

Regulatory Issues in UK Biomass Projects



Introduction

Biomass is set to be one of 2012's hot topics in energy infrastructure. As many jurisdictions aim to increase their use of renewable energy but are faced with a standing stock of thermal plants, developing a diverse mix of energy sources will underpin security of supply. With resistance from lenders to fully embracing the wind market and with wave and tidal technologies still being in their infancy, biomass is sure to provide a big part of the solution over the coming years and in the longer term.

Consequently many developers are taking a renewed interest in biomass projects which, contrary to conventional wisdom, may prove one of the most economical of all renewables technologies.

Key issues

- The Government has proposed a number of changes to the principal regulatory incentives for biomass power projects in the United Kingdom.
- Dedicated biomass power projects accredited before 31 March 2016 will receive 1.5 ROCs/MWh; and if accredited between 1 April 2016 and 31 March 2017 they will receive 1.4 ROCs/MWh.
- Power projects, including biomass, accredited after April 2017 will benefit from Feed-In Tariffs (Contracts for Difference).
- From April 2013, generators will need to ensure that their biomass fuel meets the Government's sustainability criteria, meaning that greenhouse gas emissions savings (GHG) are greater than 60% when compared to fossil fuels.
- Sustainability criteria may be strengthened in future – GHG savings exceeding 70% are already being proposed.

Currently, projects in Europe being considered include new build dedicated biomass plants (with or without combined heat and power), conversion of existing coal plants and co-firing in existing coal plants. This briefing, together with our separate briefings on "Construction Issues in Biomass Projects" and "Fuel Supply and Sustainability Issues in Biomass Projects", considers some of the key issues faced by stakeholders in developing biomass projects.

Background

Changes proposed last year to the Renewables Obligation by the Department of Energy and Climate Change ("DECC") for the 2013-2017 period in England and Wales have resulted in renewed interest in the biomass sector. The changes, if confirmed later this year by DECC, will drive the timetable for projects keen to take advantage of the higher number of Renewable Obligation Certificates ("ROCs") available for biomass projects before the ROC awards are reduced. This briefing examines some of the opportunities and challenges involved in developing biomass projects in an ever-changing regulatory world.

Changes to the Renewables Obligation

Since its introduction in 2002, the Renewables Obligation has been the key mechanism for incentivising the development of renewable energy, including biomass power projects, in the United Kingdom.

The Renewables Obligation imposes an obligation on suppliers of electricity to source part of their electricity from renewable sources, such as biomass. Suppliers then meet their obligation by presenting sufficient ROCs to Ofgem. ROCs are obtained by suppliers from generators who are awarded ROCs on a "banded" basis, with some renewable energy technologies receiving more ROCs than others. Where suppliers do not have sufficient ROCs, they must pay an equivalent amount into a fund, the proceeds of which are paid back on a pro-rated basis to those suppliers that have presented ROCs.

Changing the ROC Bands

DECC has proposed new banding support levels for all renewable energy for the 2013-2017 period¹. DECC's consultation has now closed and its response is expected to be published before May. Draft legislation is likely to be published at the same time as the response and, subject to the Parliamentary process and State Aid clearance, will come into force next year.

In its rebanding consultation, DECC acknowledged the many ways in which biomass energy can be generated and this has resulted in a more nuanced calculation of Renewables Obligations for biomass energy depending on the manner in which it is produced. DECC announced the creation of two new biomass bands – for conversions and enhanced co-firing:

- Biomass conversions: adapting existing coal-fired generating stations, which benefit from grid connections, to burn only biomass fuels. DECC proposes that biomass conversion projects would benefit from 1 ROC/MWh where the conversion occurs on or after 1 April 2013 (as opposed to the current biomass rate of 1.5 ROCs/MWh). However, support will be grandfathered (i.e. preserved for twenty years, irrespective of future changes to ROC awards) from 1 April 2013.
- Enhanced biomass co-firing: burning biomass fuels to supplement coal. DECC proposes to set support at 1 ROC/MWh provided that generating stations meet a minimum biomass content of 15%. The current 12.5% cap on co-firing will also be removed. This increases support from the current 0.5 ROC/MWh support for standard co-firing (which currently applies) and again this support will be grandfathered. Where the percentage of biomass content falls below 15%, so will its support fall to the standard level of 0.5 ROC/MWh.

