

[REDACTED]

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**From:** [REDACTED] (DECC)  
**Sent:** 11 February 2013 14:50  
**To:** [REDACTED] (Energy Markets & Networks)  
**Cc:** [REDACTED] (Office for Renewable Energy Deployment); [REDACTED] (Energy Markets & Networks)  
**Subject:** RE: CfD Allocation Process

Both,

The background to this is a conversation I had about 45 minutes ago with [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

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**From:** [REDACTED]  
**Sent:** 11 February 2013 14:44  
**To:** [REDACTED] (Energy Markets & Networks)  
**Cc:** [REDACTED] (Office for Renewable Energy Deployment); [REDACTED] (DECC)  
**Subject:** CfD Allocation Process

Hi [REDACTED]

I would very much welcome the opportunity to have a discussion with you about how the initial process for granting CfDs in 2014 is going to work in a practical, sensible and manageable manner for generation units converting to biomass. We have been thinking about this for some time, and see some very real issues with what seems to be currently envisaged, which I would like to share with you. I have copied [REDACTED] and [REDACTED] as they are familiar with what Drax is planning, and it might be useful if they were to also participate? Grateful if you could send me some suggested dates / times when we could get together.

I look forward to hearing from you.

Best regards

[REDACTED]

[REDACTED]

*Director of Regulation and Policy*

Drax Power Ltd

3rd Floor, 41 Moorgate

London EC2R 6PP

Office: [REDACTED]

Mobile: [REDACTED]

Email: [REDACTED]

[Redacted]

**From:** [Redacted] (DECC)  
**Sent:** 07 February 2013 16:31  
**To:** [Redacted]; [Redacted]; [Redacted]; [Redacted]; [Redacted]; [Redacted]  
**Cc:** [Redacted] (Office for Renewable Energy Deployment)  
**Subject:** questionnaire on conversion and ECF plans  
**Attachments:** Annex B- questionnaire - submission to John Hayes regarding letter to g....docx  
**Importance:** High

Dear Bioenergy Industry Partners,

Hopefully by now your CEOs have received a letter either from John Hayes or Fergus Ewing requesting that you provide information on your intentions to convert or enhance co-fire. For ease, I attach an electronic version of the questionnaire.

I'd also be grateful if you could agree to a short (10 minute) telephone call on the subject in the next few days. Please could you send me a quick e-mail indicating your availability.

Many thanks,

[Redacted]

[Redacted]  
Head of Bioenergy Policy, Office for Renewable Energy Deployment, Department of Energy and Climate Change, 3 Whitehall Place, London SW1A 2AW. Tel: [Redacted] (If calling from abroad, please dial: ++ 207 979 7777 and ask for extension [Redacted]). Mob: [Redacted] E-mail: [Redacted]  
[Redacted]

**Questionnaire for coal generators seeking to convert, enhance co-fire or standard co-fire**

We will ask you to update this information each year. However, if your plans change substantively between now and March 2014, we ask that you provide us with an update as soon as possible.

**Company/Generator name and address:**

**Contact name and e-mail:**

**Q.** Are you intending to convert one or more units or enhance co-fire (ECF) at any of your plants over the banding review period, namely 1 April 2013 – 31 March 2017? (See table at end of questionnaire for description of the terms conversion and enhanced co-firing) **Y/N**

**Q.** If you are not intending to convert or ECF are you intending to standard co-fire over the next 12 months? (See table at end of questionnaire for description of the term standard co-fire) **Y/N**

If so, please provide the following information for each plant in question:

<b>GENERAL INFORMATION</b>	<b>Plant A</b>	<b>Plant B</b>	<b>etc</b>
Name of plant			
Location of plant			
Is the plant currently accredited under the RO? Y?N			
If "yes", please provide accreditation date			
If "yes", please provide accreditation registration number			
What is the current capacity of your plant?			
Are you intending to Convert (C) or Enhance Co-Fire (ECF)?			
What is your intended operating profile (e.g. base load, mid merit at weekends etc)?			
Will your efficiency change? If so, please state the pre- and post efficiencies that you expect			
For how many years or months or hours do you intend to operate? In the case of LCPD/IED opt out or transition plants, please give a closure date.			
<b>CONVERSION QUESTIONS</b>			
If converting, will this be the whole plant in one operation (O) or of a unit or units (U)?			

Commercial –In-Confidence when completed

If you are converting the whole plant please provide the dates when you intend to start conversion (S); commission (C) and become fully operational (O)			
If unit by unit, please give the number of units			
Please state the number of units at which co-firing has previously been carried out			
Please give the capacity of each unit both pre (P) and the expected post (DR) conversion. Please specify whether the capacity figures assume de-rating <sup>1</sup> or not.			
Please give the load factor of each unit both pre (P) and expected post (DR) conversion			
Please give the profile and timing of physical conversion of each unit (month and year 2013 - 2017)			
Please give the profile and timing of commissioning of each unit (month and year 2013 - 2017)			
Please give the profile and timing of when you expect to be fully operational at each unit (month and year 2013 - 2017)			
How much biomass will you burn in each unit over each reporting year (GJoules)			
Do you have other units in the plant that will continue to standard co-fire under the RO? If so please provide information on the rate of co-firing for each unit			
<b>ECF QUESTIONS</b>			
If ECF will this be the whole plant in one operation (O) or of a unit or units (U)?			
If you intend to ECF at the whole plant please provide the dates when you intend to start conversion to ECF (S), commission (C) and become fully operational (O)			
If you intend to ECF at one or more units			
If ECF, please give the expected RO band. (H or M) See table			

<sup>1</sup> % reduction in capacity/ output

Commercial –In-Confidence when completed

below for further information. Please give expected band for each unit where relevant.			
Please give the capacity of each unit both pre (P) and the expected post (DR) conversion. Please specify whether the capacity figures assume de-rating <sup>1</sup> or not.			
Please give the load factor of each unit both pre (P) and expected post (DR) conversion			
Please give the profile and timing of physical conversion of each unit (month and year 2013- 2017).			
Please give the profile and timing of commissioning of each unit (month and year 2013 - 2017)			
Please give the profile and timing of when you expect to be fully operational at each unit (month and year 2013 - 2017)			
How much biomass will you burn in each unit over each reporting year (GJoules)			
What de-rating factor are you applying?			
Do you have other units in the plant that will continue to standard co-fire under the RO? If so please provide information on rate of co-firing for each unit per year			

For information, the following bands were created under the RO for unit conversion and enhanced co-firing:

Band	Description
Low-range co-firing of biomass (Standard Co-Firing)	Less than 50% biomass co-fired in a unit
Mid-range co-firing of biomass (Enhanced Co – Firing -mid)	50% - less than 85% biomass co-fired in a unit
High range co-firing of biomass (Enhanced Co-Firing -high)	85% - less than 100% biomass co-fired in a unit
Biomass conversion	Electricity generated by a unit using 100% biomass

Please submit your completed form to: [robr@decc.gsi.gov.uk](mailto:robr@decc.gsi.gov.uk) by 15<sup>th</sup> March 2013

For any queries, please contact the Renewables Obligation Team on 0300 068 5404



Department  
of Energy &  
Climate Change

John Hayes MP  
Minister of State

Department of Energy & Climate Change  
3 Whitehall Place,  
London  
SW1A 2AW

[www.gov.uk](http://www.gov.uk)

[REDACTED]  
Chief Executive  
Drax Group Plc  
Drax Power Station  
Selby  
North Yorkshire  
YO8 8PH

Your ref:  
Our ref:

JANUARY 2013

Dear [REDACTED]

I am writing to ask you complete the attached template, providing details of any plans you have to convert or enhance co-fire at coal fired power stations under your operation or control.

You will recall that on 5 October I announced that we would not introduce a mandatory pre-notification scheme as part of a cost control mechanism under the Renewables Obligation (RO) but instead wished to seek the same outcome through a non-regulatory, voluntary approach. A copy of my announcement along with the factsheet setting out how we intend to proceed may be viewed at the following link:  
[http://www.decc.gov.uk/en/content/cms/news/pn12\\_117/pn12\\_117.aspx](http://www.decc.gov.uk/en/content/cms/news/pn12_117/pn12_117.aspx).

The scale of spend on conversions and enhanced co-firing is expected to require a significant portion of the RO budget. Clearly, it is in our mutual interests to ensure the longer term stability of the RO. Therefore, it is important that we improve both visibility and predictability of this spend over the banding review period, through to its close.

This information will be used in setting the obligation on a yearly basis. In order to improve the predictability of our analysis we are asking that you cover your plans for the entire banding review period, i.e. from 1 April 2013 to March 2017. In line with our approach to setting the bands for conversions and enhanced co-firing we are asking for this on a unit by unit basis.

May I ask that you complete the attached template, **sending your responses to DECC's Renewables Obligations Team ([robr@decc.gsi.gov.uk](mailto:robr@decc.gsi.gov.uk)) by 15 March 2013.** If you have any queries regarding the template, please contact the Renewables Obligation Team on 0300 068 5404.

Yours sincerely,

**JOHN HAYES**

Encl. Questionnaire – conversion and ECF plans

[REDACTED]

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**From:** Robson Hugo (Commercial)  
**Sent:** 25 October 2012 10:39  
**To:** Gurumurthy Ravi (Strategy)  
**Cc:** McNeal Hugh (DECC - CEO, Office for Renewable Energy Deployment)  
**Subject:** Fw: Share Placement  
**Attachments:** Placing Announcement FINAL.PDF; IMS Announcement FINAL.PDF

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**From:** [REDACTED]  
**Sent:** Thursday, October 25, 2012 10:19 AM  
**To:** Robson Hugo (Commercial)  
**Subject:** FW: Share Placement

Hugo,

FYI. I would welcome a chat if you are around and have a minute.

[REDACTED]

[REDACTED]

*Director of Regulation and Policy*

Drax Power Ltd  
3rd Floor, 41 Moorgate  
London EC2R 6PP  
Office: [REDACTED]  
Mobile: [REDACTED]  
Email: [REDACTED]

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**From:** [REDACTED]  
**Sent:** 25 October 2012 07:12  
**To:** \_\_All @ Drax Power Group  
**Subject:** Share Placement

All,

Over the last few weeks we have, finally, received the regulatory clarity we needed to move into full execution of our biomass transformation project. This is a hugely exciting time for Drax as we now move into full execution. I believe that this secures the future of the company as a long term generator.

This morning we have announced to the stock market that we will be issuing a placement of new shares. We expect to raise around £180M from this share placement. It is a critical part of the funding for this transformation. Attached to this email is the placing announcement as well as the Interim Management Statement which we also released this morning.

Regards

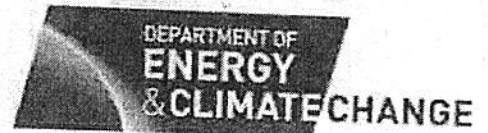
*Placing announcement + Interim Management Statement are published documents so not attached.*

[REDACTED]

[REDACTED]

Chief Executive





**John Hayes MP**  
Minister of State

Department of Energy & Climate Change  
3 Whitehall Place  
London  
SW1A 2AW

[www.decc.gov.uk](http://www.decc.gov.uk)

Our ref: INV/2012/14052

[REDACTED]  
Drax  
Drax Power Station  
Selby  
North Yorkshire  
YO8 8PH

13<sup>th</sup> October 2012

Dear [REDACTED]

Thank you so much for your letter dated 7 September and your kind message of congratulations following my appointment as Minister of State for the Department of Energy and Climate Change.

I am delighted to be joining the department at such a crucial time delivering secure, affordable energy for all. I am looking forward to working with you on these challenges.

I am very supportive of cost-effective biomass power. That is why on 5 October I took the decision not to introduce a mandatory reporting process for conversions and co-firing under the Renewables Obligation but instead opt for a voluntary process. As I said at the time, energy is central to our economic recovery. We must deliver investment in new infrastructure while keeping costs down for consumers. I hope that you will agree with me that this decision now provides the long term certainty that is required to make investment decisions under the scheme.

I would be pleased to meet you and discuss the concerns and wider energy issues you mention, subject to urgent parliamentary business. Please contact my Diary Manager; [REDACTED] on [REDACTED] to make the necessary arrangements. Please quote the above reference number when doing so.

Yours sincerely,

**JOHN HAYES**

[REDACTED]

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**From:** Virley Simon (Energy Markets & Infrastructure)  
**Sent:** 05 October 2012 12:14  
**To:** [REDACTED]  
**Subject:** Re: Biomass Conversion

[REDACTED] - good, thanks. I look forward to it.

