

BERR | Department for Business
Enterprise & Regulatory Reform

**RENEWABLES OBLIGATION
CONSULTATION**

Government Response

JANUARY 2008

Foreword by Malcolm Wicks MP, Minister for Energy



Over the last few months the Government has demonstrated its commitment to renewable energy, in a number of high profile decisions and commitments. These have included our leadership on, and commitment to, the European Council agreement that by 2020 one-fifth of all Europe's energy should come from renewables.

We expect the European Commission to publish their proposals in the near future but we are pressing on with action. We have started an ambitious process to increase the capacity of offshore wind farms beyond the eight gigawatts already planned. We have approved the building of the world's biggest biomass plant as well as some 2.5 GW of other renewable generating capacity in the preceding twelve months. We have announced a study of the feasibility of generating tidal energy from the River Severn, which alone could provide five per cent of Britain's electricity needs.

To realise these plans, investors will require incentives to commit the necessary funds. I am, therefore, pleased to be able to set out in this response our further decisions on the banding of the Renewables Obligation, the Government's main support mechanism for renewable electricity. The changes outlined here will bring on additional deployment of renewable generation using a wider range of technologies, whilst protecting the position of existing renewable energy projects and reducing the deadweight costs.

It is right and proper that such important changes need investor and development community buy-in, and I have been very pleased to see the high levels of engagement in this consultation. This process started in 2006 with the Energy Review and has moved significantly closer to its final goal.

We have introduced into Parliament the Energy Bill which will include powers necessary to make the changes outlined here. We then aim to implement the changes as rapidly as possible, subject to Parliamentary time and approval, and state aids clearance. We will, of course, be consulting with you, later this year on the details of a Renewables Obligation Order that will give effect to these changes.

A handwritten signature in black ink, which appears to read "Malcolm Wicks". The signature is written in a cursive, slightly stylized font.

Malcolm Wicks MP
Minister for Energy

Executive summary

Most of the proposals set out in our consultation document were well received by the majority of the 174 companies, organisations and individuals who responded. There are however a number of changes which we will make in response to the consultation. These changes will not significantly alter the proportion of the UK's electricity which we expect to come from renewables from the first phase of a banded RO. The key features of this response are set out below.

Banding: we intend to go forward with plans to group technologies with similar costs but now intend the following changes to our proposed banding regime.

Co-firing of regular biomass and sewage gas will be awarded 0.5 ROCs per MWh following reassessment of their costs. (Paras 2.20 to 2.25) The cap on the proportion of a supplier's obligation that can be fulfilled by co-fired ROCs will be retained at a level of 10% of the number of ROCs.

Microgeneration: we have decided to reduce the complexity for microgenerators that would have been implied by a banded and grandfathered system. All microgeneration stations (50 kW or less) will receive two ROCs per MWh, regardless of technology. Microgenerators will be excluded from any grandfathering provisions placing all microgenerators in this band irrespective of when their plant was installed (including the circa 200 stations accredited in 2006). We also commit to retain this level of support following the first scheduled banding review, planned for 2013. (Paras 2.28 to 2.29)

Tidal impoundment (lagoons and barrages) up to one gigawatt in size will be included in the two ROCs per MWh band. (Paras 2.9 to 2.12)

Existing plants using biomass and grandfathering: some respondents argued that by banding up new dedicated biomass plants and those plants supplied by anaerobic digestion, and leaving existing plant at one ROC per MWh, the latter's ability to compete for fuel will be significantly eroded. We recognise the argument but have not yet got enough evidence on which to base a decision. We expect to issue our decision on this early in 2008. (Para 3.14)

Time limits on grandfathering: the Government recognises the concerns over the proposal for retrospective time limiting of support. The Government therefore has no intention of curtailing before 2027 the ROC entitlement of capacity (other than co-firing) which is already operational. (Para 3.18)

Headroom: having studied the figures provided by consultation respondents, the Government is now of the view that 8% is an appropriate figure and has amended its proposals accordingly. (Paras 4.2 to 4.5)

The ‘cliff edge’ scenario: the cross-industry working group set up to examine this issue identified a couple of options for ‘ski slope’ mechanisms to address this issue. A final decision on which if any mechanism to include in the Order will be taken following further consultation, including the statutory consultation carried out alongside the new Order, due to be issued in 2008. (Paras 4.7 to 4.13)

Sustainability: we will introduce a requirement to report on the sustainability of biomass used in generation, with the exception of stations with capacity of 50 kW and under. (Paras 5.4 to 5.6)

Deeming the biomass fraction of waste: we will proceed with the introduction of deeming, but will begin with a lower deemed level of 50% fossil fuel energy content that will increase over time to 65% following a trajectory in line with the Government’s waste policy. We will allow operators the opportunity to present Ofgem with evidence that the fossil fuel content is lower than the deemed level and look to make the fuel measurement system more flexible. (Paras 5.7 to 5.11)

Renewable heat: responding to concerns raised by respondents, we propose that energy from waste and biomass CHP stations over 25 MW will qualify for additional support if they achieve a minimum efficiency of 35% gross calorific value. The CHPQA will continue to provide accreditation for these stations and provide Ofgem with the appropriate certification. (Paras 6.1 to 6.3)

Funding for administration of the RO: In the October 2006 consultation the Government consulted on the option of meeting the costs of administering the RO from the buyout fund. This option was not pursued at the time, in part due to the risk that the buyout fund might occasionally not be sufficient to meet the costs. Following further consideration of the issues we believe that it is appropriate that the costs of administering the RO should be met by those who participate in it rather than by the licensed network operators. We therefore intend to take a power in the Energy Bill to allow Ofgem to recover its administrative costs from the buyout fund prior to the buyout fund being recycled. (Para 6.4)

Private wire networks: We are taking steps in primary legislation to further clarify the treatment of private wire networks. We propose to include a power in the Bill to allow ROCs to be issued to small generators acting as unlicensed suppliers – subject to conditions to be consulted on in the Order. (Para 6.5)

1. Introduction

1.1 The Renewables Obligation (RO) is the Government's chief mechanism for incentivising renewable electricity generation in the UK. It is also an important part of the Government's programme for securing reductions in carbon dioxide emissions, working in support of other policy measures such as the EU Emissions Trading System. It requires electricity suppliers to source an increasing proportion of their electricity from renewable sources, or pay a buy-out price. Since introduction in 2002 it has led to more than a doubling of the proportion of electricity sales attributable to eligible renewables in the UK (from 1.8% in 2002 to 4.4% in 2006), and in its current form is expected to deliver approximately 13.5% renewable electricity by 2015¹.

1.2 Nevertheless there is scope to make the RO more efficient and effective. The 2007 Energy White Paper therefore announced the Government's decision on future reform of the RO for England and Wales. It also set out a number of other policies which will have an effect on development of renewables in this country, such as measures to address problems with planning law and grid connection, and efforts to provide appropriate funding for some projects. The reforms we intend to make to the RO are intended to work in conjunction with these other policies.

1.3 The consultation document, "Reform of the Renewables Obligation" (May 2007), set out the details of the proposed reforms and invited views on them. The principle change proposed was the introduction of banding – i.e. providing differentiated levels of support for different technologies. Other elements of the reform included a proposal to increase the level of the RO to above the level previously announced (15.4%) if actual generation requires, to a maximum level equivalent to 20% of total supply.

1.4 Our objectives in banding the RO are to:

- Bring on additional deployable technologies by providing appropriate levels of support and certainty for future investments through the RO within acceptable costs to consumers;
- Protect the position of existing renewable energy projects and investors and also those projects under construction or which come into operation prior to the introduction of the new regime; and
- Allow adjustments to the RO to avoid over-subsidy of technologies as costs and revenues evolve.