¹ Consultation on proposals for the levels of banded support under the Renewables Obligation for period 2013-17 and the Renewables Obligation Order 2012 – DECC (October 2011). See our briefing, Renewables Obligation 2013-2017 Banding Review Proposals (October 2011).

Other key proposals made by DECC include:

- Reducing the ROC support for dedicated biomass plants – i.e. power stations which burn only biomass. 1.5 ROCs per MWh will be awarded until 31 March 2016, after which the ROC award will be reduced to 1.4 ROCs per MWh for new accreditations and additional capacity.
- Amending the existing sustainability criteria so that generators need to meet the relevant criteria, rather than simply provide sustainability reports, in order to receive ROCs (see further below).
- Continuing to award an additional 0.5 ROCs per MWh until 31 March 2015 to dedicated biomass, dedicated energy crops, co-firing of biomass and co-firing of energy crops which have a CHP (combined heat and power) element. Thereafter, the Renewable Heat Incentive (similar to a feed-in tariff but payable for heat generated from renewable sources²) would apply to the "waste heat" elements; and ROCs awarded only in respect of the power generated.
- Maintaining a 90% purity threshold for materials to qualify as biomass.
- Continuing to provide an uplift of 0.5 ROCs/MWh for biomass plant which are fuelled by "energy crops", such as Miscanthus, willow, alder, birch, hazel, ash, lime, sweet chestnut, sycamore or polar. In all cases, the crops must have been planted since 1 January 1990 and grown primarily as a source of fuel. The energy crop uplift will not be grandfathered.
- Dedicated energy crop biomass plants will receive 2 ROCs per MWh for 2013-2015; reducing to 1.9 ROCs in 2015-16 and 1.8 ROCs in 2016-17. Support will be grandfathered.

As can be seen, there are a number of critical dates in the ROC rebanding consultation, after which the ROC awards will be substantially reduced. This means that developers will need to be fully focussed on constructing and accrediting their projects so that they can be accredited prior to the relevant cut-off dates – delays in the construction programme for example could have a substantial impact on the income received by generating stations for 20 years of their operation³.

The table below contains the proposed banding levels for various biomass fuel energy generation methods. We have also included comments in italics in the table setting out where the position is intended to be different in Scotland.

The Future of ROCs

Technology	Current ROCs/MWh	Proposed ROCs/MWh
Advanced gasification	2	2 from 2013-15; 1.9 in 2015/16 and 1.8 in 2016/17
Advanced pyrolysis	2	2 from 2013-15; 1.9 in 2015/16 and 1.8 in 2016/17
Anaerobic digestion	2	2 from 2013-15; 1.9 in 2015/16 and 1.8 in 2016/17
Biomass conversion	No current band but eligible to claim 1.5 ROCs under current banding arrangements	1
Co-firing of biomass	0.5	0.5
Co-firing of biomass (enhanced)	No current band but 0.5 ROCs under current banding arrangements	1
Co-firing of biomass with CHP	1	1

² See our briefing, [Further changes to UK Renewables Incentives \(April 2011\)](#)

³ See also our briefing "Construction Issues in Biomass Projects" (March 2012)

Technology	Current ROCs/MWh	Proposed ROCs/MWh
Co-firing of energy crops	1	1
Co-firing of energy crops with CHP	1.5	1.5
Dedicated biomass	1.5	1.5 to 31 March 2016; 1.4 from 1 April 2016 <i>Scotland: 1.5, but consideration of capacity threshold</i>
Dedicated energy crops	2	2 from 2013-15; 1.9 in 2015/16 and 1.8 in 2016/17
Dedicated biomass with CHP	2	2 from 2013-15 <i>Scotland: As above, but consideration of capacity threshold.</i>
Dedicated energy crops with CHP	2	2 in 2013-15 <i>Scotland: As above.</i>

The Government is in the process of phasing-out the Renewables Obligation and implementing a Feed-In-Tariff based on "contracts for difference" (FiT CfD) as its primary mechanism to encourage the decarbonisation of electricity generation.

Under the new regime, payments to the biomass generator would be made on the basis of an agreed guaranteed tariff (the Strike Price). The generator would be entitled to the Strike Price irrespective of the market price of the energy generated, but would not be entitled to the entire upside if the energy generated commanded a market price higher than the Strike Price and might have to reimburse a part of this upside.