Simon

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**From:** [REDACTED]  
**Sent:** Friday, October 05, 2012 11:58 AM  
**To:** Virley Simon (Energy Markets & Infrastructure)  
**Subject:** Biomass Conversion

Simon – I just wanted to let you know that we have had sight of the fact sheet DECC issued today on grandfathering and cost control. We believe that this gives us the mandate to raise the funding required to implement our unit conversion project at Drax. We will now press on with the project. I hope I will be able to persuade you to visit Drax when we have our first converted unit in operation in April next year. Regards [REDACTED]

[REDACTED]  
Chief Executive  
Drax Group Plc  
Tel: [REDACTED]  
Mob: [REDACTED]

This email was received from the INTERNET and scanned by the Government Secure Intranet anti-virus service supplied by Cable&Wireless Worldwide in partnership with MessageLabs. (CCTM Certificate Number 2009/09/0052.) In case of problems, please call your organisation's IT Helpdesk. Communications via the GSi may be automatically logged, monitored and/or recorded for legal purposes.

[REDACTED]

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**From:** Rhodes Sarah (Office for Renewable Energy Deployment)  
**Sent:** 05 October 2012 10:18  
**To:** [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
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[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
**Cc:** [REDACTED] (Office for Renewable Energy Deployment);  
[REDACTED] (Office for Renewable Energy Deployment); [REDACTED] (Office  
for Renewable Energy Deployment); [REDACTED] (DECC)  
**Subject:** Renewables Obligation: cost control  
**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dear All

This is to let you know that DECC is publishing a press notice and fact-sheet this morning on cost control for coal to biomass conversion and enhanced co-firing. You can access these on our website at [http://www.decc.gov.uk/en/content/cms/news/pn12\\_117/pn12\\_117.aspx](http://www.decc.gov.uk/en/content/cms/news/pn12_117/pn12_117.aspx). You'll see that we have opted for a light-touch version of cost control, being a voluntary registration process together with the grandfathering provisions you have already seen. These measures are intended to support investor confidence while also helping with good management of the RO budget.

This package is not being formally consulted on but we are open to comments on the fact sheet until 1 December in which case please get back to [REDACTED] and/or me.

You have our thanks for your input to the options for cost control and their impacts. We expect to write to generators early next Spring to ask about your generation plans for the year but don't feel you have to wait for this to update us on developments– we are keen to keep in touch with progress meanwhile.

Best regards

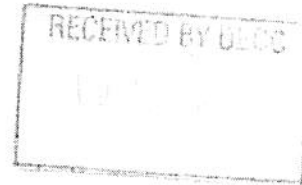
**Sarah**  
SARAH RHODES | Head, Renewables Delivery | Office for Renewable Energy Deployment  
Department of Energy and Climate Change | 3 Whitehall Place | London SW1A 2AW  
☐ email [sarah.rhodes@decc.gsi.gov.uk](mailto:sarah.rhodes@decc.gsi.gov.uk) | ☎ tel 0300 068 6171 | 📱 mob 07947 636280



Drax Power Station • Selby • North Yorkshire • YO8 8PH • T. [REDACTED] • F. +44 (0)1757 612192

7 September 2012

John Hayes  
Minister of State  
Department of Energy and Climate Change  
3 Whitehall Place  
London  
SW1A 2AW



Dear Minister

It was a pleasure to meet you on Wednesday. I am writing to offer you my congratulations on your new appointment and to take this opportunity to seek a meeting with you at your earliest convenience.

By way of a brief introduction, Drax Group plc ("Drax") is a FTSE250 company and one of the largest independent generating companies in the UK responsible for meeting some 7% of the nation's electricity demand. We own and operate Drax Power Station in North Yorkshire, but also have a growing interest at the other end of the supply chain through our retail arm, Haven Power, which serves the electricity needs of over 40,000 business sites.

Drax Power Station is the largest, cleanest and most efficient coal-fired power station in the UK. We are focused on reducing our carbon emissions both through the increased use of sustainable biomass in place of coal and initiatives to improve our efficiency, such as the recently completed £100m project to upgrade our steam turbines. Notable as the largest steam turbine modernisation programme in UK history, the project will reduce Drax's annual carbon emissions by one million tonnes, the equivalent of taking 275,000 cars off the road every year.

It is, however, the use of biomass, the low-cost, low-carbon renewable fuel, which will have the biggest impact on the power station's carbon emissions in the short to medium term. The Government's recent decision on the future support levels for renewables is welcome and combined with the excellent technical progress we are making at Drax we plan to progressively

convert three of our six generating units to biomass in the near future, transforming Drax into a predominantly biomass fuelled generator.


The future support level for converting existing coal-fired generating units to biomass makes our ambition achievable, but delivery will require significant investment. It is, therefore, important that as the Government works through the consultations stemming from the July decision document, particularly in relation to proposed cost control measures, it is mindful of the need to promote investor confidence, not undermine it.

I should welcome an early opportunity to meet with you to discuss these issues as well as several others, including the implications of the draft Energy Bill, the forthcoming Industrial Emissions Directive and our plans, subject to successful outcomes from both the UK and European funding processes, for a new, standalone carbon capture and storage demonstration project at the Drax Power Station site.

I shall ask my office to contact yours to see if such a meeting would be possible over the course of the coming weeks.

Yours sincerely

A handwritten signature in black ink, appearing to be a stylized 'D' followed by a horizontal line and a flourish.

  
Chief Executive



I'll send an agenda together with the notes of our last meeting by Thursday afternoon.

[REDACTED]  
[REDACTED]  
Office for Renewable Energy Deployment  
Department of Energy and Climate Change, 3, Whitehall Place, London, SW1A 2AW

Tel: [REDACTED] (If calling from abroad, please dial: ++ 207 979 7777 and ask for extension [REDACTED])

Mob: [REDACTED]

E-mail: [REDACTED]

Generators' meeting on conversion and enhanced co-firing: registration mechanism

Date 3 September 2012

Location: Room G03, 3 Whitehall Place, London SW1A

Time: 14: - 15:30

#### Agenda

1. Welcome
2. Minutes of last meeting
3. Actions arising
4. Updates
5. Brainstorming: registration mechanism
  - a. Outline proposal
  - b. Pre-registration – what would be involved, what type of information?
  - c. Triggers for action – what type and what actions?
  - d. Options for responding
6. Summary
7. Date of next meeting



[Redacted]

**From:** [Redacted]  
**Sent:** 31 August 2012 08:22  
**To:** [Redacted]  
[Redacted] (Office for Renewable Energy Deployment); [Redacted] (Office for Renewable Energy Deployment); [Redacted] (Office for Renewable Energy Deployment); [Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted]  
[Redacted] (DECC); [Redacted]  
**Subject:** note of meeting of conversion and ecf developers 16 August 2012  
**Attachments:** note of meeting with generators on conversion and enhanced co-firing.docx; Conversion and enhanced co-fring FAQs sheet for developers.docx  
**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dear All,

Please find attached a note of the meeting of 16 August, together with a FAQs sheet. An agenda for Monday's meeting will follow shortly.

Kind regards,

[Redacted]

[Redacted]  
Office for Renewable Energy Deployment  
Department of Energy and Climate Change, 3, Whitehall Place, London, SW1A 2AW

Tel: [Redacted] If calling from abroad, please dial: ++ 207 979 7777 and ask for extension [Redacted]  
Mob: 07825 681 221  
E-mail: [elizabeth.mcdonnell@decc.gsi.gov.uk](mailto:elizabeth.mcdonnell@decc.gsi.gov.uk)

**Note of meeting: Bioenergy Stakeholder Event**

**Thursday 16 August 2012. 11:00 – 13:00, Defra, Room B, Nobel House, London**

Attendees:

<b>Name</b>	<b>Company</b>	<b>Name</b>	<b>Company</b>
[REDACTED]	Centrica	[REDACTED]	SSE via telecon
[REDACTED]	Drax	[REDACTED]	DECC
[REDACTED]	EdF	[REDACTED]	DECC
[REDACTED]	Eggborough	[REDACTED]	DECC
[REDACTED]	Eggborough	[REDACTED]	DECC
[REDACTED]	E.ON	[REDACTED]	DECC
[REDACTED]	E.ON	[REDACTED]	DECC
[REDACTED]	International Power	[REDACTED]	Ofgem
[REDACTED]	Mitsui	[REDACTED]	Ofgem
[REDACTED]	RWE	[REDACTED]	Ofgem

Agenda Item 3: Questions from the floor regarding conversions and enhanced co-firing

Questions were raised on the following issues: the difference between grandfathering and accreditation, when the accreditation clock starts, definition of permitted uses, use of fossil fuel in start up procedures, grandfathering of future plans on financial commitment, grandfathering when a unit moves between bands, whether planned and unplanned outages will affect grandfathering and the ROC rate, whether fossil fuel used in start up is taken into consideration when calculating the ROC rate and publication of the draft RO regulations.

In response to the questions raised both prior and during the meeting, a FAQ sheet has been prepared (attached).

DECC will try to release a copy of the draft Orders. These will hold no official or legal weight but will be provided for illustrative purposes only.

Agenda item 4: Cost control mechanism

DECC asked for developer views on the proposed cost control mechanism and in particular issues that they wished to see addressed as part of the consultation. The following issues were discussed:

- A period of registration which gave 3-4 years foresight of conversion and ECF plans than the 1 year proposed by DECC was preferred by generators. This would give greater clarity to all and provide DECC with sufficient cost control.
- Setting out DECC's expectation on generation and what was affordable under the RO budget would give greater clarity to generators. The Government Response Impact Assessment sets out DECC's estimate of capacity and generation in Annex B. Based on the modelled central scenario,

approximately 18,400 GWh of new build enhanced co-firing and conversion deployment is forecast during the 2013-17 Banding Review period.

- Prevention of gaming during registration; the consultation will need to provide detail on how DECC will deal with this potential issue. DECC requested feedback from industry on how we could distinguish malicious intent through deliberate false registration from the unintentional brought about by changes in circumstance.
- Grandfathering on registration or at least 3-4 years certainty that the bands would not change was proposed. This would enable generators to lever the necessary finance for future build. This could be linked to a board decision or other demonstrable form of commitment.
- It was suggested that the registration process could be split in two; a pre-registration of intent followed by full registration on proof of commitment with grandfathering on the latter.
- Whether there will be or can be consistency across the financial instruments on cost control
- Reducing the headroom could provide a means to control costs. This might be difficult to implement and would have the impact of reducing the value of the ROCs
- The consultation would need to provide greater clarity on grandfathering
- The consultation should also provide clarity on whether the FMS will move from a station to a unit basis.

DECC confirmed that the cost control mechanism would involve pre-notification and that the proposal allowed for a reduction in ROC levels, but not a termination in the issuing of ROCs. There were no plans to change the headroom. DECC also confirmed that registration of units was part of the cost control process. This foresight would enable DECC to avoid a rushed emergency review. Ofgem are considering the implications of unit by unit co-firing on existing generating station FMSs and will issue a paper to clarify ROC issue calculations and FMS requirements once the draft regulations are available.

### AOB

In order to facilitate updates to the Renewables & CHP Register IT system to accommodate unit by unit co-firing, Ofgem would like to gather further information on fuels which will and will not be used for co-firing, via a short questionnaire.

### Actions

- DECC to try to publish the draft regulations as soon as possible.
- Ofgem to circulate a paper on implementation of regulations once the draft regulations are available.
- ██████████ to organise future stakeholder events to discuss different cost control options.
- Ofgem to circulate a questionnaire to stakeholders to collate information on fuels used for co-firing.