1.5 The consultation closed on 6 September 2007. This document summarises responses received and sets out the Government's intentions in the light of them. We are seeking through the Energy Bill to secure the necessary primary legislative powers to make the proposed changes. The detail will be implemented through a new

¹ The Renewables Obligation is predicted to deliver 13.5% from eligible renewable generation sources; generation from ineligible renewable sources such as large hydro will take this to 15%.

Renewables Obligation Order. This order will be subject to a statutory consultation which will include a draft of the proposed instrument, and which will issue later this year. We are aiming for the changes to be implemented on 1 April 2009 subject to Parliamentary time and approval, and receipt of EU State Aids clearance.

Responses to the consultation

1.6 We received 174 responses from generators, suppliers, trade associations, non-energy concerns and individuals. A list of all respondents can be found at Annex A and copies of all responses— except those who have requested confidentiality – can be found at <http://www.berr.gov.uk/energy/sources/renewables/policy/renewables-obligation/key-stages/banding-ro/page42154.html>. We would like to thank all of those people who responded to the consultation.

1.7 97 of the responses were from companies spread across generators, suppliers, supply chain companies and competing sectors. 60 were from organisations including trade associations for renewables industries, and trade associations for industries competing for raw resources and NGOs. The remainder were from individuals or other groups.

Devolution and the RO

1.8 While we refer in this document to ‘The Renewables Obligation’, in practice the system works on the basis of three complementary obligations, one covering England and Wales, and one each for Scotland and Northern Ireland. Decisions regarding the details of the Obligations in Scotland and Northern Ireland are for the Scottish Government and the Northern Ireland Executive respectively². Each will carry out further consultation with stakeholders before determining its own policy. The UK Government and the Devolved Administrations understand the benefits of a consistent approach across the UK and that this is a matter of importance to many within the industry. Indeed, the need for such consistency was made by a number of respondents in this consultation.

1.9 The Government is also working with the Devolved Administrations to address the other issues affecting renewable generation such as planning law and grid connection issues mentioned above.

The EU 2020 Renewable Energy Target

1.10 In spring 2007 the UK played a key part in securing agreement among EU heads of Government to a binding target of 20% of the EU’s energy consumption to come from renewable sources by 2020. The European Commission is expected to publish shortly a draft directive to implement this target, including proposed contributions to be made from each Member State. This will then be subject to negotiation, with a final decision

² Some minor technical amendments to the legislation will be necessary to ensure the RO works in conjunction with the Single Electricity Market between Northern Ireland and the Republic of Ireland.

expected in early 2009. Therefore we do not yet know what the UK contribution will be, but it is clear that we will need to raise significantly the proportion of our energy that comes from renewable sources. We will launch a consultation later this year on how we are to achieve our targets and we intend to publish our full renewable energy strategy in spring 2009 once the EU directive has been agreed.

1.11 It is therefore likely that we will need to introduce further changes, in due course, to further stimulate renewable electricity generation in the UK. However in the meantime the proposed changes to the RO as set out in this document allow us to make good progress on this important agenda, and provide the basis for doing even more in due course.

Decisions on proposals

1.12 The Government asked a number of questions in its consultation. The following outlines the proposals we made in the consultation, briefly summarises the tenor of the response, and sets out our planned way forward (a list of questions can be found at Annex B).

2. Proposed bands for implementation from 1 April 2009

2.1 Chapter 3 of the May consultation covered the proposed bands for implementation.

2.2 We proposed a banding regime with four bands, which we referred to as Established, Reference, Post-Demonstration and Emerging. We set out that it is not the Government's intention through banding to provide all projects with exactly the support level they need as this would not incentivise developers to site and build economic projects or reflect some of the natural constraints on the limits of future resource. The allocation of technologies into these bands was based on the cost analysis, performed by Ernst and Young, which was published alongside the Consultation Document.

2.3 The majority of respondents agreed with our rationale for grouping technologies in this way. Comments from respondents suggested support for the Government's view that banding the RO was a necessary step to increase deployment and improve efficiency. Some concerns, though, were raised over the danger of 'picking winners' and the additional complexity introduced by the proposed reforms.

2.4 A number of respondents identified the need for additional support in the form of grants for new technologies. The Government remains of the view that the RO is aimed at supporting mass deployment of near commercial technologies, and we believe it would be inappropriate to use it as the sole method of support for those technologies still in the research, development or early demonstration phase.

2.5 The broad response to our proposed banding levels was that respondents considered the structure appropriate. Most responses indicated that most of the banding levels were appropriate. Generally, respondents agreed with the grading of ROC allocation per MWh, although some suggested a band between the Established and Reference bands to provide an intermediate step should any of the technologies in the reference band merit banding down in future reviews. Some responses also argued for a higher allocation for 'emerging technologies'.

2.6 In the consultation we also asked for comments on whether we had omitted any technologies, our approach to specific technologies such as energy crops and geopressure, and for detailed comments on the analysis underpinning our banding provisions.

2.7 As a result of the responses we propose the following amended banding regime, introducing an additional band at 0.5 ROCs to allow an intermediate step between the 0.25 ROCs and one ROC bands, with sewage gas and co-firing of non-energy (regular) biomass moving to the 0.5 ROCs band following reassessment of their costs:

<u>Band</u>	<u>Technologies</u>	<u>Level of support ROCs/MWh</u>
Established 1	Landfill gas	0.25
Established 2	Sewage gas, co-firing on non-energy crop (regular) biomass	0.5
Reference	Onshore wind; hydro-electric; co-firing of energy crops; EfW with combined heat and power; geopressure; other not specified	1.0
Post-Demonstration	Offshore wind; dedicated regular biomass	1.5
Emerging	Wave; tidal stream; fuels created using an advanced conversion technologies (anaerobic digestion; gasification and pyrolysis); dedicated biomass burning energy crops (with or without CHP); dedicated regular biomass with CHP; solar photovoltaic; geothermal, tidal impoundment (e.g. tidal lagoons and tidal barrages (<1GW)); Microgeneration	2.0

Other technologies (Q1 and para 3.7)

2.8 We asked whether there were any other technologies which should be included in the RO. In light of the responses, we have looked at costs for four groups of technologies.

Tidal impoundment: lagoons and barrages

2.9 A major study carried out by the Sustainable Development Commission³ into tidal power identified existing cost estimates for a variety of tidal impoundment proposals. These technologies are eligible for ROCs at present but following the SDC report we have considered further their treatment under the RO.

2.10 A project along the lines of the proposed Severn Barrage could be so large both in terms of the proportion of UK electricity it would generate (4.5%) and in terms of the likely cost (£15bn estimated in the SDC Report), that it would present a risk to the stability of the RO if it were eligible for RO support. We therefore propose to exclude barrages over one gigawatt from the RO. The Severn Barrage feasibility study will consider the financing of larger tidal power projects in the Severn Estuary.

2.11 Smaller barrages (i.e. those below one gigawatt in capacity such as have been proposed for the Mersey and other West Coast estuaries) present less of a challenge to the RO. The available analysis of the economics indicates they would need more than one ROC per MWh in order to be viable. In general, such support is reserved for

³ <http://www.sd-commission.org.uk/pages/tidal.html>

developing technologies where we expect costs to decrease in future. For barrages the majority of the costs relate to civil engineering, and as there are relatively few sites in the UK for tidal barrages and the technology is mature, the scope for learning effects is limited. However a limited period of support would enable barrages to pay back their initial costs leaving assets able to continue providing low-carbon electricity on commercial terms for succeeding decades. The tidal barrage in La Rance, France has been in operation for over 50 years, is still producing electricity, and will continue to do so for the foreseeable future. We therefore propose to include tidal barrages below one gigawatt in the two ROC per MWh band.