The Government envisages primary legislation being introduced in 2012 with the first FiT CfD being signed in early 2014. Projects commissioned between 2014 and March 2017 will have a one-off choice whether to gain accreditation under the Renewables Obligation or the FiT CfD. Those projects that are commissioned from 1 April 2017 will only be eligible for the FiT CfD. However, existing projects within the Renewables Obligation will continue to receive the support for the full 20 years.

The UK Sustainability Challenge

In April 2011, DECC introduced mandatory reporting against sustainability criteria for solid biomass and biogas under the Renewables Obligation for biomass electricity generators over 50kW in the UK. The criteria are based upon those set out in the Renewable Energy Directive in relation to biofuels and require generators to report the extent to which they meet the criteria to Ofgem – importantly there is no compliance obligation, only a reporting obligation.

The sustainability criteria for UK projects are:

- Greenhouse gas emissions criteria: for a generator to meet the criteria, the emissions associated with the biomass should be less than or equal to 285.12 kg CO_{2eq}/MWh. This equates to a 60% saving in greenhouse gas emissions compared to fossil fuels (which are set by reference to the Renewable Electricity Directive).
- Land criteria: the biomass itself cannot be obtained from land that:
 - was primary forest during or after January 2008. Primary forest is forest which is untouched by human activities and exists in its original condition;
 - was designated for nature protection purposes during or after January 2008;
 - was peatland at any time during January 2008;
 - was a continuously forested area during January 2008 and was not a continuously forested area when the materials were obtained from it; or
 - was a wetland area during January 2008 and was not a wetland area when the materials were obtained from it.

It has been proposed by DECC that from 1 April 2013, generating stations of 1MW and above would be required to meet (rather than simply report upon) the above sustainability criteria in order to receive ROCs. DECC will shortly announce whether the sustainability criteria will be grandfathered or whether generators will instead be required to meet the Government's sustainability criteria from time to time, which would be an issue to address in any long-term feedstock supply contract, which would also need to contain detailed provisions to enable the generator to meet its reporting obligations.

Proposals to grandfather the criteria would be controversial amongst environmental campaigners, who have argued that such a move would "lock in" greenhouse gas emissions for the next 20-25 years; and as such, a decision to grandfather the sustainability criteria may be susceptible to judicial review, which would cause further delay and uncertainty for projects aiming to be fully accredited prior to any proposed decrease in ROC awards.

Please also refer to our briefing "Fuel Supply and Sustainability Issues in Biomass Projects" (March 2012) for details as to how these sustainability criteria may impact a biomass project.

Future Criteria in the UK?

In December last year, the UK's Committee on Climate Change (CCC) published its Bioenergy Review in which it assessed the role for bioenergy in meeting the UK's carbon targets. With respect to biomass-fuelled power, the CCC made various recommendations, including:

- Strengthening the sustainability criteria for forest biomass to 200kg CO_{2eq}/MWh, approximately equivalent to 72% savings in greenhouse gas emissions compared to fossil fuels;
- Recommending a focus on the use of biomass from countries with best-practice sustainability safeguards (equivalent to or better than those in the UK) in order to avoid indirect land use impacts, including deforestation;
- Tailoring the Renewables Obligation to biomass co-firing and conversion projects and smaller-scale plants using local resources; and
- Introducing safeguards to ensure that support for new dedicated biomass capacity is very limited.

Whilst these recommendations are not binding on the Government, the CCC remains an authoritative body and its proposals will be considered with care. Whilst it would take several years for the CCC's recommendations to be adopted as policy and then legislated for, the CCC's Bioenergy Review provides useful insight into the Government's next likely proposal with respect to greenhouse gas emissions reductions and those considering developing biomass plants would be wise to ensure that the relevant feedstock supplier is capable of meeting this target.

Clifford Chance

The commercial impetus to develop biomass power projects, driven by the government incentives available, and the need to obtain energy from renewable sources means that the obstacles in developing more efficient and larger biomass power projects will be overcome.

Clifford Chance has the experience, expertise and innovative edge necessary to support the developers and financiers of these projects. Any of the contacts on the following page would be delighted to provide details of our capabilities.

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