Issues	Response
<b>Conversion and Enhanced Co-Firing</b>	
What is accredited and from when?	<p>The Government response to the banding review consultation has not changed the process for the accreditation of stations, and it has not changed the rules for the maximum period of support that a station may receive under the RO. Accreditation applies to generating stations, rather than to generating units. We are not intending to re-start the clock if an accredited station decides to move to conversion or to enhanced co-firing.</p>
So what is grandfathered?	<p>In the case of conversion and enhanced co-firing, grandfathering of RO support levels applies from the date at which the generating unit becomes eligible for the ECF or Conversion band, and applies for so long as the generating unit remains eligible for that band.</p> <p>Grandfathering does not change the rules for the maximum length of time that a generating station may receive support under the RO.</p> <p>In the case of the highest ECF band, the Government response to the banding review sets out our decision that the ROC rate should increase in 2014/15 to 0.9, and that any high range co-firing unit which is in receipt of 0.7 prior to that date, should be automatically uplifted to the new rate. Therefore, the highest ECF band will not be grandfathered until 1 April 2014.</p>
What if you accredited before 2008 – how long are you grandfathered for?	<p>If the station was accredited before 2008 as a co-firing station, then the conversion of a unit, say, in 2014/16 is not going to change the rules about the maximum length of support the station can have. In line with article 17A, support will end on 31 March 2027, or earlier, if the station ceases to be eligible for the RO for some reason.</p> <p>In the past, co-firing has not been covered by our grandfathering policy. However, our decision to adopt a policy of grandfathering conversions and enhanced co-firing means that once a unit is converted or ECF and becomes eligible for the relevant band, that unit should continue to be supported at that band for the remainder of the period that the station is eligible for the RO. This is of course subject to the unit continuing at all times to meet the eligibility criteria for the conversion or ECF band and the eligibility requirements for ROCs (e.g. not using bioliquids</p>

	<p>that breach the sustainability criteria). It is also subject to compliance with any advance registration requirements that we are proposing to introduce for cost control purposes.</p> <p>So conversions of units by a co-firing station that is already accredited under the RO will not change the end date of that's station's eligibility for support under the RO.</p>
What happens if we decide to change bands – are we still grandfathered?	Grandfathering only applies for as long as a generating unit remains eligible for a band. So if the unit ceases to be eligible for the conversion band and moves into an ECF band, the unit would no longer be covered by our policy to grandfather the conversion band. If the unit later moves back into the conversion band, it would become covered by our grandfathering policy again, but at the rate which applies as at the date of the move back into that band.
Will grandfathering be affected by outages?	All plants have to, at some time, stop generating in order to carry out routine maintenance or repairs in the case of an unplanned outage. Provided that a generating unit is not generating at a different RO band, or outside of the RO completely then it will retain its grandfathered status.
What happens if my biomass fuel - supply ship sinks or other examples of force majeure?	The same rules would apply, if it is not possible for a unit to operate, it would retain its grandfathered status. However, if it receives ROCs under a different RO band, or ceases to claim ROCs for the entirety of an obligation period, then it will lose its grandfathered status.
What happens if, as part of a planned outage, I make material changes to a unit which change the size of the output?	<del>1.1.1</del> It will be a matter for Ofgem whether the changes constitute "additional capacity". If that is the case, then that additional capacity will not be covered by the grandfathering policy.
If we are grandfathered will our bands change if you review the rates?	The principle of grandfathering means that generating units will not be subject to a change in rate while they are still eligible for a particular ECF or conversion band.
If a coal power station is fully converted, and reaccredits with the Environment Agency as a biomass power station under the IED does the RO's clock restart for a further 20 years?	No. RO and LCPD/IED are separate legislation. The same end date still applies under the RO as before; the converted plant can receive support as a 'full conversion' under the RO (subject to meeting any eligibility requirements such as sustainability criteria). But there is no restart of , the clock.
What if we haven't completed work on a unit but have made up-front investment in the supply chain, will we be grandfathered at a pre-change rate?	In the case of ECF and conversion, grandfathering only applies to a unit from the date at which ROCs start to be issued under the relevant band in respect of electricity generated by that unit. We cannot guarantee rates for units

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	or stations that have yet to commence operation
How are you going to monitor and report on the fuel measurements?	Once the draft regulations are published, Ofgem will be able to provide more detail. We hope to be able to publish these regulations very soon.
How much fossil fuel is allowed at start up?	The Government response to the banding review sets out our decision to add "fouling reduction" and "corrosion control" to the list of permitted ancillary purposes in article 22 of the RO Order. The Government response does not make any other changes to article 22(3) or (4).
Is fossil fuel used in start up taken into consideration when determining the ROC band?	Policy on this has not changed.
Will the CHP uplift be available for unit conversion and ECF or is it only available on a plant basis?	CHP uplift does not require the individual unit to be CHP. The uplift is available if the plant is good quality CHP and is based on when the capacity was accredited, or the additional capacity was added. The uplift will not be available for capacity accredited or added after 31 March 2015, or for capacity which receives the RHI. In the case of co-firing, there will continue to be a requirement for the fossil fuel and regular biomass to have been burned in separate boilers or engines.
Can you provide any additional information as to how the revised list of permitted ancillary purposes will be applied?	We hope to be able to publish the draft order very soon.
Will the use of corrosion control and fouling reduction be a permitted ancillary use throughout normal generation as well as start up?	Corrosion control and fouling reduction will be a permitted ancillary purpose throughout normal generation as well as start up.
We assume that the 10% will remain to be viewed on a monthly basis?	The 10% will continue to be viewed on a monthly basis.
In relation to the GHG standards, how will the fossil fuel and waste used for ancillary uses be accounted for in this regard? Will there be account taken of emissions generated in this way?	The GHG cycle is assessed for a consignment of biomass feedstock used. It does not factor in the emissions from the fossil fuel that may be combusted with the biomass or used for ancillary purposes.
<b>Voluntary agreement on woodfuel supply</b>	
What is happening with this voluntary agreement	DECC is facilitating discussions between potential large biomass generators and the wood products industry to create a voluntary disclosure process on the intended use of UK feedstocks. The process consists of the following steps:

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	<ul style="list-style-type: none"> <li>• DECC will write to large biomass electricity generators (both coal-to-biomass and dedicated biomass) asking them to voluntarily set out their intention on the future use of domestic feedstocks and in particular a) the expected volumes of domestic feedstock consumption and b) the expected split between virgin wood and recovered (waste) wood. DECC's letter will also ask generators for annual updates of these initial statements, noting any changes in the initial statements of intent. A draft letter will be circulated in advance to all parties for comment.</li> <li>• The generators' replies should carry the company's authority as a clear and public statement of intent and will be published by DECC.</li> <li>• DECC will then analyse the potential cumulative impact of the generators' intentions and meet the wood products industry to discuss this analysis and whether further steps are needed</li> <li>• Ofgem will publish annually the sourcing information for all generators &gt;1MW and DECC will facilitate annual meetings between the parties after the publication of the Ofgem statistics to discuss developments in the market</li> </ul> <p>The details of the letter are currently being discussed with the two groups and we expect the disclosure process to be underway before the Parliamentary debates take place.</p>
<b>Sustainability standards</b>	
When is the consultation coming out?	We intend to issue the consultation as soon as is possible.
Can you say what the standards will be in 2020 and beyond?	The consultation will set out our proposals for 2020. We do want to provide increased certainty by setting standards to 2025 but to do this we will require evidence. Clearly, we want the standards to be both achievable and drive greater GHG saving. We will use the consultation to ask for that evidence.
What about existing contracts? Will they be grandfathered?	We stated in the Government response to the RO banding review that we propose introducing improved sustainability criteria which, to encourage a level playing field, would be applied to <b>existing as well as new</b> biomass generation. That means we will not be grandfathering existing contracts. We are proposing to fix the

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	criteria for all generators until April 2020 – subject to any changes which need to be introduced at any time to comply with EU or international obligations.
<b>Energy crops</b>	
When is the consultation coming out?	We are intending to issue the consultation as soon as is possible, as part of the sustainability package.
What are you proposing in order to protect investment? We have contracts ready to sign, will they be protected?	We cannot pre-empt the consultation but we will set out proposals for some limited continuation of the uplift for standard (low range) co-firers that currently use energy crops.
<b>Standard Co-firing</b>	
When will you consult on the changes?	We are intending to issue the consultation as soon as is possible, as part of the sustainability package.
<b>Cost control – monitoring and reporting requirements</b>	
When will the consultation come out?	We are intending to issue the consultation as soon as is possible.
Will you set out in more detail what and how the evidence from monitoring and reporting will be used?	We will be consulting soon on a cost control mechanism that includes a pre-registration system. We will be proposing a process whereby ECF/conversion plants register their intentions in advance, so we know how much generation we could expect to come forward and can take action if it is more, or less, than we expect. This would not affect the principle of grandfathering.  We will provide more detail in the consultation.
When will you decide to conduct an early review? What will you base the trigger points on? What legal powers do you have?	We want to give developers as much clarity so we will set this out in the consultation document.
Will we need to provide information on our plans for the year ahead or perhaps longer, e.g. for the period of the banding review, updating them each year?	This is something we can consider for the consultation
Will we have to provide this information on a unit by unit basis or for the whole station	Each unit will need to register. If the whole station is being converted, then clearly there is no need to break that information down further
If we don't do what we say we will do, will we be eligible for the bands? Will there be any penalties for misleading information?	We want stability and surety so that we know how much renewable generation we will get at any one time. We do not want to be in the position of trying to find promised renewable

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	generation from elsewhere. In developing proposals for pre-registration we are considering options for providing maximum certainty on both sides.
Will you grandfather us once registered?	Support is only grandfathered once the unit or station is generating electricity and claiming ROCs at the relevant band.
<b>Draft ROO</b>	
When will the draft ROO be published? Will there be a consolidation order?	We hope to publish the draft ROO in the next few days. Please bear in mind that this will be for illustrative purposes only but we hope it will address some of your questions. The final draft ROO will include changes made in light of the forthcoming consultations. Once the orders are made, we intend to publish an unofficial consolidated version of the order.

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[REDACTED]

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**From:** [REDACTED] (Office for Renewable Energy Deployment)  
**Sent:** 06 August 2012 15:43  
**To:** [REDACTED]; [REDACTED]  
**Cc:** [REDACTED] (Office for Renewable Energy Deployment); Rhodes Sarah (Office for Renewable Energy Deployment); McNeal Hugh (DECC - CEO, Office for Renewable Energy Deployment); [REDACTED]; [REDACTED]; [REDACTED]; [REDACTED] (DECC); [REDACTED] (Office for Renewable Energy Deployment); Virley Simon (Energy Markets & Infrastructure)  
**Subject:** RE: Meeting - Banding Review  
**Categories:** Actioned

[REDACTED]

We would be happy to talk through the cost control mechanism more fully, but the below might provide some reassurance in the first instance.

The cost control mechanism is not a fixed cap that would prevent converted plant from dispatching. Rather, it is a process whereby ECF/conversion plant register their dispatch intentions in advance, so we know how much generation will be coming forward – if it is more, or less, than we expect, then we will review the ROC level. However, any reviewed ROC level would only apply to new generation, or generation which has changed bands. The principle of grandfathering still applies.

[REDACTED] - we are setting up a workshop for developers who are converting/co-firing, with the aim of discussing this and other technical issues before we publish the consultation. But as I said, happy to talk through this issue in particular, so let me know if you'd like us to set up a meeting.

Thanks,

[REDACTED]

[REDACTED]

Head of Deployment, Land-based Renewables  
Office For Renewable Energy Deployment  
Department of Energy and Climate Change

[REDACTED]

[REDACTED]

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**From:** [REDACTED]  
**Sent:** 06 August 2012 15:13  
**To:** Virley Simon (Energy Markets & Infrastructure)  
**Cc:** [REDACTED] (Office for Renewable Energy Deployment); [REDACTED] (Office for Renewable Energy Deployment); Rhodes Sarah (Office for Renewable Energy Deployment); McNeal Hugh (DECC - CEO, Office for Renewable Energy Deployment); [REDACTED]; [REDACTED]; [REDACTED]; [REDACTED]  
**Subject:** RE: Meeting - Banding Review

Simon

Thank you for your prompt response.

My understanding is that there have already been a number of working level discussions. I am unclear whether the key issue from our investor meetings can be resolved at the working level. I certainly hope so but thought it might be useful if I was to explain a little more.

I think the problem is simple and fundamental. The ROC support for conversion is grandfathered which provides clarity on support levels but not investor certainty because the proposed "cost control mechanism" for conversion and co-firing means that, post investment, a converted plant may be prevented from dispatching. Our investors will not support investment in facilities that a "cost control mechanism" will prevent us from using.

We are asking investors to support a 3 unit investment programme. This is necessary as a single step if we are to craft the right solution for IED compliance, which as you know is fuel dependent. The total investment we are asking investors to support is £650-700M. Roughly half of this is to be invested at Drax on unit conversions, it includes plant modifications as well bespoke biomass handling and storage systems to significantly expand our existing biomass handling systems. The balance is to be invested in upstream biomass investments, including pellet plants, and equipment required for IED compliance.

We need to secure additional debt and equity funding for this investment programme. Please note, as we are publically traded, the need for additional equity through a placement or rights issue is currently market sensitive information not in the public domain.

The solution is simple, we need Government to confirm that, if Drax commits fully to its capital investment programme to convert 3 units, that dispatch of the units will not be constrained by the proposed "cost control mechanism". On this basis we would hope to secure investor support by the end of this year. We would install the facilities at Drax to fuel 3 units with 90% biomass. We could demonstrate this commitment and would expect these facilities to be fully operational by [REDACTED]

[REDACTED]

Will it be possible for Government to give our investors the assurance that they need – namely that if they commit the funds now to support 3 unit conversion over the next 5-6 years, Drax will be able to operate these units on an unconstrained basis once converted?