2.12 Tidal lagoons work in a similar fashion to barrages but as entirely offshore freestanding structures or semicircular arrangements connected to the shoreline at either end. We are not aware that this type of scheme has been built anywhere in the world, but there are already projects proposed for Swansea Bay and Liverpool Bay. We have assessed the costs suggested by a few preliminary feasibility studies and believe that two ROCs per MWh should allow projects to be explored further. In this case there may be some scope for learning through development of design and construction approaches, but as with tidal barrages the main rationale would be the lifetime of the plant and its ability to keep generating for decades after any direct support ended.

Micro-algae

2.13 The current legal definition of energy crops requires evidence of planting. Micro-algae are not planted but grown in ponds or even at sea. This is an untried technology and while we see no reason in principle that algae should be treated differently from more conventional crops we have little evidence on which to base any decision. At this point we do not propose changing the definition of energy crop to include micro-algae but we will keep the situation under review as the technology develops with the intention of including it in the definition of energy crops if the economics and sustainability of the technology supports this approach.

Pre-treatment of sewage sludge

2.14 Pre-treatment of sewage sludge is a process which can be used to increase the yield of gas raised from the sewage gas treatment process. We do not therefore believe it is suitably distinguishable from sewage gas to justify separate treatment, but we note that the increased gas yield will mean there is a consequent increase in the amount of electricity generated. For this reason this technique will benefit from increased numbers of ROCs in comparison to 'regular' sewage gas.

Biomethane supplied direct to the gas grid

2.15 From the limited evidence available and experience of other countries, we believe that it is feasible to 'clean up' biogas and use it for renewable electricity, heat or transport. It can be injected to the grid, and some have suggested that where this is done, it should be possible to claim ROCs on the basis that an equivalent amount would

be used for electricity generation. Since there is no direct link to generation, this would require a significant change to be made to the RO. Before deciding if and how this technology should be supported, we need much more evidence and understanding of its costs and potential. Further work is being undertaken at EU and national level which will input to this. The Government will publish a call for evidence on heat generation in January which will include questions around use of biogas as a renewable heating fuel. While this work is being undertaken we do not believe that it would be appropriate to reform the RO to enable it to support biomethane supplied direct to the gas grid.

Biomass and energy crops (Q2 and paras 3.7-3.8)

2.16 The Government proposed that the banding should provide additional support for biomass stations using energy crops as fuel compared with 'regular' biomass stations and asked for views on the proposal to make this distinction. A majority of respondents agreed with this position, although there were a variety of views as to what should fall within each definition.

2.17 The Government intends to maintain the current distinction between energy crops and regular biomass, with no change to the definition, whilst recognising that this definition might need to change over time to take account of future developments, such as further study of the economics and sustainability of micro algae, or support for bio fuel co-products following publication of the RTFO proposals. Any such changes would merit fuller consultation than has so far been undertaken on this subject.

Banding the RO (Q3 and paras 3.1-3.9)

2.18 The majority of respondents agreed with our rationale for grouping technologies, whereby technologies are allocated to a band with other technologies which have similar costs. We therefore intend to proceed as proposed.

Banding levels (Q4 and paras 3.5-3.9)

2.19 Generally, respondents agreed with the proposed structure and the levels of ROC allocation per MWh, although some suggested a 0.5 ROC band or a higher allocation for 'emerging technologies'. However, the specific allocation of technologies to bands drew much more comment. Several respondents argued that the technology in which they have an interest was under-rewarded. Where they provided evidence that the costs on which we based the banding regime were substantially incorrect, we have looked again at our analysis.

Co-firing

2.20 The major criticisms of our analysis of co-firing related to the forms of regular biomass that can be used as co-firing fuels, and the capital costs for direct injection. The initial analysis had assumed that all existing co-firing capacity could make use of the cheapest available fuels – unprocessed straw and wood. Respondents to the

consultation have argued that the capacity for burning these cheap fuels is very limited. In order to make use of the existing capacity and in particular where plants have invested in direct injection technology, the fuels need to meet technical specifications that allow them to be milled. This technical specification can only be met by domestic fuels such as straw and wood when they have been formed into pellets. Our previous analysis of the costs of energy crops indicates that processing the fuel into pellets adds some £2 per gigajoule to the cost of the fuel.

2.21 Taking these fuel costs into account, modelling of the renewables market showed that at 0.25 ROCs per MWh much less co-firing (3.1 TWh) in 2009/10 was likely to come forward than had been assumed previously (5 TWh). The Government has indicated previously that we consider that coal fired generation is likely to remain part of our generating mix for the foreseeable future and that co-firing potentially has a long-term role to play in abating the carbon emissions from coal plant. Looking at the new fuel costs we have decided that co-firing of regular biomass should receive 0.5 ROCs per MWh.

2.22 The move to a higher band for co-firing increases the possibility that potential volatility in the volume of co-firing will have an impact on the stability of the ROC price. This risk has continued to be of concern to many respondents. In order to mitigate this risk we will retain a cap on the number of ROCs from co-firing of non-energy crop (regular) biomass that any supplier may use in order to fulfil their obligation. This cap will be set at 10% of a supplier's obligation in ROCs. We do not believe that this cap is likely to be a significant constraint on the ability of co-firers to use their existing capacity. The highest volume of co-firing that has been achieved in any one year was 3.4 TWh in 2005/06. On the central scenario we estimate the obligation in 2009/10 will be approximately 31 million ROCs which would allow some 6 TWh of co-firing. This would be less than 10% of the entire Obligation and so should allow a market for independent co-firers to sell their ROCs without the value being eroded by the cap.

Sewage gas

2.23 The major criticisms from the sewage gas sector were that the Ernst and Young report only allowed for the incremental costs of fitting a generating engine to an existing anaerobic digester and that the analysis assumed that there was little scope for increased capacity. Respondents presented evidence that while most of the existing generating stations had been based on existing anaerobic digesters, future expansion was possible up to 0.8 TWh by 2010 by fitting new digesters to sewage treatment works which were not equipped with these at present.

2.24 Respondents also presented evidence as to the operating and capital costs that new installations would face. This evidence was used to estimate the levelised costs of generating electricity and compared with estimates produced by other studies produced either for the Department or for the European Commission as well as by Ernst and Young. The other reports pointed to higher levelised costs than the Ernst and Young report.

2.25 Taking these additional costs into account modelling indicates that placing sewage gas in the 0.25 ROC band would fail to bring forward additional potential capacity after 2009. We will therefore place sewage gas in the 0.5 ROC band. Modelling suggests that this could bring forward a total of 0.6 TWh of sewage gas generation by 2015.

Anaerobic digestion

2.26 The costs of generating electricity from anaerobic digestion were assessed as part of the report by Ernst and Young. We are aware that there was comparatively little information available to Ernst and Young for this part of their report. During the consultation process we have seen information that indicates that the cost of new anaerobic digestion projects is unlikely to be as high as the historical data indicated. Anaerobic digestion also seems to be a more developed technology than the other advanced conversion technologies such as gasification and pyrolysis.

2.27 The evidence was not strong enough to convince us that anaerobic digestion should receive less than two ROCs per MWh and, as set out in the consultation document, anaerobic digestion has particular benefits in mitigating methane emissions from agriculture and landfill. We propose therefore to retain the 2 ROC band, but to closely examine the support that this technology requires during the first review in 2013.