Regards

[REDACTED]

[REDACTED]

Chief Executive  
Drax Group Plc

Tel: [REDACTED]

Mob: [REDACTED]

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**From:** Virley Simon (Energy Strategy & Futures) [mailto:Simon.Virley@decc.gsi.gov.uk]  
**Sent:** 06 August 2012 11:57  
**To:** [REDACTED]  
**Cc:** [REDACTED] (Office for Renewable Energy Deployment); [REDACTED] (Office for Renewable Energy Deployment); Rhodes Sarah (Office for Renewable Energy Deployment); McNeal Hugh (DECC - CEO, Office for Renewable Energy Deployment)  
**Subject:** Re: Meeting - Banding Review

[REDACTED] - thanks for this. Happy to discuss, but I think it would be helpful for our teams to talk through the issues first as there may be issues they can clarify. The renewables team here will contact [REDACTED] (or his colleagues) to have a first run through.

Thanks  
Simon

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**From:** [REDACTED]  
**Sent:** Friday, August 03, 2012 05:03 PM  
**To:** Virley Simon (Energy Markets & Infrastructure)  
**Subject:** Meeting - Banding Review

Simon,

I wonder if it might be possible to meet next week.

I have just been through a very difficult week of shareholder meetings and would like to come to talk to you about it. I would like to explain to you why the shareholders are concerned and explore if there is anything that can be done to make them sufficiently confident to support unit conversion. Most of the shareholders have serious concerns about the supply and technical risks inherent in unit conversion but I think with more work from us can be persuaded to support progressive conversion of units. I am less confident that they will be willing to accept the risk of caps or volume constraints on the output of a unit once converted.

I gather that you are out of the office but expect to be back on Monday. I would really appreciate if we could meet.

Regards

[REDACTED]

[REDACTED]  
Chief Executive  
Drax Group Plc  
Tel: [REDACTED]  
Mob: [REDACTED]

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[REDACTED]

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**From:** Rhodes Sarah (IEES)  
**Sent:** 03 August 2012 09:54  
**To:** [REDACTED]  
**Cc:** [REDACTED] (DECC); [REDACTED] (Economics); [REDACTED] (Office for Renewable Energy Deployment)  
**Subject:** RE: RO Follow Up points

[REDACTED]

We spoke. Just to confirm, [REDACTED] is working through August if you want to discuss any of these points further. Meanwhile, the position on them is as below. I'm copying for info to [REDACTED] who will also be involved in the cost control process.

Best regards

Sarah

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**From:** [REDACTED]  
**Sent:** 01 August 2012 16:31  
**To:** Rhodes Sarah (Office for Renewable Energy Deployment)  
**Cc:** [REDACTED] (DECC)  
**Subject:** RO Follow Up points

Sarah,

Good to catch up earlier. My main take-aways from the discussion were:

- Permitted additives: SR to confirm that the 10% applies not just to the converted unit but also to the ECF bands – thus avoiding a complex overlap issue.  
Yes – Liz will be writing to all generators imminently to confirm this
- Converted band: SR to confirm that a unit that fails to make the converted threshold in any month would receive the ECF support for which its generation qualified in that month (subject to any 'gaming' safeguards).  
That's our expectation but [REDACTED] is considering the detail now, including your point about gaming. For discussion at a collective meeting of coal to biomass generators which Liz is arranging
- SR to confirm timings for when you are back from leave w/c 20<sup>th</sup> August for a discussion on how DECC will manage the RO post-2017 for units that currently form part of an accredited station (ie. one which was originally accredited in 2007) and which may actually first qualify for the conversion band after 2017.  
This is part of our CfD discussion – [REDACTED] is considering this issue (she's in next week and on leave the following one)
- Also to discuss the budget control mechanism with you and [REDACTED] including how to ensure that DECC receives the most accurate forecasts of actual intentions under the 'unit registration' process (to avoid 'gaming').  
As above
- SR to check on September timings for the consultations on sustainability / dedicated cap / energy crop uplift and LCF control mechanism – reporting / SCF 0.3ROCs; and confirm whether the 2 will be coming out together.

The plan is to cover the first 3 in a consultation to issue in Sept, and the cost control mechanism separately asap afterwards

- SR will try and get us an early sight of the draft ROO2012 so we can start to engage with Ofgem on compliance / reporting arrangements to be in place from April 2013.  
Our lawyer is on leave this week but hopefully back on Monday. [REDACTED] is on the case, and will circulate what we can to all generators
- We will respond to [REDACTED] on the WPI letter.  
Done, thanks
- We will get you a short note on why we think we should be considered favourably for a switch to CfD under FID-enabling process, which we can then discuss with Hugo, his team and yourself.  
thanks. Please copy to [REDACTED]

Feel free to add /amend etc.

Best regards

[REDACTED]

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[REDACTED]

**From:** [REDACTED]  
**Sent:** 05 July 2012 18:08  
**To:** Rhodes Sarah (IEES)  
**Subject:** Current Draft - in strict confidence

"We welcome confirmation of the strategically important role that electricity generated from sustainably-sourced biomass can play in the future UK renewable energy mix.....we are confident that the Government's decisions will provide the support required to transform Drax from a coal-fired power station to a predominantly biomass fuelled generator, through converting three of our six generating units fully to biomass. It will take some time to develop all of the sustainable biomass supply chain, but we believe that within approximately five – six years Drax could be a predominantly biomass fuelled plant. We are currently refining our previously announced £700 million strategic capital investment plan, but remain confident of the overall scope and scale. We will continue to work with Government and Ofgem on the design of practical and efficient regulations for the implementation of these decisions. We now look forward to their approval by Parliament and to a timely conclusion of the legislative process, in conjunction with which we will seek to finalise our financing plans.

"This transformation will be achieved through [significant] capital investments [in excess of £0.7bn] at Drax and other investments across the supply chain and will secure thousands of jobs, predominantly in the North East. We are keen to contribute fully to the UK's renewables and carbon reduction targets by producing low cost, reliable and flexible renewable electricity."

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[REDACTED]

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**From:** [REDACTED]  
**Sent:** 15 June 2012 17:29  
**To:** Rhodes Sarah (IEES)  
**Subject:** RE: Banding Issues

Thanks Sarah and understood. Goes w/out saying that if you need to road-test any other options do not hesitate to get in touch.

BRs

[REDACTED]

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**From:** Rhodes Sarah (Office for Renewable Energy Deployment) [mailto:Sarah.Rhodes@decc.gsi.gov.uk]  
**Sent:** 15 June 2012 17:25  
**To:** [REDACTED]  
**Cc:** [REDACTED] (DECC); McNeal Hugh (DECC - CEO, Office for Renewable Energy Deployment); [REDACTED] (DECC)  
**Subject:** RE: Banding Issues

[REDACTED]

Many thanks for this helpful confirmation which I'm copying to colleagues to see. As we go through option analysis it is essential for us to have a good general understanding of the impacts on generation of the various potential policy choices.

As I said we intend and expect to issue the response ahead of summer recess which means your last point shouldn't arise. But if it does we can discuss nearer the time. I'm afraid the sustainability consultation will be at least a month behind the response on this timetable – the response has to be our first priority and we can't resource doing the two simultaneously.

Best regards

Sarah

SARAH RHODES | Head, Land-based Renewables | Office for Renewable Energy Deployment  
Department of Energy and Climate Change | 3 Whitehall Place | London SW1A 2AW  
✉ email [sarah.rhodes@decc.gsi.gov.uk](mailto:sarah.rhodes@decc.gsi.gov.uk) | ☎ tel 0300 068 6171 | 📱 mob 07947 636280



**From:** [REDACTED]  
**Sent:** 15 June 2012 17:01  
**To:** Rhodes Sarah (Office for Renewable Energy Deployment)  
**Subject:** Banding Issues

Sarah,

Further to our discussion yesterday, I said I would check my initial reaction internally to the issues you raised and get back to you. Our comments are as follows:

1. We are quite relaxed about any reduction in the NCF rates (ie below 50%), but as I said, that is contingent on you adopting a unit x unit approach to ECF / Conversion support. We would clearly be very concerned about this, if you reverted to a station based approach.
2. We accept that DECC needs to implement some budget control mechanism for 2013/14. Of the options discussed, the least damaging would be a reduction in ECF support for one year only. We would be concerned about any extension to this as it would very adversely effect our ability to progressively convert units beyond the first one.
3. Any temporary change to the Converted support would be extremely detrimental.
4. On the permitted allowance for fossil fuels/non-biomass additives, we would really welcome any additional (R&D justified?) allowance for fossil additives for the first few years of operation. This would reduce the risks of the rapid transition to full conversion.
5. On Energy Crops, we suspect the only way of legally / practically limiting imports is by defining them for RO qualification purposes in relation to the existing Energy Crop Scheme, which I think was where you were coming from.
6. On process, I assume any consultation on Energy Crops will be part of the next Sustainability paper, and wondered when we can expect that? Can I urge you to get that one out ASAP (given the work we will need to do with Ofgem to implement the sustainability conclusions). For example, if the RO Decision is delayed beyond 17<sup>th</sup> July (which we sincerely hope it will not be!), then we suggest you get the Sustainability paper out anyway, and not wait.
7. Again on process, we have our Prelims on 31 July and, given holidays etc, are starting to make preparations. Clearly we anticipate there will be a lot of focus for investors and analysts on the RO outcome. If the Decision is not out by then, we face a tricky position and wondered if you would have any problem in principle with us saying that you had asked us to examine the possible conversion of individual units? I know this is only hypothetical at this stage, and perhaps we could discuss nearer the time, but I just wanted to register the issue with you.

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**From:** [REDACTED]  
**Sent:** 25 May 2012 09:54  
**To:** Rhodes Sarah (Office for Renewable Energy Deployment)  
**Subject:** unit reporting

Sarah,

We've been giving some serious thought to the biomass conversion options that we have discussed over the last few weeks and, as [REDACTED] mentioned at her recent meeting with Lord Marland, have noted that the definition of unit reporting within the plant accreditation framework is key to progress.

We've sent you a 'significant amount of material about this, originating from our discussions with Ofgem a few years ago, but haven't discussed this in any detail with you. Is there any merit in going through this, or are you confident that you have all the information necessary to set the regulations? Our concern is that the level of detail, and possible necessary plant work, might take some time for Ofgem to determine.

Please let me know if we can help out here.

[REDACTED]

Drax Power Limited  
[REDACTED]

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**From:** [redacted] [mailto:[redacted]]  
**Sent:** 21 May 2012 11:20  
**To:** PS Charles Hendry (DECC)  
**Subject:** Drax: Definition of Unit Conversion

[redacted]

It was good to catch up on Thursday. As a follow-up, I thought you may (in confidence) find the attached note and email useful. They articulate the 'definition of conversion' issue we were discussing. As [redacted] says below, we are currently conducting some very hasty trials on [redacted] biomass burn which is higher than we have previously gone because, as I said to you, our base strategy has been to increase co-firing progressively, but prudently, across the whole station building up to unit conversion perhaps towards 2020.

If you need anything more do not hesitate to get in touch.

Best regards

[redacted]

[redacted]

*Director of Regulation and Policy*

**Drax Power Ltd**

3rd Floor, 41 Moorgate  
London EC2R 6PP

Office: [redacted]

Mobile: [redacted]

Email: [redacted]

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**From:** [redacted]  
**Sent:** 16 May 2012 09:02  
**To:** Simon Virley (simon.virley@decc.gsi.gov.uk)  
**Cc:** [redacted] [redacted] [redacted]  
**Subject:** Boiler Combustion Purity

Simon

Thank you for meeting with me on Monday to discuss the RO generally and also EMR, specifically CfD FITs.

My team is now preparing a draft term sheet for a CfD fit for Drax's low carbon output from biomass which we hope to send to your team in a few weeks.

Meanwhile, I asked my technical team to do a quick summary note on combustion purity for biomass in our type of coal boilers, which is hereby attached. We recognise that DECC's objective is to have the highest levels of biomass combustion within units but also reliable and flexible generation. There is very limited experience of burning very high percentages of biomass in the type of coal-boilers that are standard in the UK. I wonder if the solution might be a progressive increase in the required percentage for full conversion to allow for technical development as we all gain experience in how to handle high levels of biomass in the boilers reliably. I know that the Drax engineers would advise that the percentage should be [redacted] in the early years and [redacted] thereafter.

As I mentioned in the meeting, we are currently, in haste, doing technical trials on burning biomass above [redacted] in a single unit. If anyone from DECC would like to come to observe these trials (we have cameras in the boiler monitoring the burn and lots of other monitors) we would be pleased to host a visit.

Regards [redacted]

[redacted]

Chief Executive  
Drax Group Plc  
Tel: [redacted]

## Summary Information on Boiler Corrosion, Slagging and Fouling

### 1. Introduction

The use of biomass for combustion is not without its technical challenges. One of the most critical is that some of the non-combustible elements (such as alkali salts) within the fuel can have deleterious impacts when deposited upon metal tubing exposed within a boiler. This has been accommodated in dedicated biomass plants either by specific design of the boiler (such as the Ely straw plant) or by building circulating fluidised bed boilers operating at consistent temperatures within the height of the boiler or by using low steam temperatures (and hence low efficiencies). Unfortunately, all coal plant in the UK use pulverised fuel boilers which operate at very wide temperature ranges across the boiler and were not designed to limit these impacts.