Microgeneration

2.28 Our proposals in the consultation saw micro-generation projects placed in the same band as larger projects using the same technology, and their ROC entitlement grandfathered on broadly similar terms albeit with a slightly simpler process. Most respondents agreed with these proposals. However, some key respondents including the Micropower Council and Ofgem raised significant issues about the practicality of this approach. In particular they pointed out that many microgenerators use more than one technology (e.g. combination of solar PV and either wind or hydro- turbines). Under our current proposals these would be placed in different bands and would have to be accounted for separately. As well as adding to the complexity for microgenerators, this would add a disproportionate burden on Ofgem who run the scheme.

2.29 We have therefore decided to minimise the complexity by placing all microgenerators (50 kW or less) into one band, regardless of technology. In order that they should be properly rewarded, we intend to award them two ROCs per MWh (the band in which PV is currently placed). We have also decided to exclude microgenerators from any grandfathering provisions to minimise complexity for them and their agents. While this will mean that microgenerators will have no guarantee of retaining the two ROC allocation if a future review leads ministers to change microgeneration to a different ROC level, they will in the first instance be banded up to receive two ROCs per MWh irrespective of when their plant was installed (including the

circa 800 existing accredited stations). The Government also commits to retaining this level of support following the first banding review, planned for 2013.

Revised Modelling Results

2.30 We have run some extensions to the Oxera modelling covering the amended figures for co-firing and sewage gas, the addition of tidal impoundment and the increase in headroom. These new runs also take account of the impact of the Energy White Paper measures on the overall electricity market. This will be published alongside this document at <http://www.berr.gov.uk/energy/sources/renewables/policy/renewables-obligation/key-stages/banding-ro/page42154.html>.

2.31 In summary, a revised supply curve arrived at as a result of the consultation results has been used to model the banding regime set out in the Energy White Paper and the one set out in this document. Banding the RO in the way we propose continues to lead to an increase in the deployment of renewable electricity generation with a reduction in the deadweight cost. Modelling of the unbanded RO on the new assumptions resulted in 11.4% renewable electricity in 2015/16 the same proportion as that modelled in the Oxera report published in May. The banding regime described in this document results in 13.4% renewable electricity in 2015/16 compared with 13.5% expected in the consultation document. However, under our revised proposals the lifetime costs of the RO to consumers is expected to be £23.7bn. This is less than the £25.1bn estimated in the May consultation document, a decrease which can be attributed to the Government's energy efficiency policies reducing the expected size of the electricity market.

2.32 While our re-evaluation of the costs for co-firing and sewage gas has decreased the deadweight cost associated with the unbanded RO, we still expect our new banding proposals to result in decreased deadweight cost in the region of £1.5bn over an unbanded RO.

Exclusion of Geopressure (Q5 and para 3.10)

2.33 We proposed that geopressure associated with fossil fuels should be excluded from the RO. A majority of respondents who expressed an opinion agreed that geopressure should be excluded, although several groups and individuals pointed to the potential carbon savings associated with the technology, while others disagreed with the assessment that it is not renewable.

2.34 The Government believes that geopressure can be an efficient use of resources and that it has the potential to be a low-carbon energy source. The evidence presented by those in favour of the inclusion of geopressure were that geopressure itself is renewable and can be carried by a variety of fluids which will in time replace the natural gas in these reservoirs. Based on this evidence, we no longer intend to exclude geopressure from the RO. As there is little independent evidence on the costs for

geopressure we will place the technology in the reference band (one ROC per MWh) in the first instance until sufficient evidence becomes available from actual installations.

2.35 A proportion of the pressure in the gas transmission system exists due to mechanical equipment used both on and offshore. It is Government policy that ROCs should be awarded on the basis of the net renewable electricity generated. With this in mind, any company generating electricity from geopressure will have to agree with Ofgem a methodology for subtracting the energy used in adding pressure to the gas from their gross generation in order to establish the net renewable generation on which ROCs will be awarded.

3. Setting bands and when they will apply

3.1 Chapter 4 of the May consultation dealt with the band setting process and outlined our proposals on grandfathering.

3.2 In this section we further developed proposals on independent advice for band setting. This had been supported by a significant number of respondents in the October 2006 consultation and continued to be well-supported. We took the opportunity in the consultation to set out proposals on who should provide the advice, to what criteria they should have regard and what expertise they would need to be able to display.

Independent advice for setting future banding levels (Q6 and paras 4.1-4.5)

3.3 We proposed in the consultation that Ministers should receive independent advice on banding levels. A majority of respondents who expressed an opinion agreed with this. We further asked who should provide this advice and stated that we were looking at whether the Committee on Climate Change, due to be established by the Climate Change Bill, would be an appropriate body.

3.4 While respondents told us they wanted advice to be provided by a group independent of Government which had expertise in renewables, there was less consensus on whether the Committee on Climate Change is the right body to provide it.

3.5 Guided by this, and in view of the Committee's likely make up and other duties, the Government is persuaded that the Committee on Climate Change is not the right body to provide advice on banding. The Government has made no final decisions on the personnel and remit of any advisory group, but does commit to seeking and publishing advice from a source independent of Government and with expertise in renewables before any change in banding. The Government further intends to work with ministers in the Devolved Administrations to develop a common approach, and would like to ensure that the expert advice we take into account takes a view across the entire UK.

Frequency of band-setting (Q7 and paras 4.6-4.11)

3.6 We proposed linking the timing of the reviews of banding levels to the EU ETS timetable. This was almost universally supported and we intend to pursue this proposal. This will mean a scheduled review in 2013.

Criteria to trigger early review (Q8 and paras 4.12-4.16)

3.7 We suggested, building on the response to previous consultation, that a review of one or more bands/technologies might be carried out prior to the scheduled review in certain circumstances, and proposed a list of criteria:

- (a) significant change in grid connection/transmission regime;

- (b) new technology eligible under the RO emerges with potential to deploy on large scale;
- (c) other major support scheme with impact on renewables market starts, ends or is subject to significant changes;
- (d) demonstrated significant variation in net costs (for an individual technology) changing the economic case from that assumed in the setting of banding levels;
- (e) ROCs from co-firing (regular) contribute to more than 10% of the obligation;
- (f) over-compliance of obligation; or
- (g) other unforeseen event with significant effect on operation of the RO.

These criteria were designed to ensure that a review would address a real need or change in the market, and are not intended to be invoked unless there is such a demonstrable need. Responses to the consultation suggested the principle of emergency reviews was generally accepted, although there were some concerns over how broad the criteria were. However there was no consensus on how the list should be narrowed.

3.8 The Government continues to believe that there might be a need for an early review of the banding levels should an unexpected event occur, or if it became clear the band allocation was causing unwelcome distortions in the market. We recognise the value of providing predictability to the market and wish to provide as much certainty as possible by setting out the criteria in advance. Bearing in mind the lack of consensus over the changes people would like to see made, we are not minded to make amendments to the criteria, with one exception. The decision to retain the co-firing cap has rendered criterion (e) redundant. We are though mindful that the cap might cause fragmentation in the ROC market, and therefore intend to re-word it:

- (e) co-firing cap creating significant distortions in the ROC market.

Grandfathering (Qs9-11 and paras 4.17-4.26)

3.9 In the Energy Review⁴, the Government made a number of commitments to grandfather existing projects at the one ROC per MWh level. The consultation laid out our proposals for transitional arrangements (see Annex C), to ensure appropriate treatment of capacity accredited since 11 July 2006, as well as the methodology for accounting for additional capacity changes and for separate treatment of projects 50 kW and under.

3.10 The principles behind our approach, and many of the details including the transitional arrangement and the intention not to grandfather co-firing, were supported by respondents to the consultation. There was, however, some call for further definition of the trigger points, and in particular the definition of when capacity can be said to have 'become operational or achieved planning consent' (para 4.20 of the consultation document). Annex C outlines the process Ofgem would expect to follow in accrediting

⁴ <http://www.berr.gov.uk/energy/review/page31995.html>

capacity, including the evidence it would look for in assessing whether planning permission has been granted.

3.11 Some respondents also suggested that we should allow a period greater than two years following the introduction of banding to allow capacity already in receipt of preliminary accreditation to become operational in order to benefit from grandfathering. The Government continues to believe that those technologies we propose to see banded down do not face obstacles to becoming operational significant enough to warrant an extension to this two year window. We are though mindful that in future reviews we might need to look again at the period we allow during the transitional phase.

3.12 Following analysis of the responses we intend to leave to generators' discretion whether they meter any additional capacity added post-grandfathering or allow Ofgem to calculate their ROC entitlement on the basis of a fraction pro rata to the installed capacities.

3.13 Because of the need to ensure compliance with State Aid rules we still intend to take a power allowing generators who wish to be banded up to repay the relevant proportion of the grant they have received. As this would need to be done on a case by case basis, the detail will be worked out with individual companies at the time of their decision, although the broad principles and mechanism will be consulted on in the statutory consultation accompanying the Renewables Obligation Order later this year.

3.14 Some respondents raised the concern that dedicated biomass plants and those using fuels created through an advanced conversion technologies should be banded up. They argued that by banding up new dedicated biomass plants and those plants supplied by advanced conversion technologies while leaving existing plant at one ROC per MWh, the latter's ability to compete for fuel will be significantly eroded. This, they argued, unfairly prejudices first movers in this market segment. While we recognise the argument we have not yet got enough evidence on which to base a decision and are currently gathering further evidence from generators. We expect to issue a decision by Spring 2008.

Time limits on grandfathering (Q12-14 and paras 4.27-4.29)

3.15 The consultation asked whether there was any reason why RO support at the grandfathered level should continue after the initial investment has been paid back, and whether 20 years might be an appropriate proxy for project financing.

3.16 A majority of those who expressed an opinion opposed the suggestion that support might be time limited in this way for existing projects, though many recognised the principle behind the proposal. Some respondents suggested that while projects would initially have been financed on a projected payback period, some developments have changed hands since, and the price paid by the new owners would have reflected the expected ROC revenue. Several respondents made a similar point over

refurbishment of existing plant, which might be ongoing or even escalating throughout the project. There was additionally a feeling in several responses that retrospective time-limiting of support might undermine investor confidence in the RO.

3.17 As for whether 20 years was a fair proxy for project financing timescales, opinion was fairly evenly divided. Of those answering 'no' a number suggested payback periods might be shorter or longer than 20 years, depending on the technology and capital intensiveness of the business plan.

3.18 While we continue to believe that in order to provide value for money for consumers no indefinite promise of support should be made, the Government equally recognises the concerns over retrospective time limiting of support. The Government therefore has no intention of curtailing before 2027 the ROC entitlement of capacity in which people have already invested. This will apply to NFFO projects as well.

4. Obligation levels in a banded RO

4.1 Chapter 5 of the consultation dealt with measures to increase industry certainty in the RO, ensuring that the value of ROCs was protected. The Chapter sought views on the Government's proposals to increase the Obligation on a 'guaranteed headroom' basis and to take powers in primary legislation to introduce a 'ski slope'.

Headroom (Qs 15-16 and paras 5.5-5.13)

4.2 The Government recommitted to its existing announcements on RO levels to 2015/16 as a minimum, and thereafter maintaining RO levels above renewables generation up to our 20% aspiration. In the consultation document from October 2006, the Government had proposed an approach based on 'headroom' (i.e. to ensure that the Obligation for each period was set at a level determined by the expected renewable generation plus a further proportion of that generation). This is intended to minimise the likelihood that increased deployment will increase the risk of over-compliance due to weather or market conditions in a given year. Over-compliance could lead to a crash in the ROC price as ROCs in excess of the obligation become unredeemable.

4.3 The intention to increase the Obligation in line with previous announcements and to allow the Obligation to rise above the announced annual levels on a headroom basis was supported by respondents, as was our decision to retain the link between the buyout price and RPI. Respondents did however raise some concerns on the details of our approach to headroom.

4.4 Building on the results of the 2006 consultation, we proposed that the 'headroom' at which the obligation is set above the expected generation should be set as a percentage of ROCs expected to be issued in the relevant period. We proposed that the level of headroom should be 6%. We further said that while this measure should provide some security against supply of ROCs exceeding demand, it is no guarantee. Banking of ROCs⁵ and, potentially, introduction of a 'ski slope mechanism' (see below) would also have a part to play. The Government is also conscious that headroom carries a cost to consumers and the benefits in terms of potential increased investment need to be balanced against that cost.

4.5 A majority of respondents welcomed the move to headroom based on the number of ROCs in the market but suggested that 6% was too low. A few⁶ provided some statistical analysis in support of their argument – these can be found in their published responses⁷. In short, these studies viewed the risk of weather conditions bringing about an oversupply of ROCs as unacceptably high if headroom is set at 6%,

⁵ Banking occurs where suppliers hold over ROCs where for business process reasons they do not manage to present ROCs by the due date or where they have more ROCs than they need to meet their obligation for a given period.

⁶ AEP, BWEA, Centrica, EdF, E.On, REA, RWE nPower and Scottish Power

⁷ <http://www.berr.gov.uk/energy/sources/renewables/policy/renewables-obligation/key-stages/banding-ro/page42154.html>

and proposed a figure of, variously, 8%, 10% or 13%. They argued that headroom should reduce the risk of a ROC market oversupply to no more than one year in ten. From the limited evidence available for annual wind variability respondents estimated that headroom of about 8% would be required to reduce the risk from wind speed variability alone to one in ten. Some respondents also argued that there needed to be additional headroom to allow for the variability from other sources such as co-firing which will depend on other external factors such as biomass prices and the contribution that coal-fired generation makes to the market. The Government recognises the level of concern on this issue and wants to establish headroom at an appropriate level to ensure investors have confidence in a sustained healthy ROC market. However, while the variability from wind power is out of the control of operators, generators – in particular biomass and co-firing – have the ability to modify their generation in order to manage the risks themselves and with banking ROCs need not lose more value than the cost of capital for one year. The Government therefore believes that headroom of 8% strikes the right balance between the need to retain the value of the ROC for investors while restraining the increased costs to consumers from headroom.

4.6 In response to our request for opinions on when we should announce the level of Obligation for a given obligation period we received a number of suggestions without a consensus emerging. The Government believes that a fair compromise between certainty that estimates were accurate and certainty for business planners is an announcement six months prior to the obligation period in question.

The 'Cliff Edge' (Q17 and paras 5.17-5.26)

4.7 Investors have expressed concern about the 'cliff edge' scenario, whereby over-compliance of the RO triggers a price crash in the value of ROCs and therefore disincentivises investment as we approach the Obligation level. In order to mitigate this risk we suggested introducing a 'ski-slope mechanism' which would allow the market to be overcompliant while the buyout price reduced gradually. Two consultations have resulted in a substantial amount of analysis and comment, but no consensus over which mechanism, if any, might be appropriate. We therefore proposed to take a power in primary legislation to introduce a ski slope subject to later need, and a large majority of respondents agreed with this.

4.8 We further proposed to establish a cross-industry working group to address the 'cliff edge' issue, which we have now formed by inviting those who responded on this issue in the most recent consultation to become members.⁸

4.9 The group has now met twice, and considered the four models already proposed in previous consultations. None of these was considered to be entirely appropriate and effective, and the Government does not intend to take powers which would allow their introduction.