In order to convert coal-fired pulverised fuel boilers to biomass whilst retaining their reliability and flexibility, care needs to be taken to ensure that the biomass is burnt in such a manner that these additional problems of slagging, fouling and corrosion can be mitigated. There is limited experience of this but it is believed that it can be done over time by a combination of fuel selection and the injection of suitable additions of mitigating compounds (which in some cases contain carbon), which interact with boiler deposits both physically and chemically.

### 2. Biomass Fuel Quality

The chemical properties of biomass vary greatly. Typically, low quality biomass is the product of a fast growing species that generally has a high content of alkali salts. All annual agricultural crops (for example straw, oat husks, miscanthus) produce low quality biomass. High quality or "clean" biomass is the product of very slow growing trees, typically from sustainable Northern Hemisphere pine forests with a low bark content. "Clean wood" biomass has a very low concentration of alkali salts but may not be available in sufficient quantities to fuel UK ambitions.

## Summary Information on Boiler Corrosion, Slagging and Fouling

### 4. Way Forward.

It is desirable to construct regulations in such a way as to ensure the long term reliability and flexibility of converted units whilst maintaining the highest practicable level of biomass throughput. (It should be noted that in this context, the percentage of biomass by heat should refer to the actual biomass ultimately combusted in the boiler.)

This will inevitably require an approach which allows for development in the understanding of how to mitigate corrosion, slagging and fouling from biomass. It is suggested that this would comprise an allowance for the use of additions of non-biomass products. [REDACTED]

*This limit could be reduced to 10% in 2020 by which time across the industry there will be much greater experience of different fuels and additives* which we would hope would provide alternative solutions to mitigating the deleterious effects of the of the non-combustible elements of the biomass whilst enabling a wider range of fuels.

#### **Note: Drax Experience**

During 2011 and early 2012 Drax conducted extensive trials on a single unit by burning around 800kt of a wide spectrum of biomass fuels with a large range of different coals at a range of biomass percentages up to 50% biomass. Biomass fuels trialled comprised the full spectrum of low quality through to high quality ("clean" wood) biomass. These trials at 50% proved that the unit remained reliable and flexible and that as the fuel quality [REDACTED] fault conditions were encountered in terms of slagging, fouling and corrosion. Working with third-party experts, bespoke additives were trialled which resulted in extreme slagging [REDACTED] We also ran a limited trial of co-firing 70% biomass with coal in 2011 which was inconclusive in terms of demonstrating the long term viability of high biomass throughputs and we did not pursue further.

On 9th May 2012 we started single unit trial burning >75% biomass in a single unit using "clean wood" only. Unfortunately, our biomass delivery systems are not sufficient to deliver the volume of biomass required for full load at these high percentages of biomass. The trial is on-going and will include extensive slagging, fouling and corrosion analysis.

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** 09 May 2012 16:38  
**To:** Rhodes Sarah (IEES); [REDACTED] (DECC); [REDACTED]  
**Cc:** Hargreaves Roger (Office for Renewable Energy Deployment); [REDACTED] (DECC); [REDACTED] (DECC); [REDACTED] (Office for Renewable Energy Deployment); [REDACTED] (Office for Renewable Energy Deployment); [REDACTED] (Energy Markets and Networks)  
**Subject:** Meeting tomorrow  
**Attachments:** Note to DECC May 9 2012 final.docx

**Follow Up Flag:** / Follow up  
**Flag Status:** Flagged

Sarah

Thank you for the opportunity to provide some further information. I attach another paper which mainly covers the actions we took away last week.

We look forward to the discussion at 2.30 tomorrow.

Nigel

[REDACTED]  
Head of Environment  
Drax Power Limited  
Selby  
North Yorkshire, UK  
YO8 8PH  
[REDACTED]

---

**From:** Rhodes Sarah (Office for Renewable Energy Deployment) [mailto:Sarah.Rhodes@decc.gsi.gov.uk]  
**Sent:** 09 May 2012 09:16  
**To:** [REDACTED] (DECC)  
**Cc:** Hargreaves Roger (Office for Renewable Energy Deployment); [REDACTED] (DECC); [REDACTED] (DECC); [REDACTED] (Office for Renewable Energy Deployment); [REDACTED] (Office for Renewable Energy Deployment); [REDACTED] (DECC CSSS)  
**Subject:** RE: Meeting next week

[REDACTED]

Could you arrange for tomorrow (Thurs) pl, inviting the copy list as well, and let [REDACTED] know the time

Thanks

Sarah

---

**From:** [REDACTED]  
**Sent:** 08 May 2012 13:30  
**To:** Rhodes Sarah (Office for Renewable Energy Deployment); Hargreaves Roger (Office for Renewable Energy Deployment)  
**Subject:** RE: Meeting next week

Sarah, Roger,  
Following [REDACTED] e-mail of last week, would it be possible to arrange a meeting for Thursday please. We will aim to circulate our paper on Wednesday

[REDACTED]  
-----Original Message-----

From: [REDACTED]  
Sent: 04 May 2012 19:19  
To: 'sarah.rhodes@decc.gsi.gov.uk'; 'roger.hargreaves@decc.gsi.gov.uk'  
Cc: [REDACTED]  
Subject: Meeting next week

Sarah / Roger,

As you know I am on A/L next week so [REDACTED] will be co-ordinating the follow up meeting. We said we would try and get you another short paper on tues/weds developing the points we discussed last Wednesday. Would be sensible for another discussion of that prior to [REDACTED] meeting Simon on Monday 16th afternoon.

Regards

[REDACTED]  
-----  
Sent using BlackBerry

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## Additional Information for Discussion on the Renewables Obligation

Drax welcomes the opportunity to provide further information on the RO, building on the separate papers previously submitted. Overall, Drax believes that the ROC regime needs to deliver the right level of rewards for the risk we will be undertaking. In particular, we have argued that the maximum potential of the plant will only be realised at a ROC band >1 and that the design of any cap needs to recognise the long term investment needs of an independent generator within the ROC market place.

### Summary

- [REDACTED]  
[REDACTED] The optimum way is to use a minimum level of coal (1 mill out of the 8 required) combined with additional ash injection. [REDACTED]  
[REDACTED]  
[REDACTED]
- We have strong opposition to any extension of the existing co-firing cap since it is anti-competitive and fails to recognise the low cost benefits of biomass. An independent generator such as Drax will be at a huge disadvantage in the market because such a cap would be on suppliers not on generators;
- However, if there is an overriding need to constrain biomass output in the short term and, if DECC decide to adapt the existing co-firing capping framework, it should not extend beyond March 2015 thereby providing the opportunity to develop a more appropriate regime. In that case, we would welcome the opportunity to work with DECC towards a longer term means of incentivising (and managing the growth of) renewable generation, potentially through negotiation of a CFD FIT for biomass ECF/converted plant;
- A large scale biomass supply volume takes time to develop and it is difficult to convert a unit 'overnight'. Mechanisms to facilitate ramp-up of biomass supply without loss of ROC support need to be in place and we suggest the use of the enhanced co-firing band (within the range of 50-80% biomass throughput) to achieve this;
- Access to the ECF/conversion bands should be limited to generators which can demonstrate a capacity to generate from biomass on a long term basis. We believe that conditions or gateways could be introduced into the existing ROC regime to achieve this.
- Optimising the reliability and flexibility of a multi-unit station requires the flexibility to shift fuel and output between individual units. Hence regulations should implement a unit reporting arrangement to allow different units across the station to operate as a 'converted' unit.

#### 1. Overview

It is understood that ECF and conversion will operate on a unit basis and on a monthly compliance period. It is also understood that no new accreditation will be required to introduce ECF/conversion although each unit will report separately to Ofgem for each period. As noted in our previous paper, for a multi-unit station prudence indicates that there should be flexibility to change the nominated ECF/conversion unit(s) between compliance periods to reflect (for example) breakdowns and emergencies.



## 2. Definition of unit

Drax did some extensive work with Ofgem in 2010 to consider the practical aspects of 'unit separation'. The relevant documentation has already been shared with DECC but the relevant conclusions are as follows:-

- Any unit operating in ECF or converted mode will be fuelled separately, operated separately and its electrical output and emissions monitored separately from other units on the station;
- When in operating mode (i.e. outside start-up/shut down) the vast majority of the power required to operate a ECF/converted unit has to be powered directly by the Unit itself without input from the Station Board;
- Any power used for equipment necessary for operating the ECF/converted unit powered from the Station Board for security or emergency reasons has to be measured;
- Certain ancillary activities such as water abstraction, ash disposal and office power are common to all Units and the contribution to the operation of the ECF/converted unit will be estimated by suitably pro-rating total site works power according to unit loads. Similarly, provision of steam and auxiliary fuel will be estimated by suitably pro-rating of site usage if no direct measurement exists;
- All pro-rated works power will be subtracted from the output of the ECF/converted unit for submission to Ofgem.

## 3. Definition of conversion

We understand that DECC are investigating the regulatory implications of using coal ash (at the 5-10% level) or other additives to reduce corrosion/fouling and hence facilitate high levels of biomass. The single most effective conditioning material is the normal ash content of coal, supplied within the coal stream in co-firing to the point where it is most reactive within the flame. Sulphur content, ash content and ash melting point all contribute towards providing a buffer for the challenging effects of biomass.

[REDACTED]

[REDACTED]

[REDACTED]

As mentioned in our previous paper, it would be helpful if DECC could facilitate the above by modifying Article 22(3) of the RO so that the fourth indent reads 'emission, fouling or corrosion control'.

[REDACTED]

Taken together, these 2 elements could result in the effective biomass proportion for fully converted units being [REDACTED] biomass by heat.

#### 4. Force majeure

We have been requested to consider a force majeure condition that would not tip converted plant temporarily into the lower ECF band. These could include:-

- a. A period of coal-only operation is required after [cold] start-up and commissioning when the protective inert oxide layer is forming. In order to improve boiler reliability by avoiding initial deposition of aggressive sticky corrosive salts derived from the easily volatilised elements in biomass it may be necessary to "coat" the boiler tubes with more benign coal derived deposits prior to high biomass regimes. The initial burn period (first week plus) is particularly acute after extensive tube replacements during 4 yearly unit outages but may also be required in the event of a tube leak and subsequent repair/replacement.
- b. Fuel shortages due to either supply chain disruption or inability to meet steep fuel requirement ramp-rates would affect generation as burning coal for 'load support' would cause the average biomass percentage to rapidly deteriorate.

#### 5. Ramp up and ECF band

In our previous paper we noted the value of the ECF band as an intermediate ROC band to account for the progressive build-up of fuel. A typical Drax unit will require around 1.4m tpa of biomass to achieve conversion status (80%) at 64% load factor and such a throughput will only be possible to 'switch on' over a long period – possibly up to a year- during which the unit will operate at an unprofitable level. The difference in ROC income between the co-firing band and the converted band over this period may be of the order of £30-40m.

Alternatively, as noted previously, we suggest that, when a unit has been notified to DECC/Ofgem as being converted within the next [12] months, a 'ramp-up period' is provided which ensures that all biomass burnt within that [12]-month period prior to attainment of ECF or full conversion status attracts the higher ROC rate.

#### 6. 2013/2014 expectations

We understand that DECC are concerned about the volumes of biomass generation in the near term and particularly for 2013-2014.

- a. Little generation will occur under a 0.5 ROC regime since this is largely uneconomic
- b. The only two UK generators that have publicly demonstrated any potential to convert or run at high levels of ECF in 2013/14 are Drax and Tilbury. RWE's Remit website shows all 3 units unavailable from 1<sup>st</sup> April 2013 for 12 months and therefore there will be no

ROC production from them in 2013/14. We are also aware that Ironbridge has considered an early conversion.

#### 7. Throughput expectations for 2014 and beyond

DECC calculations on the extent of generation from ECF/conversion in the next few years need to be based on an understanding of the constraints in pellet supply, US port capacity, UK port capacity and UK generation site storage.

A sudden move to biomass could not easily be accommodated and would require massive investment in overseas and UK port and rail infrastructure - many more trains would be required and many covered stores would be needed to be built at both ports and generation sites. It will take many years of significant investment in UK ports and UK rail infrastructure to support large scale growth of biomass and co firing. Indeed the load port situation is no different and whilst many are now chasing the few available ports in the US, they all need robust contracts to secure the space.

We consider North America as the main supply source for short term (2013 to 2015) "clean" biomass supply.

[REDACTED]

[REDACTED] We also note that IEA estimate that only 5.5mtpa is available for export to the whole of Europe from North America by 2015.