⁸ The group's Terms of Reference and Membership can be found at Annex D

4.10 Further options have been presented and discussed. In particular a model (the 'pre-emptive model') - which works on the same principles as the Co-op equilibrium model set out in the May consultation, but which would be carried out prior to the obligation period - was considered to merit further examination. It is particularly relevant to the period towards 2027 where there is a sustained risk that the level of renewable generation might exceed the obligation, because it has reached its 20% limit. If this happens, the tradable ROC price is likely to fall dramatically as supply exceeds demand. The model does not address one-off years where greater than expected levels of renewables generation due to weather or market conditions leads to over supply. This risk will instead be mitigated through appropriate headroom, and is less likely to lead to sustained over-compliance in successive periods.

4.11 The Secretary of State will have responsibility for setting the Obligation for each forthcoming period based on a forecast of ROCs likely to be issued, plus the headroom. Under the pre-emptive model, where this number of ROCs exceeds an amount equivalent to 20% of the total electricity to be supplied, the Secretary of State would implement the equilibrium model.

4.12 This would involve setting the obligation at the level calculated, and if this represents more than 20% of the total supply, adjusting down the buyout price. This will leave the number of ROCs multiplied by the floor price the same as a number of ROCs equivalent to 20% multiplied by the scheduled buyout price. A simplified example would look like this:

RO percentage	= 20% (upper limit)
Buy-out price	= £50
Forecast of Total ROCs for next period	= equivalent to 21% of electricity
New obligation	= 21% (expressed in ROCs)
Revised buyout price	= $(20 \times 50) / 21 = £47.62$

4.13 To implement this option, the Secretary of State would not need additional powers in primary legislation, and we do not now intend to take any further powers in the Energy Bill⁹. The Government believes further study of the issue is required, and a final decision on whether to implement the above mechanism, or any other, will be taken following further consultation.

⁹ The Bill will include minor clarification of ministers' powers to set the level of the obligation and calculate the buyout price, by a method to be set out in the Order.

5. Co-firing and sustainability of biomass

5.1 Chapter 6 of the consultation set out our proposals dealing with a number of technical issues around co-firing, the definition of energy crops, sustainability reporting, and waste.

Co-firing (Qs 18-19 and paras 6.1-6.8)

5.2 The responses on the issue of co-firing are covered above in paras 2.20 to 2.22.

Energy crops (Q20 and paras 6.9-6.14)

5.3 The Government stated in the consultation that it is committed to promoting energy crops and proposed through banding to give energy crops a higher support level than regular biomass. Mirroring the removal of energy crops from the overall co-firing cap (which was done in the 2007 Order), we proposed to exclude energy crops from the trigger for emergency review mentioned above. We did though propose to monitor the materials co-fired as energy crops to ensure the RO was not leading to behaviour that does not support sustainable crop supply chains. A majority of those who expressed an opinion agreed with the Government's proposals. Some expressed concern over the origin of energy crops or argued that other biomass products should be brought within the definition. Although there might be some administrative benefits to tightening the definition of energy crops, we feel the current definition strikes the right balance and are not proposing to change it.

Sustainability (Qs 21-24 and paras 6.15-6.21)

5.4 We set out proposals to require biomass users to provide information which would allow for assessment to be made as to the sustainability of the biomass they use for generation. While there were some calls for the introduction of minimum regulated standards, a large majority of respondents agreed with our proposals to seek information on sustainability of biomass used. We are therefore minded to proceed with introducing a requirement to report. We further asked whether the criteria we set out were appropriate. A majority agreed that they were and we intend to retain that list:

- Biomass used, origin and volumes;
- Whether it is a waste/residue or co-product or energy crop;
- Whether it has been sourced under any quality standards (in particular sustainability standards under the Road Transport Fuel Obligation (RTFO), the Roundtable on Sustainable Palm Oil (RTSPO), or land use standards under the Directive on Integrated Pollution Prevention and Control (IPPC));
- What the land use has been from 2005; and
- Whether producers/generators are under any voluntary code of conduct.

5.5 The Government will seek to make the reporting requirements as light as is practicable to achieve the information we need. In line with this, we intend to exclude

stations with a capacity of 50 kW and under from the reporting requirement (a suggestion which a majority of respondents endorsed).

5.6 We further proposed that Ofgem should be given the power to withhold from issuing ROCs until information is provided, as a means to ensuring compliance. Respondents generally agreed with this proposal. However, questions were raised about how this mechanism might work: whether ROCs could be withheld retrospectively, whether once they had been withheld they could not ever be issued, or whether they were only withheld until a company provided the information requested. We are currently working with Ofgem to work out the detail of how the power will apply, but do not believe that it should apply retrospectively. Our conclusions will be included in the statutory consultation on the Order.

Deeming the biomass fraction of waste (Qs 25-26 and paras 6.22-6.28)

5.7 Under the RO it is possible for certain energy from waste stations to claim ROCs on the electricity generated from the biomass fraction of waste. The May 2007 consultation set out the difficulties in cost-effectively measuring the biomass energy content of mixed wastes (in particular municipal solid waste), which is hindering the deployment of beneficial waste to energy projects. We therefore consulted on a proposal to deem the fossil energy content of waste and suggested a level of 65%. This was deliberately set at a conservative level to reduce the risk of ROCs being awarded to non-biomass energy and so as not to compromise efforts to increase source separation of waste for recycling and composting.

5.8 Respondents to the consultation generally expressed support for the principle of deeming, but a number of operators stressed that such a conservative deemed level would have a detrimental impact on the deliverability of projects using municipal mixed wastes. We have decided to proceed with the introduction of deeming, but to begin with a lower deemed level of 50% fossil fuel energy content that will increase over time to 65%. This trajectory is in line with waste policy, reflecting how we expect the composition of residual municipal waste to change over time with increased separate collection and treatment of food and other biodegradable waste streams. We wish to provide a margin of 5-10% for each period between the deemed level and that indicated by Defra's waste policy projections. We therefore propose setting the deemed levels of fossil energy content at: 50% from 2009 to 2013; 60% from 2013 to 2018; 65% from 2018. The deemed level to be applied from 2018 will be reviewed as part of the banding review expected in 2013 should the biomass content of waste deviate significantly from the trajectory under-pinning these deeming levels.

5.9 Ofgem will be given powers to withhold ROCs for mixed waste streams where there is reasonable doubt that the biomass energy content reaches the deemed level. This is consistent with the approach currently used under the scheme for issuing Climate Change Levy Exemption Certificates. It should be noted that lowering the deemed level of fossil-fuel energy from 65% to 50% is likely to increase the risk for some stations that a test of reasonable doubt will be met.

5.10 The consultation also asked whether operators should be given the opportunity to present Ofgem with evidence that the fossil fuel content is lower than the deemed level. This approach was widely supported. Therefore generators will be able to claim ROCs according to the deemed level or demonstrate the biomass energy content and receive ROCs according to actual renewable generation.

5.11 The majority of responses which addressed these points also asked the Government to consider allowing a more flexible and proportionate approach to measuring the renewable energy content of waste. Several respondents referred to the radiocarbon dating approach which has been the subject of a report commissioned by (among others) the Renewable Energy Association. We agree with the principle that the fuel measurement system should be more flexible as long as it produces appropriately accurate and reliable results. We are currently working with Ofgem to consider whether radiocarbon dating is a valid option and, if it is, to identify any changes to secondary legislation necessary to allow it or other accurate and reliable means of determining biomass content to be used.

Making the RO neutral to waste (Q27 and paras 6.29-6.31)

5.12 Representations have been made that the RO provides a barrier to the burning of waste by co-firers, as they are currently prevented from claiming ROCs for any month where they have burnt both biomass and waste. We have therefore made proposals which would make the RO neutral to certain types of waste allowing co-firers to claim ROCs for the biomass content of their fuel, even if this waste was burned alongside it. The consultation further suggested adopting a definition of solid recovered fuels, following the CEN definition. The majority of respondents agreed with our proposals and we therefore intend to pursue them.