[REDACTED]

- [REDACTED]
- [REDACTED]

Further constraints are imposed by the ability to build the necessary rail and site storage infrastructures within the period up to 2015.

More detail is provided in the Annex on Biomass Supply and Port Capacity.

#### 8. Cap structure, legislation required and timing

We set out, in our previous paper, our concern that, unless suitably designed, any cap may severely impact the ability of independent generators such as Drax to obtain the necessary finance to enable long term investment - banks will only provide finance on the surety of an allocation. We also set out some initial criteria and considerations which DECC might wish to incorporate into the final model.

We are strongly opposed to DECC constraining biomass usage and particularly through a mechanism such as the existing co-firing cap since it is anti-competitive and fails to recognise the low cost benefits of biomass. The arguments against this cap that we used in the past are as valid today as they were a few years ago and, indeed even more persuasive since the amounts of investment and ROC support involved are now considerably higher.

Our fundamental issues here are that

- An independent such as Drax will be at a huge disadvantage to most other generators because such a cap would be on suppliers not on generators.

This will result in a large discount in the ROC price which will be absorbed by the Suppliers, little certainty in our biomass procurement programmes and higher volatility in output;

- There is no long term certainty of allocation under any such arrangement, thereby reducing our ability to attract the necessary capital to invest.

If DECC decide, however, that a cap of some form is required, we believe that the current RO includes sufficient flexibility for the amount of ROCs to be effectively controlled through a number of mechanisms. For example, we believe that conditions or gateways could be introduced requiring generators to demonstrate capacity to generate from biomass on a long term basis. We also understand that the RO would allow for a cap on ROCs to be introduced at the generation level.

However, if there is an overriding need to constrain biomass output in the short term and, if DECC decide to adapt the existing co-firing capping framework, it should not extend beyond March 2015. In the interim, DECC will be able to assess the likelihood of other generators converting their plant and can build a more robust long term biomass plan. In that case, we would welcome the opportunity to work with DECC towards a longer term means of incentivising (and managing the growth of) renewable generation, potentially through negotiation of a CFD FIT for biomass ECF/converted plant.

## Annex

### Biomass Supply

In the short term (2013 to 2015) and with the requirement of "clean" biomass only, while we believe that supply will be available to meet the expected base case UK generation demand levels, any potential higher cases of demand above this level would be significantly constrained by the available supply

We estimate the biomass pellet demand from UK coal plant to be up to approx. 10mtpa but has the potential range of between 5mt and 15mt by 2015

In the short term (2013 to 2015) and with the requirement of "clean" biomass only, we believe that supply will be available to meet the expected base case UK generation demand levels, but any potential higher cases of demand above this level would be significantly constrained by the available supply. We anticipate the UK biomass generation between 2013 and 2015 that relies on "clean" biomass to be a maximum of 10mtpa supplied mainly from North America.

Other geographies are expected to provide very little [REDACTED] of this specific UK coal plant biomass demand by 2015 because;

- The rest of Europe will consume a lot of any supply produced from within Europe;
- Russia may provide approx [REDACTED] by 2015 but the lack of infrastructure and the country risk provides significant challenges in accessing any new biomass supply in the short term;
- South America has a huge potential of supply but predominantly from fast growing Eucalyptus plantations and agricultural residues which are not "clean" biomass. The time taken to grow these supplies specifically for energy or to develop the infrastructure required pushes the expected start of supply well beyond 2015;
- Africa has similar long term potential to South America but is not expected to have a significant supply of "clean" biomass established by 2015;
- We do not expect any significant supply from Asia that is "clean" and generally we expect it all to be consumed within Asia.

Port capacity

We consider the UK deep water ports ( i.e. Handymax/Panamax capable) handling bulk commodities today.

**East Coast:**

Tyne, Tees, Immingham, Thames (specialist terminals)

**South Coast:**

Southampton

**West Coast:**

Bristol, Liverpool.

**Scotland**

Hunterston

Grangemouth (specialist terminals)

Each of these ports handle a variety of bulk commodities and will have access to some bulk storage, normally designed for bulk grains, animal feeds, minerals or cement products. The scale of the storage will generally be limited and, unless the existing business has left the port or is failing, it is unlikely the stores would or could be turned over to biomass imports.

**Tyne:** Grain export facility with no interest in moving from the port so unlikely would become available for import operations. Coal import facility still widely used by Drax and others indications from all Ports is a decline in coal post 2014 but not before then. Drax import facility has associated rail loading. [REDACTED]

**Tees:** Handles a large volume of bulk commodities today all through specialist terminals operated by the importers. No existing facilities for the development of biomass import so will require investment with backing. [REDACTED]

**Immingham:** Handles a large volume of bulk commodities today including coal for many of the generators in the region. With the exception of coal the bulk commodities are stored within large bulk storage facilities within the port and these are a combination of individual operator stores such as the Cefetra animal feed facility or port operated bulk storage predominantly used for the fertilizer trades. [REDACTED]

**Thames:** The bulk facilities on the Thames tend to be owner operated and offer limited capability today. The new Thames Gateway project does offer some space for the development of bulk imports although originally intended for container developments. [REDACTED]

**Southampton:** The port does handle dry bulk commodities today mostly Grain Feed and fertiliser for the local agricultural community in the South and South West. [REDACTED]

**Bristol:** Handles large scale bulk imports and exports today including coal for RWE/SSE and others, animal feed imports for the major companies such as Cargill and Arkady (ADM) as well as grain exports. The port does have storage facilities which are predominantly used for the animal feed trade. [REDACTED]

[REDACTED]

**Liverpool:** Like Bristol this port has a tradition of handling bulk commodities and has a number of terminals dedicated to such products as well as a large grain facility. The grain terminal is dominated by Cargill and Allied Grain imports [REDACTED]

[REDACTED]

have a large coal import facility which serves Ironbridge and the SSE station Fiddlers Ferry. [REDACTED]

[REDACTED]

Scottish Ports have limited capability. [REDACTED]

Beyond the major ports listed here there are many smaller ports around the UK Coast capable of handling bulk commodities such as Hull in our own area. The depth of water and size of ships capable of navigating the locks make these very limited in capability but could handle smaller vessels from Europe or tonnage transhipped from the continent in large volumes.

In all of the major ports mentioned above the other main constraint will be access to rail capacity and the potential increase in track access charges which drives users to go through local ports.

[REDACTED]

**From:** [REDACTED]mailto:[REDACTED]  
**Sent:** 02 May 2012 08:52  
**To:** Rhodes Sarah (Office for Renewable Energy Deployment)

4

**Cc:** Hargreaves Roger (Office for Renewable Energy Deployment)  
**Subject:** Discussion note for this afternoon

Sarah,

As discussed with Roger yesterday, please find attached a short note setting out some initial thoughts from us following the helpful discussion we had with Roger and some of your colleagues on Friday. We look forward to discussing these with you this afternoon at 14:00. I will be accompanied by [REDACTED] and [REDACTED]

Regards

[REDACTED]

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**Additional Information for Discussion on the Renewables Obligation**

Drax welcomes the opportunity to provide further information on the RO.

**Summary of Key issues and outcomes**

Drax has consistently argued for the existence of an enhanced co-firing (ECF) band as the most cost-effective means of progressively increasing the throughput of biomass on a coal-fired plant. Our approach has been 'horizontal' (i.e. across all six units) rather than 'vertical' (i.e. one unit complete conversion at a time). The merits of this approach were well recognised by DECC in the recent Consultation document, supports DECC's goal of *maximising cheaper generation*, and provides the lowest cost, lowest risk and maximum reliability to any programme of increasing biomass usage.

This document sets out various options and implications for a unit, rather than station, approach. The principal issues (given in detail in the Annexes) relate to issues of band support levels/unit accreditation, and market management/'biomass caps':-

- a. We recognise DECC's preference for ensuring that biomass is used in boiler units which are predominantly biomass-fired and that consequently the ECF threshold in the recent RO Consultation was considered to be too low. Our proposals, therefore, are (on a unit, monthly, compliance basis):-

% biomass	ROC
0 to 20	■
20 to 50	■
50 to 70	■
70 to 80	■
80 to 100	■

- b. It is critical that the ECF/conversion bands are only available to units which can guarantee a significant contribution to long term (i.e. 2020 and beyond) renewable energy production. Such a guarantee needs to be a combination of a high barrier for entry to the ECF/conversion unit band combined with a continued examination by DECC of post 2020 expectations.
- c. DECC may implement a biomass generation capping mechanism to give it comfort that the Levy Control Framework will not be breached. We do not believe that the stepped RO support levels/ban is the best way forward and that a separate mechanism should be implemented. Our initial considerations in this area are given in Annex 2. Any such cap needs to be designed in such a way as to enable the financing of long term investments in biomass firing.

**Annex 1. Unit accreditation and banding levels.**

**1. Technology**

[REDACTED]

We are only aware of one small plant in Europe which is 100% converted to biomass but this operates on a restricted fuel diet of 'clean wood'. The vast majority of the co-fired plant in Europe use the 'co-firing' or 'enhanced co-firing' route as a means of displacing



coal, further indicating that 100% conversion of coal units to biomass is an unproven technology, particularly for conversion of large, efficient, coal plant.

Drax has a great deal of recent experience of operating at and around 50% conversion. At this point, a wide range of fuels can be burnt without major difficulty. There are however some impacts on efficiency and total output (both MW and reliability) mainly because of the changed combustion and heat transfer characteristics of the fuel.

[REDACTED]

We also have a reasonable level of confidence that any SCR that we construct (for our nominally coal units) could eventually be used at [REDACTED]

Work would have to be done to raise the confidence level beyond [REDACTED] throughput.

As a result of the above, our proposals aim to reduce the focus on the definition of full unit conversion as '100 % biomass' throughput on individual units. We suggest that the DECC approach widens the envelope to facilitate the delivery of the cheapest and most reliable biomass power, irrespective of whether it originates from fully or partially converted units.

## 2. Banding Levels

We understand that DECC is focused on the unit-by-unit conversion approach and therefore our proposals reflect this as follows. (Note that these figures represent a monthly compliance basis and therefore less than the operating target range):-

% biomass per unit	ROC	Comments
0 to 20	●	Could be 25% or more. We recognise that DECC wish to see a high threshold to prevent gaming. Precludes "through the mill" solutions.
20 to 50	●	Ordinary co-firing. We recognise that DECC wish to see a high threshold to prevent gaming but this level simply reflects fuel cost recovery.
50 to 70	●	Principally a means of ensuring that fuel costs (plus a risk element) are recovered as plant and supply chain investments lead progressively towards very high ECF or full conversion.
70 to 80	●	Enhanced co-firing. Top end reflects current confidence in ability to operate plant [REDACTED]
80 to 100	●	[REDACTED]

The various levels are proposed as critical risk mitigants:

- to allow for progressive build up of fuel (a typical 500MW unit will require 0.9m tpa of biomass to achieve 50% biomass at 64% load factor). (If DECC consider this approach to be too difficult, then an alternative to the 50-70% unit band is that, when a unit has been notified to DECC/Ofgem as being converted within the next 12 months, a 'ramp-up period' is provided which ensures that all biomass burnt within that 12-month period prior to attainment of ECF or full conversion status attracts the higher ROC rate);
- to protect generators from the significant and costly risk of potential disruptions in fuel supply (delayed ships, rail / port disruptions (at either end), pellet plant forced outages etc);
- to maintain secure flexible electricity capability for the UK.

### 3. 'Gaming'

We recognise that DECC have concerns about 'gaming' by operators who may have an interest in flexing their biomass outputs depending on the coal/biomass price difference. Such behaviour was evident in the early days of co-firing when some operators took advantage of the low capital costs of low levels of co-firing.

Therefore we propose that DECC raises the unit co-firing threshold to 50% such that only serious players enter the unit ECF/conversion market.

We are also proposing that low levels of biomass are not rewarded at all since this will be an additional, powerful, incentive towards ensuring a high level of commitment / investment to unit conversion.

It is also worth noting in this context that:-

- at medium-high levels of biomass throughput, the time and effort to revert to coal by modifications to burners, mills and fuel distribution systems is measured in months rather than days;
- the great majority of the biomass will be contracted on strategic, long term (7-10 year) contracts (in effect 'take or pay') which do not permit any short term variation. The biomass market is not commoditised to allow short term fluctuations or opportunities for resale of large volumes.

### 4. Unit Conversion Implementation

DECC needs to consider whether it is necessary to formally re-accredit each unit in a multi-unit station as individual plant or whether it is sufficient for each of these units to simply report individually to Ofgem.

However this issue is managed, it will need further work on unit separation and methodologies for (for example) allocation of imported and works power.

On a multi-unit station, prudence indicates that there should be flexibility to change the nominated biomass unit(s) to reflect (for example) breakdowns and emergencies.