6. Other issues arising from the consultation

Renewable Heat

6.1 A number of responses raised the issue of Renewable Heat and the Co-Generation Directive. A few respondents suggested that Renewable Heat should be incentivised through the RO, beyond the proposed additional allocation of ROCs to biomass CHP plants.

6.2 There was also concern that an overall efficiency criterion of 70% only recently transposed from the Co-Generation Directive for plants over 25 MW would mean that these larger energy from waste (or biomass) CHP stations currently eligible for ROCs (or additional ROCs) would no longer qualify. This is because the efficiency requirements in the Directive are based on those of well-designed, fossil-fuel CHP. Concern was raised that such a change would have an adverse effect on CHP as generators unable to meet the Good Quality Heat requirement will lose the incentive to make good use of the heat output from their systems and decrease the overall efficiency and carbon savings of these stations.

6.3 In order to respond to this concern we propose that the overall efficiency criterion under the RO for energy from waste and biomass CHP stations over 25 MW should be a minimum of 35% of the gross calorific value. The CHPQA will continue to provide accreditation for all stations and provide Ofgem with the appropriate certification.

Funding for administration of the RO

6.4 At present the costs of administering the RO are paid by Ofgem through licence fees from the gas and electricity network operators. The reforms proposed in banding the RO will add to Ofgem's workload and require additional resources. There is a strong case that these costs as well as the existing ones should be met by those who participate in the RO. In the October 2006 consultation on reform of the RO the Government consulted on the option of meeting the costs of administering the RO from the buyout fund. This option was not pursued at the time, in part due to the risk that the buyout fund might occasionally not be sufficient to meet the costs. Following further consideration and examination of this issue we intend to take a power in the Energy Bill to allow Ofgem to remove its administrative costs from the buyout fund prior to the buyout fund being recycled. Where there is not sufficient money in the buyout fund the difference will be met by Government. Consultation on the amount of money to be taken from the fund each year will take place as part of Ofgem's annual consultation on its budgets. There will also be consultation on the detail of how this new mechanism will work prior to its inclusion in the Renewables Obligation Order.

Private Wire Networks

6.5 Following the previous consultation we are also taking steps in primary legislation to further clarify the situation with private wire networks. We propose to include a power

in the Bill to allow ROCs to be issued to generators acting as unlicensed suppliers – subject to conditions to be consulted on in the Order.

Timing and Next Steps

6.6 It remains our aim to introduce the Banded RO by 1 April 2009, subject to Parliamentary time and process, EU State Aids clearance and Statutory consultation on the proposed 1 April 2009 Renewables Obligation Order.

Annex A

Responses can be found at:

<http://www.berr.gov.uk/energy/sources/renewables/policy/renewables-obligation/key-stages/banding-ro/page42154.html>

2oc	Corus UK Limited
Advanced Recycling Technologies Ltd	Cory Environmental
Agricultural Industries Confederation	Country Land And Business Association (CLA)
Agrivert Ltd	Covanta
Airtricity	Coventry & Solihull Waste Disposal Company
Alcan Smelting and Power UK	Cumbria County Council
Andigestion Ltd (see also 153)	Delia Quigley
APPG on Wood Panel Industry	Derek Rayner
Arkady Feed UK Ltd	Derwent Hydroelectric Power Ltd
Arup Building London Sustainability Group	DONG Energy
Association of Electricity Producers	Dr Hugh Montgomery MD (Ind)
Balcas Ltd	Drax Power Limited
Beck Mickle Hydro Ltd	E.ON UK
Bedminster International	Eaga plc
Biffa Waste Services Limited	EBCOR Ltd
Biomass Industrial Crops Ltd (BICAL)	Eco-Solids International Ltd
Blanche Symons (Ind)	EDF Energy plc
Bond Pearce LLP	EEF
Brian Wilson (Ind)	ENER-G plc
British Cement Association	Energia – Viridian Energy Limited
British Contract Furnishing & Design Association (BCFA)	Energy Developments (UK) Limited
British Energy	Energy Power Resources Ltd (EPR)
British Hydropower Association	Energy Savings Trust
British Sugar plc	Energywatch
British Water	Environment Agency
British Wind Energy Association	Environmental Services Association
Bryan Norris	Environmental Technologies Cluster
Business Council for Sustainable Energy UK (UKBCSE)	FCC Projects
CantorCO2e	Forum for the Future
Centrica	Fred Olsen Renewables Limited
Chartered Institute of Water and Environmental Management (CIWEM)	Friends of the Earth
Chemical Industries Association	Fuel Cells UK
Claire Riou	Future Energy Yorkshire
CLG Energy Consultants Ltd	Glencore Grain UK Limited
Combined Heat and Power Association	Good Energy
Confederation of Paper Industries (CPI)	Greater Manchester Waste Ltd
Co-operative Group	Green Works
	Greenpeace
	Helius Energy plc
	Herefordshire Hydro Group

Highlands and Islands Community Energy Com	Scottish and Southern Energy Group
Highlands and Islands Enterprise	Scottish Power Group
Highmead Consultants	Scottish Renewables
HSH Nordbank AG	SE England Regional Assembly
Ian Smith (Ind)	SembCorp Utilities (UK) Limited
INEOS Chlor Limited	Severn Trent Water Ltd
Infinis Limited	Shanks PFI Investments Limited
Institute of Mechanical Engineers (IMechE)	Shell WindEnergy Limited
InterGen (UK) Ltd	Shetland Island Council
International Power plc	SITA UK
Keld Energy Ltd	Slough Heat and Power Limited
KTI Energy Limited	Solarcentury
Ldr, Bath and NE Somerset Lib Dems (Ind)	Solent Sustainable Energy Ltd
Lesley Carson	South East England Development Agency (SEEDA)
LIFE IC Limited	South West Hydro Group
Mark Wilson (Ind)	South West Water Ltd
Merseyside Waste Disposal Authority	Southampton City Council
Michael Jefferson	Steam Supplies Limited
National Farmers' Union (NFU)	Summerleaze Ltd (see also 135)
National Grid	Talisman Energy
National Non-Food Crops Centre	Tesco plc
Natural England	Thames water Utilities Ltd
Neil Hollow, PHD Student	The Climate Group
Nordex UK Ltd	The Converging World
Northern Energy Developments Ltd	The Green Party
Northern Ireland Company Natural Energies Limited	The Micropower Council
Northern Ireland Electricity plc	The Ramblers Association
Northumbrian Water Ltd	The Scottish Environment Protection Agency (SEPA)
Novera Energy plc	The Woodland Trust
Ofgem	Town and Country Planning Association (TCPA)
Organic Resource Agency Limited	Tradelink Solutions
PDM Group Ltd	UK Forest Products Association
Pelamis Wave Power Limited	UK Oleochemical and Soap Industries
Peter Myers (Ind)	UPM-Kymmene (UK) Ltd
Prof Per Bullough	Veolia Environmental Services (United Kingdom) plc
Progressive Energy Ltd	Vestas Wind Systems A/S
Prospect	Viridor Waste Management Limited
Renewable Energy Association	Waste & Resources Action Programme (WRAP)
Renewable Energy Foundation	Water UK
Renewables Advisory Board	Wavegen
RES UK & Ireland Ltd	Wessex Water Services Limited
Robin Stott (Ind)	Western Power Distribution
RSPB	WFL Engineering & Management Services Ltd
RWE npower plc	Wood Panel Industries Federation
SBGI (Soc of British Gas Industries)	World Future Council (Miguel Mendonca)
	WWF-UK