### 5. Fuel availability and fuel price

For corrosion, slagging and fouling reasons, a fully converted unit under DECC proposals will require the exclusive use of 'clean wood' pellets. Even a unit running at [REDACTED] biomass will be severely restricted in its fuel diet.

All DECC estimates of biomass availability (Biomass Strategy, AEA Technology 2010) have been developed on the basis of the use of biomass of all grades including straw,

agricultural residues etc. Restriction to the 'cleanest' grade will lower the global availability of fuel which might be imported to the UK and will inevitably introduce price / cost increases. The current Drax approach allows the use of cheaper fuels including UK agricultural residues and energy crops.

We note that the biomass price used in DECC's RO Consultation modelling assumed that co-firing plant would use a mix of 90%/10% imported/domestic fuel and hence changing to a 100%/0% ratio would automatically increase costs by around 6%.

Adoption of the '100% biomass' solution will involve the termination of all UK energy crop and local agricultural product contracts and the closure of the Drax straw pellet plant and 'Green Shoots' programme. This would not be a good advertisement to the local farming community to build an energy crop programme. Adoption of the ECF band (70-80%) may allow the potential use of such fuels although the extent will be the subject of more R&D.

## 6. Ancillary uses of fossil fuel

[REDACTED]

However, it would still be helpful if DECC could modify Article 22(3) of the RO so that the fourth indent reads '*emission, fouling or corrosion control*'.

## Annex 2. Market issues

### 1. Restrictions to biomass output

DECC have a concern around the potential volumes of biomass power which might be brought forward and are looking for mechanisms which can be invoked to limit such outputs. There are several models which might be adopted here and considerable more work needs to be done in this area before a suitable mechanism is agreed. Various points are, however, relevant here:-

- We have a concern that, unless suitably designed, the cap may severely impact the ability of independent generators such as Drax to obtain the necessary finance to enable long term investment - banks will only provide finance on the surety of an allocation;
- Any cap should recognise a plant's current biomass status and be based on historic biomass throughputs;
- DECC would have to be completely transparent on the expectations and volumes over the whole period to 2025 to give generators as well as DECC the confidence that the process would deliver its objectives;
- Caps could not be reduced by DECC – the sector is grandfathered;
- DECC needs to design a system which prevents operators from 'gaming' the system by accrediting a plant without any intention to fully exploit its full potential.
- Fundamental to the design is the mechanism whereby the 'cap' interacts with the market for 2016 (IED compliance) and 2020 (RED compliance) as discussed below.

## 2. 2016 IED compliance

We recognise that some of the recent interest in biomass exhibited by other generators is due to the perception that biomass could be a cheaper means of compliance with IED in 2016 compared to Selective Catalytic Reduction (SCR). This is a perfectly appropriate commercial decision on a plant-by-plant basis but DECC need to be aware of the potential implications of a major sectoral move to biomass and hence need to be able to design the capping mechanism accordingly.

A sectoral decision to abandon SCR and to rely entirely on biomass is dangerous for security of supply in 2016 and beyond since there could be a significant mismatch in timescale between the need for a station to be IED-compliant and its ability to completely convert to biomass. It is highly unlikely that the UK can convert all stations, set up 15-20mt of biomass supply chain as well as building port and other infrastructure within the next few years. Units which are not either biomass-converted or SCR-fitted in 2016 will either have to close or operate at very low load factor.

From DECC's point of view, companies which offer units (or stations) for biomass unit ECF/conversion accreditation therefore need to be able to demonstrate (In addition to the criteria set out below) their capacity to operate in 2016 at a high load factor on biomass.

## 3. Longevity of plant - the 2020 question

We recognise that a critical outcome for DECC is compliance with the 2020 renewables targets. This imperative demands that plant qualifying for cofiring support should be capable, and indeed required, to operate into the early 2020s at least. The regulatory regime should therefore involve a mechanism which prevents plant from obtaining cofiring accreditation and subsequently (for example) opting out of the IED in 2016 or exiting a IED TNP into a low load derogation.

Whilst it is difficult to legislate against plant closing for commercial reasons or because of incidents, the RO needs to develop a process which only selects those plant where there is a high (and continuing high) probability of survival beyond 2020. Reliance on a simple requirement for a company to state its intention to operate into the long term is unenforceable.

We consider therefore that each unit submitted for accreditation must pass a series of tests to provide information to demonstrate preparedness and long term capability.

[REDACTED]

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**From:** [REDACTED] (DECC)  
**Sent:** 23 April 2012 13:49  
**To:** [REDACTED]

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi [REDACTED]

Any update on what we talked about this morning? Happy to talk by phone if you'd prefer.

[REDACTED]

Project Manager - RO Banding Review  
Renewable Financial Incentives Team  
Office for Renewable Energy Deployment  
Department of Energy and Climate Change  
Area 4A  
3 Whitehall Place  
London  
SW1A 2AW

Telephone:

[REDACTED] (use this number if calling from within the UK)

[REDACTED] (use this number if calling from outside the UK)

Sent: 18 April 2012 18:59

To: Nicholson Chris (DECC Private Office Group); PS DECC SPADS

Cc: [REDACTED]

Subject: Meeting with [REDACTED] CEO Drax, 20 April at 2pm

Chris

[REDACTED] is travelling at present so as a follow up to her email to you, sent earlier this week, I thought it would be useful to suggest an agenda for Friday's meeting. For clarity I have included a bit of context against each item. Please feel free to add to the following:

#### Agenda

##### 1. Introduction to Drax

*A brief outline of Drax Group plc and its generating and retail assets, namely Drax Power Station, the UK's largest, cleanest and most efficient coal-fired power station, and Haven Power, our growing electricity retail company supplying business customers. Reducing the carbon footprint of the Group is central to our strategy. Efficiency improvements, burning sustainable biomass and exploring carbon capture and storage are all strands of our carbon abatement activities, but building a biomass future for the Group is our focus.*

##### 2. Biomass plans

*Generating electricity from sustainable biomass has many benefits and complements well the UK's energy policy objectives in that it is low carbon, therefore good for the environment, low cost, therefore good for the consumer, and both flexible and reliable, therefore good for security of supply. Sustainable biomass is abundantly available across*

*the globe. Our carbon footprint analysis proves that importing biomass from as far afield as the West coast of Canada still delivers very significant greenhouse gas savings compared to burning fossil fuels.*

*Extensive R&D into co-firing biomass in place of varying proportions of coal at Drax Power Station has given us the confidence that we have the technical competence to become, over time, a predominantly biomass fuelled generator. To do so is entirely dependent on an appropriate level of regulatory support. We have engaged fully with DECC during the RO Banding Review period and have openly stated that at the proposed level of support for enhanced co-firing we will be able to co-fire more biomass than at present. However, with a moderate uplift in the level of support we could maximise our potential. We believe that were we not to maximise our potential it would be a missed opportunity to the detriment of the consumer, the growth agenda and the green agenda. There is an exciting opportunity to establish a robust supply chain in this new sector and with it create thousands of jobs, whilst making a meaningful contribution to meeting the UK's 2020 targets.*

##### 3. Carbon Capture and Storage

*Alstom, Drax and BOC are consortium partners in Capture Power, which is behind the White Rose CCS Project proposal to construct a standalone 426MW oxyfuel CCS demonstration project at the Drax Power Station site. European funding has been sought as part of the NER300 programme and the consortium will also be bidding for funds through the recently announced UK CCS programme. Appropriate market mechanisms are also a key requirement for the project, for example, a satisfactory Contract for Difference Feed-in Tariff under the Electricity Market Reform proposals. We believe the Yorkshire and Humber region is ideally placed to demonstrate this important technology end to end through linking up with National Grid's proposed 'Humber Gateway' CO2 pipeline to the North Sea. The cluster of generating and industrial process plants in the region strengthens the Humber Gateway proposal.*

##### 4. Community Energy Saving Programme

*Despite our best efforts it has become clear that we are extremely unlikely to comply with our obligation under the Community Energy Saving Programme. We believe that market and administrative issues, which have been outside of our control, have made the programme unworkable. We do, however, wish to see the target customer group benefit and we do wish to see carbon savings delivered. We have suggested that a solution may be to monetise any shortfall we encounter in meeting our target under the obligation and inject that into an energy efficiency programme of Government's choosing such that the two objectives of consumer benefit and carbon savings are delivered.*

Finally, [REDACTED] will be accompanied by [REDACTED] (Head of Environment) and me. I look forward to meeting you on Friday.

Kind regards

[REDACTED]

Renewables Obligation Team,  
Department of Energy & Climate Change,  
Area 4A,  
3 Whitehall Place,  
London, SW1A 2AW.

12<sup>th</sup> January 2012

Dear Sirs,

**Response to Consultation on proposals for the levels of banded support under the Renewables Obligation for the period 2013-17 and the Renewables Obligation Order 2012**

Drax Power Limited (DPL) is the operating subsidiary of Drax Group plc, and the owner and operator of Drax Power Station in North Yorkshire. This is the largest, cleanest, and most efficient coal-fired power station in the UK and at current output levels its coal and alternative fuel burn approaches some 10 million tonnes per annum. Its six 660MW units supply some 7% of the country's electricity needs.

Drax welcomes the opportunity to comment on the Consultation since, over the last five years, we have been expanding our biomass usage considerably. With the capability to produce 12.5% of the station's output from sustainable biomass – equivalent to the output of over 700 2MW wind turbines – Drax is now by some distance the largest renewable generating facility in the UK. In 2010, Drax produced around 7% of the UK's renewable power, more than twice that of the next largest renewable facility.

Our key points are as follows:

- Drax welcomes the introduction of new bands for enhanced biomass co-firing and conversion and agrees that the support level should be the same for each;
- The qualification threshold for enhanced co-firing support should be 20% rather than 15%, and should be assessed on a monthly basis;
- The proposed 1 ROC/MWh support is insufficient to bring forward the full potential of enhanced co-firing / conversion. In calculating this level of support DECC has:
  - underestimated the biomass fuel costs for both imported and UK sourced biomass;
  - not recognised the need for generators to properly manage the foreign exchange exposure arising from the longer-term strategic supply contracts they want us to enter into; and
  - not fully compensated generators for the foregone earnings from the existing plant that would have accrued had the plant continued to operate as a coal plant (i.e. the 'residual value' of the plant).
- A moderate increase in the 1 ROC/MWh support to address these issues would significantly increase the renewable generation from biomass at a much lower cost to consumers than the alternatives;
- The 90% load factor DECC is assuming for enhanced co-firing / converted plant is impossible to achieve in practice. A more realistic estimate would be around 65%. Using this would significantly reduce the forecast number of ROCs generated from renewable biomass and hence the overall support costs. A moderate increase in ROC/MWh support for enhanced co-firing/conversion would therefore not necessarily increase the overall cost of RO support;
- The sustainability standards for biomass should be 'grandfathered' for all fuel supply contracts in place on 1 April 2013;
- The proposed level of support for dedicated biomass, 1.5 ROCs/MWh, makes the investment case for these developments highly challenging. The step down in support for new dedicated biomass plants from 1.5 ROC/MWh to 1.4 ROC/MWh in April 2016 should be removed or delayed.

## Introduction.

Generating electricity from biomass has considerable potential and should have an important role as a low carbon, cost effective, reliable and flexible renewable technology in the future energy mix of the UK, as recognised by the Government in its Renewables Roadmap, published in July 2011.

The Renewables Obligation Banding Review is critical to ensuring electricity from biomass achieves its full potential and we welcome the overall thrust of the document as it focuses on maximising *'deployment of the cheapest renewable technologies, such as coal-to-biomass conversions and co-firing'*. We also welcome Government's recognition of the role that sustainable biomass generation can play in the future, *'as one of the most reliable and cost effective sources of renewable energy'*.

Given the implementation of this Review with an appropriate level of regulatory support, Drax is prepared to expand significantly its renewable power generation to become, in time, a predominantly biomass fuelled generator and to contribute greatly to the UK's renewables and carbon reduction targets. We are therefore very supportive of the principle of converting existing coal generating stations to biomass as a cheap and effective way of achieving renewables deployment using existing infrastructure, supporting other less flexible renewables and hence helping to maintain security of supply. This document provides our conclusions regarding the Consultation and we therefore provide:-

- a. A non-confidential overview of the Banding Review proposals (this document);
- b. A confidential set of answers to the specific DECC questions, supplemented by material summarising recent discussions with DECC. (submitted separately)

As noted above, we fully support the policy direction of increasing the usage of biomass to meet 2020 and 2030 targets. Given the importance of bioenergy to the achievement of national targets, it is important that both the Banding Review and the Government's forthcoming Bioenergy Strategy are set in the appropriate context. In particular, the high UK population and low existing forest resources imply that the UK will have to import substantial amounts of bioenergy to ensure compliance with these national targets. We have therefore expanded our overview of the Banding Review Consultation to address some of these wider issues.