Ynni Glan cyf, Wales

Yorkshire Water

Annex B

- Q1: Are there any technologies that will fall into the reference band as 'others' that should be given a different support level? Please provide evidence as to the technology and cost.
- Q2: Do you agree that it is appropriate to distinguish between energy crop and regular dedicated biomass projects?
- Q3: Do you agree with the rationale for grouping technologies in this way?
- Q4: Do you agree with the proposed banding levels? If not, please provide evidence as to why these should be changed. Views are also invited on the reports by Ernst and Young and Oxera published alongside this consultation document
- Q5: Do you agree with the proposal that Geopressure occurring in conjunction with fossil fuel should be excluded from the RO?
- Q6: Do you agree with the principle of providing independent advice to Ministers to help agree UK wide bands, and on who should provide that advice?
- Q7: Do you support this approach to timing of reviews?
- Q8: Do you agree with the criteria set out in paragraph 4.14? Should there be any additional criteria?
- Q9: Do you agree that the proposed trigger points for grandfathered rights, including the transitional arrangements for projects consented on 1st April 2009, are appropriate?
- Q10: Should the electricity generated from power stations that add additional capacity after the point at which they are grandfathered be calculated as a fraction pro rata to the installed capacities and/or be subject to separate metering at the generators' discretion?
- Q11: Do you agree with the proposed treatment of projects under 50 kW as set out in para 4.21?
- Q12: Is there any reason why RO support at the grandfathered level would need to continue after the initial investment had been paid back?
- Q13: Accepting that there will be variation between projects, is 20 years a fair proxy for project financing?
- Q14: Should this provision apply to projects under NFFO 3, 4 and 5 from date of contract, date of first supply or date of commencement in RO?

- Q15: Is a guaranteed headroom of 6% adequate, given the ability of suppliers to bank ROCs and our intention to also remove the risk of a ROC price crash through introducing the ski-slope?
- Q16: At what point in time should the level of Obligation for a given obligation period be announced?
- Q17: Do you agree with the intention to take a power to introduce a ski-slope in primary legislation subject to a later need?
- Q18: Do you agree with the need for a special co-firing criterion for an emergency review of banding? Is 10% of ROCs an appropriate trigger point?
- Q19: Do you agree with the Government's proposal that reducing support and reviewing the co-firing band for regular biomass if it contributes 10% of ROCs makes a cap on co-firing unnecessary? If not, please provide evidence as to what the likely impact of uncapping co-firing at the proposed level of support would be and the level of cap appropriate.
- Q20: Do you agree with the proposed treatment of energy crops set out in paragraphs 6.9–6.14?
- Q21: Do you agree that sustainability requirements should cover all biomass users?
- Q22: Should those generating less than 50 kW be exempted from sustainability reporting? Should any other threshold be used?
- Q23: Do you agree with the criteria to address sustainability for biomass?
- Q24: Do you agree that Ofgem should freeze the ROCs of operators who do not provide the necessary information on sustainability?
- Q25: Do you agree that deeming the fossil fuel content of waste is appropriate? Should operators be given the opportunity to present Ofgem with evidence that the fossil fuel content is lower?
- Q26: Is 65% fossil fuel the right level to deem? Does the remaining 35% receiving ROCs provide a suitable incentive through the RO without compromising the Government's aspirations for increased recycling?
- Q27: Do you agree that the RO should be made 'neutral to waste (SRF)' in this way? Would there be any negative consequences? Do you agree that a CEN based definition is appropriate?

Annex C

The table and explanation below provides a summary of the grandfathering proposals

Generator Type	ROC Entitlement			
	Technologies Banded Up		Technologies Banded Down	
	Normal	Exceptions	Normal	Exceptions
Large generating stations (with a DNC over 50 kW) with a full accreditation date prior to 11 July 2006	1 ROC per MWh	Additional capacity – treated as if it was a new generating station	1 ROC per MWh	Additional capacity – treated as if it was a new generating station Co-fired generation will be exempt from grandfathering
Large generating stations which receive preliminary accreditation by 1 April 2009 and full accreditation by 31 March 2011.	Move up into new band	Projects in receipt of capital grants – receive 1 ROC per MWh unless they return their grants	1 ROC per MWh	
All other large generating stations	Move up into new band	Projects in receipt of capital grants – receive 1 ROC per MWh unless they return their grants	Move down into new band	

These grandfathering provisions will not apply to small generators (50 kW or less). All small generators will be placed in the microgeneration band regardless of their technology type and when their plant was installed.

Preliminary and full accreditation

In order to apply for preliminary accreditation under the Orders, an operator must be able to provide Ofgem with evidence of one of the following in respect of the generating station in question:

- consent under Section 36 of the Electricity Act 1989 or Article 39 of the Electricity (Northern Ireland Order) 1992, or
- grant of planning permission under either the Town and Country Planning Act 1990, the Town and Country Planning (Scotland) Act 1997, or the Planning (Northern Ireland) Order 1991 (as appropriate)

Operators cannot apply for preliminary accreditation for additional capacity that is to be installed at generating stations that have already been awarded full accreditation.

Ofgem will consider the validity of the consent or planning permission and also look at any conditions attached. Ofgem can attach conditions to a preliminary accreditation and these may include aspects of the planning permission or consents.

A generating station will be awarded full accreditation under the Orders once Ofgem are satisfied that all the appropriate requirements of the legislation have been met and that the generating station is operational.

A generating station will be awarded full accreditation from one of two dates:

- when it becomes operational, assuming that it is not operational when an application for full accreditation is submitted, or
- the date of receipt of an application for full accreditation, assuming that it is already operational when the application is submitted.

Ofgem will only issue ROCs based on generation that has taken place from the date of full accreditation onwards.

For the purposes of this document, “operational” means the date at which renewable electricity is, or was, first supplied such that it is, or was, eligible to receive ROCs.

Cliff edge group: terms of reference

Background

1. The Government consultation paper 'Reform of the Renewables Obligation (May 2007)' proposed that the Government should take a power in primary legislation to allow for the introduction of a mechanism, known as a "ski slope", which could be introduced at a later date in the event it is thought desirable. The purpose of the ski slope is to prevent a sudden drop in ROC prices (known as a "cliff edge") due to the number of ROCs in the market being higher than the level of the RO. Increased certainty in the value of a ROC should increase investor confidence while not increasing the overall cost to consumers.

2. However, the consultation stated that the Government recognised the need to ensure that any chosen mechanism is fit for purpose. The document therefore stated that 'due to the importance of this issue in ensuring investor confidence the Government will establish a cross-industry working group...to test possible solutions and inform our choice of an appropriate mechanism.'

Composition

3. To be chaired by BERR.

4. Membership to be drawn from generators, suppliers, investors, trade associations and Ofgem, or anyone else with an interest. Input will be drawn from BERR economists and statisticians.

Aims

- To inform the decision on which model, if any, should be introduced to mitigate the risk of a sudden collapse in ROC price and increase investor confidence in the value of the RO;
- to identify what the effects on the RO compliance process and the market of each model might be; and
- to inform decisions on timing and administration of implementation.

Decisions

5. Conclusions of the group will be the responsibility of the chair. Final decisions on policy will belong with ministers.

Meetings

6. To meet initially three times, for around an hour each time, with papers circulated in advance. Members may be invited (or can volunteer) to provide papers or presentations to the group.

Members:

Attending Meetings:

AEP
Alcan
BWEA
Centrica
EDF
EON
ESA
HSH-Nordbank
nPower
Ofgem
RAB
REA
REF
Scottish Power
Viridor Waste

Receiving Papers:

Covanta
Energia
Enviros
National Grid
National Non-Food Crop Centre
Nordex
RES Ltd
Scottish & Southern
Severn Trent Water
Solent Sustainable Energy