## Enhanced co-firing and conversion

We welcome the creation of specific support levels for the increased use of sustainable biomass in existing coal-fired power stations through enhanced biomass co-firing and full conversion. It is difficult to envisage a viable business case for an operator simply wishing to invest in biomass at a maximum of 15-20% throughput - the pressures on carbon prices and the requirements of the Industrial Emission Directive imply that such investments will be for an eventual extensive biomass throughput and for a substantial period of time.

Hence, we support the rationale for these support levels on the basis that enhanced co-firing enables a unit by unit upgrade towards complete conversion. Indeed, we see the whole purpose of the enhanced co-firing band is to encourage stations who wish to increase biomass throughput progressively because of limitations of (for example) plant size or biomass availability. The costs (per MWh) for both investment and fuel are similar for these two techniques and therefore the support levels should be identical.

We are concerned that the proposed level of 1ROC/MWh for enhanced co-firing/conversion will be insufficient to allow us to maximise the potential for producing this low cost renewable electricity. With a moderate increase in support we believe we could, over time, substantially increase biomass throughput. If support is not increased, we believe it will be a missed opportunity for burning biomass in place of coal in the UK's coal-fired generation plant and this would lead to higher electricity prices for the UK consumer who will bear the cost of the more expensive alternatives required to meet the UK's 2020 climate change targets.

## Capex

The Arup assessment of capital and operating costs is within the range of incremental costs estimated by Drax. Determination of the level of support is most sensitive to biomass fuel costs and this response reflects a focus on this area.



## Fuel prices

Converted and enhanced co-firing plant will only be able to operate using finely ground, probably pelletised, biomass. The price of this fuel will therefore have to include the cost of processing to convert the raw un-pelletised feedstock into a dry pellet form for use in power generation in existing coal boilers. We believe the price for fuel sourced from domestic suppliers has been significantly underestimated by DECC because of a failure to take these costs into account.

The imported fuel costs used by DECC do not fully reflect the new supply chain infrastructure required or the costs of the additional transport and processing required to render raw feedstock into a pelletised form. We have provided evidence to support modifications to these price levels. In addition, biomass-fired renewable generators will have to incur costs to hedge the foreign currency exposures assumed when purchasing internationally sourced biomass since there is no correlation between UK power prices and exchange rates and no recognised method of measuring the correlation between biomass prices and exchange rates. Such foreign exchange hedging costs need to be addressed in the ROC assessment. Our assumptions relating to the level of such hedging costs are included in our detailed response to the consultation questions.

## 'Make-whole'

The methodology DECC has used for setting ROC levels for enhanced co-firing / conversion is based on the principle of "topping up" (or "making whole") existing generators with respect to the additional costs of burning biomass rather than coal in their existing plant. However, DECC has not set out the detail of its calculations of exactly how this has been done, and what costs and revenues have, or have not, been included. As a result Drax commissioned an independent paper to examine which costs should properly be included in this "make whole" process and that paper is attached as part of the Confidential Annex to this overview. One of the key conclusions of that paper is that the ROC support should include an allowance for the earnings from the existing plant that would have accrued had the plant continued to operate as a coal plant (ie. the 'residual value' of the plant). This approach is also supported by the Committee on Climate Change

Our understanding is that the DECC levelised cost calculation does include an allowance for the foregone earnings from burning biomass rather than coal. However, it apparently only does so on the basis of making the generator whole for the derated biomass capacity (eg. 700 MW of a 1000MW station). If this is the case, then the proposed ROC support fails to compensate generators for the foregone revenues on the difference between the existing coal capacity and the derated biomass capacity (ie. 300MW in the previous example). This is an error which should be corrected.

## Load Factor

Drax disagrees with the 90% load factor assumption for enhanced co-firing and conversion outlined in the RO Banding Review Consultation Document, October 2011 (page 143, Table 8). Drax believes that this is not possible as planned and unplanned outages will limit the maximum load factor of biomass generation to around 80% – 85%. Without a significant increase in demand, biomass will be pushed out of merit even under low wind build scenarios, further reducing the effective load factor. Even when biomass generation is in merit during overnight periods there is a significant probability that it will be turned down by NGC to provide reserve and response along with other responsive plant (CCGTs).

If a biomass generator cannot forecast a significant and regular running regime / fuel demand over the summer overnight periods it may be more economic to limit purchases to daytime running only, thereby foregoing very short term biomass burning opportunities but avoiding storage costs. Under the forecast renewable generation growth scenario contained in the Renewables Roadmap load factors for individual biomass generation are likely to be in the range 55% to 75% (of de-rated capacity). The average load factor of 64% used by Arup for DECC looks a reasonable assumption. Load factors will only be higher than this if there is a significant reduction in nuclear/wind generating capacity compared to forecast or a significant increase in forecast demand.

## Dedicated Biomass

In addition to our focus on biomass enhanced co-firing / conversion at Drax Power Station, we have been working with Siemens Project Ventures on our dedicated biomass developments. We are disappointed that the proposed level of support for this technology remains at the same level as today, 1.5ROCs/MWh. This makes the investment case for these developments highly challenging. Any further reduction from this level

will make even these projects unviable. The very challenging level of ROC support proposed is further eroded by the proposed step down to 1.4 ROCs/MWh in April 2016.

Given the likely timetable needed for the Government to enact these regulatory changes, (currently estimated at Q3 2012) which is a key lender requirement, and the typical construction period for a large scale dedicated biomass plant (39 to 42 months) it will not be possible for any projects to reach accreditation before the end of 2015 at the earliest (Q1 2016 is more realistic). This date is at best only 3 months prior to the date of the proposed step down and leaves both sponsors and lenders with little or no 'float' to ensure that the 1.5ROC/MWh support level can be secured.

Therefore, this step down should be removed altogether to give a reasonable opportunity for the small number of previously developed, efficient, projects to reach financial close. Alternatively, the date should be postponed to at least December 2016. Making this change would for developers, to some extent, address previously unforeseen delays in the timetable for securing regulatory certainty during this review.

In addition, we do not believe that small scale biomass plants are likely to be more economic than large scale plants unless they can take advantage of extremely cheap domestic fuel. Given the scarcity of such fuel for the vast majority of cases, we believe that large scale plants will prove to be more economic.

### Biomass Sustainability

We are disappointed with the DECC proposal not to grandfather biomass sustainability criteria. This is unhelpful in building a sector which represents a major component of the Consultation. DECC needs to provide the necessary sustainability support to the Renewable Road Map ambitions and we therefore suggest that DECC provides exemptions from changes in UK sustainability standards for all fuel supply contracts in place on 1 April 2013. DECC should aim to change the UK standards only when required to do so by the EC, negotiating, where possible, exemptions for existing contracts.

The UK is at the forefront of setting sustainability standards for solid biomass—well ahead of any other EU country - and the bioenergy industry itself is powering ahead with innovative ways of sustainably providing low-carbon fuel to the UK. DECC therefore needs to resist the recommendations from the Committee for Climate Change (CCC) (in their recently published Bioenergy Review) to tighten standards even before the existing proposals have been implemented and before operators have started to report data.

DECC should, in its response to this Consultation as well as in the Bioenergy Review, reinforce its views on the effectiveness of the ROO 2011 and the Ofgem guidelines which define the measures which generators need to ensure are in place to demonstrate sustainable biomass procurement practices. DECC should specifically reject the conclusions in the CCC's report that the standards could result in extensive use of biomass which '*could result in direct and indirect land use impacts including deforestation*'. This is because the great majority of Drax's current solid biomass fuels are by-products of other industries (forestry and agriculture), which have highly effective certification schemes and/or legal requirements which demonstrate that sustainable practices are in place.

Drax recognises that sustainability criteria will evolve into the future as information about supply chain performance becomes more readily available. However, the CCC report states *that the current RO GHG threshold represents a 60% saving relative to the EU grid average carbon intensity, which is much higher than that of the UK (i.e. around 700gCO<sub>2</sub>/kWh for the EU compared to around 500gCO<sub>2</sub>/kWh for the UK)*. This is wrong. The February 2010 EC guidance clearly states that the life cycle emissions for solid and gaseous biomass used in electricity, heating and cooling should be compared to the average EU **fossil** electricity, heat and cooling and not the EU grid average. The 500gCO<sub>2</sub>/kWh UK grid benchmark, by including nuclear and other renewables, is therefore irrelevant and should not be used as a comparator in this context. The 200gCO<sub>2</sub>/kWh benchmark is assumed to be a 60% saving from the 500g CO<sub>2</sub>/kWh UK grid average and the justification for it is flawed and arbitrary. The CCC has presented no data on the breakdown of the life cycle emissions for forest biomass and have provided no assessment of the impact or practicality of such a proposal on the current procurement programmes which will be necessary to implement DECC's objectives.

### Biomass availability

There is a significant worldwide potential for biomass electricity generation although it will take time for the large scale markets for bioenergy to build. Several transitional activities are required such as the development of long-term contracts between biomass suppliers and end-consumers as well as using independent certified schemes for standardization and sustainable criteria. All increases in the availability of biomass for electricity generation will be demand led and the support regime should give a clear signal for producers and new investors about this potential market and its benefits to overcome early-stage market barriers and establishment costs.

## Domestic and Imported Biomass

We consider that more efforts should be made by Government to develop domestic bioenergy resources. We note that questions are being raised regarding the environmental benefits of importing biomass on the (flawed) assumption that all UK bioenergy supplies can be sourced from the UK. At the same time different voices are suggesting that large scale power generation should only use imported materials because of assumptions that this activity drives up the price of indigenous material. Neither of these extreme views is realistic or supportable.

Although (as noted above) we are sceptical of the rationale underlying DECC's views on large scale dedicated biomass, we do support DECC's objectives of developing a range of small (<50MW) dedicated biomass plant using principally local fuels. It is, however, considered totally unrealistic to develop policies based on short term 'UK-only' fuel sourcing and we are therefore pleased that DECC has recognised the needs and value of imported biomass. Indeed, this was also recognised as important by the CCC who support enhanced co-firing / conversion as a transitional technology which will build the imported biomass supply chain in the UK for use in other technologies in the late 2020s and beyond.

Whilst a 'UK-only' policy is unrealistic, restricting large scale biomass plants from use of domestic biomass is equally so. There is a substantial potential for increasing the use of domestic biomass for energy in the long term with a substantial amount (of energy crops, and agricultural/forestry residues) useful both for large and small scale power and heat plant, but efforts need to be made to encourage the supply chain capacity of biomass at the local and national scales to economically generate the volumes needed into the future.

## Energy Crops

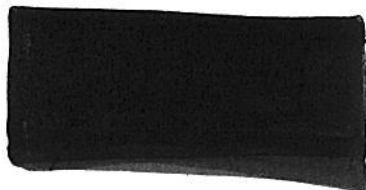

The UK energy crop programme has not been a policy success and the scale of new tree planting is currently inadequate for a country with high bioenergy expectations. In addition, much of the UK's forestry is 'under-managed' with negative implications for both biodiversity and commercial exploitation. This is partly due to the intrinsically small scale of UK operations combined with unfavourable geography but also to the historically low prices available to UK forest owners which have reduced incentives for investment and use. Government policy needs to be re-directed to building a strong biomass infrastructure and to encourage the many UK participants in the market place to make the transition from growing wood for timber to additionally growing wood for energy.

Whilst the proposed narrowing of the definition of energy crops will certainly achieve the goal of the risk of confusion with food crops, it is at risk of being overly restrictive and constraining. We need the ability to seek approval for new products to add to the list of defined energy crops. New species and varieties may become available that have far superior biomass properties yet require the identified uplift to be commercially viable. A clear and encouraging system for getting potential energy crops assessed and approved would facilitate more research in this area as well as obviating the need for new legislation every time new crops were considered. Our proposal is that the definition of "energy crop" within the RO should not specifically define species but should define the principal characteristics of energy, with case-by-case interpretations managed by Ofgem.

We believe that grandfathering of all energy crops is essential. Fuels of this nature require long term contracts and clear visibility to encourage farmers to embrace long term change and we suggest that grandfathering should be possible for all firm energy crop contracts for the duration of such commitments. Following the publication of the Consultation indicating that energy crops would be grandfathered, combined with confirmation that the associated uplift would also continue, Drax has been approached by a number of farmers ready to discuss increased planting. Furthermore we have had discussions with some key members of the farming community who indicate that they intend to develop further pellet plants to process miscanthus, which will be backed by increased planting. This early interest indicates that, with the right support, the farming community is becoming engaged in greater development of energy crops.

We trust that this information is sufficient for DECC to determine its response to the Consultation. We are prepared to discuss our submission in more detail if that would be helpful.

Yours faithfully

A large black rectangular redaction box covering the signature area.

Head of Environment  
Drax Power Limited