

# **NEW AND RENEWABLE ENERGY**

*Prospects for the 21<sup>st</sup> Century*

## **The Renewables Obligation (Amendment) Order 2003 Statutory Consultation**

### **Mature Willow, Short Rotation Coppice**

*Front cover photograph provided by Department for Environment, Food and Rural Affairs (DEFRA)*

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## Annexes

**Annex A:** The Renewables Obligation (Amendment) Order 2003

**Annex B:** Draft Regulatory Impact Assessment

**Annex C:** Glossary

**Annex D:** DTI Consultation Criteria

A copy of the Renewables Obligation Order 2002 is also enclosed for information.

## **Foreword by Stephen Timms, Minister for Energy**

I was delighted to become the Minister responsible for energy earlier this year. It is an area full of exciting challenges, and none more so than promoting the growth of renewable energy in the UK.

The Energy White Paper has set us on the path to achieving major reductions in greenhouse gas emissions by 2050, and thereby gives the UK a leadership role in combating climate change. A greater use of renewable energy is a vital element in our strategy.

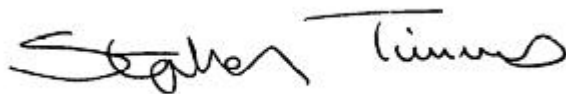
The Renewables Obligation was introduced just over a year ago, and is already proving a success in encouraging the growth of renewables in Britain. But there are a number of ways in which it can be made more effective, and work more smoothly.

This consultation document outlines a number of changes we propose to make with effect from April 2004. The majority are technical adjustments to ensure that the Obligation works as originally intended. On two issues the changes are more substantial. First, we are proposing to relax the rules so that small generators, such as PV installations on houses, can qualify for Renewables Obligation Certificates (ROCs). Although the financial benefit may be modest, I believe this will send a clear signal to small generators that they are part of the renewables `family', and an integral part of the effort to increase renewables in UK.

Second, we are proposing changes to the rules on co-firing of biomass with fossil fuels. The purpose of the existing regime was to encourage the development of energy crops. It is already clear that it will not be achieved as we had hoped. We are, therefore, proposing to give more time to get the crops planted and allow the co-firing regime to cover three crop cycles. To balance this, and reduce the risk of flooding the ROC market, the limit on the amount of co-firing that an individual supplier could use to satisfy his obligation would be progressively reduced.

This new proposal should provide growers with a more secure long-term market and more time to exploit improvements in cultivation. An independent study commissioned by the DTI shows that this regime would not lead to any increase in carbon emissions, and that the impact on ROC prices is likely to be marginal.

I believe these changes make the Obligation an even more effective instrument in promoting growth of renewables in our electricity market. I look forward to receiving your comments on these proposals.

A handwritten signature in black ink, reading "Stephen Timms". The signature is written in a cursive style with a long horizontal line above the name.

Stephen Timms

Minister for Energy

## Section 1: Introduction

### Purpose of Consultation

1.1 This statutory consultation exercise applies to England & Wales only. An equivalent consultation on amendments to the Renewables Obligation (Scotland) Order 2002 will be a separate exercise handled by the Scottish Executive.

1.2 By publishing this statutory consultation paper we are announcing the changes that will be laid before Parliament in the next session and inviting a final check on the finer details of the proposed Order (see Annex A).

1.3 A full review of the Renewables Obligation Order 2002 is planned for 2005/6 (as announced in the Energy White Paper). The Obligation is working well apart from in one area - energy crop uptake. It is this area that requires early review to ensure that the co-firing rules are likely to work as intended. So, although significant, the main theme of this review is narrowly focused and the adjustments proposed are designed not to unbalance other aspects of the Obligation. Within those parameters, we propose other changes designed to help the working of the Obligation.

1.4 Views on co-firing from a range of interested parties have been taken into account in

drawing up this statutory consultation.

### Responses to this Consultation

1.5 The Utilities Act requires us to consult, before the Order is made, with certain bodies (the statutory consultees): the Gas and Electricity Markets Authority, the Gas and Electricity Consumer Council, electricity suppliers to whom it would apply and generators of electricity from renewable sources. We would also welcome comments on these detailed proposals from other interested parties. The consultation will also be advertised in the national press in order to reach as many stakeholders as possible. **Views are sought on the proposed changes to the Renewables Obligation as set out in this document, on the attached Regulatory Impact Assessment and on the draft amendment Order.**

1.6 Responses to this consultation must be received by **Friday 21 November 2003**.

E-mail your response to [info.trro@dti.gsi.gov.uk](mailto:info.trro@dti.gsi.gov.uk) or post or fax it (fax number 020 7215 6528) to:

**Holly Firmin  
Renewable Energy Policy  
Department of Trade & Industry  
Bay 110  
1 Victoria Street  
London  
SW1H 0ET**

Please include your name and postal address with any response,

including those sent by e-mail. We plan to publish responses on the DTI website. If you do not wish to have your response made publicly available, please let us know by marking your response "confidential".

## Section 2: The Renewables Obligation

2.1 The Renewables Obligation is the Government's main policy measure to encourage the development of renewable forms of energy in the UK. It is supported by many other measures including targeted capital grants. The Obligation has already provided, and will continue to provide, an impetus for the new renewable generating capacity that will be needed to meet the UK's current 10% 2010 target for renewable energy and as a basis for further reductions in carbon dioxide emissions.

2.2 The Renewables Obligations (Renewables Obligation Order 2002 in England and Wales and the Renewables Obligation (Scotland) Order 2002 in Scotland, hereafter referred to as the Obligation) on electricity suppliers require all licensed electricity suppliers in Great Britain to supply a specified and growing proportion of their sales from renewable sources – with the ultimate aim of achieving 10% by 2010. The Obligation is underpinned by a substantial package of financial and non-financial supporting mechanisms and, through the Renewables UK unit, active assistance to the industry to develop its competitive potential.

2.3 The Obligation has worked well in its first year. In response, applications for Section 36 consent (under the Electricity Act

1989) for renewables projects have taken off dramatically. By March of this year, the Government had consented to more offshore windpower capacity than all the windfarms built in the whole of the 1990s.

2.4 The Obligation aims, among other things, to encourage the generation of electricity from energy crops but we recognise that we are starting from a low base. Minimal planting of energy crops has taken place so far and the industry has argued that this is in part due to overly restrictive rules on co-firing in the Obligation, particularly that permitting co-firing only until 2011. They have argued that this is too short a timescale to allow for the development of a market in energy crops.

2.5 This issue of how to stimulate energy crop development has provided the main focus of this review. We commissioned ILEX Energy Consulting Ltd ("ILEX") to assess the implications for energy crop development, and for the Obligation more widely, of adjusting the rules for co-firing under alternative scenarios.

2.6 We have also considered a number of other issues that needed to be addressed to ensure that the Obligation works as originally intended.

2.7 In taking forward this technical review, we are mindful of the forthcoming major review of the Renewables Obligation and also our commitment to do all that we can to ensure stability surrounding the Obligation rules in order not to disturb investor confidence in renewables.

2.8 Our proposed amendments are set out in paragraphs 2.9 to 2.46.

## **Amendments to the Renewables Obligation which are subject to Statutory Consultation**

The Amendments we propose are listed below.

### **Changes to rules on co-firing of energy crops**

2.9 Minimal planting of energy crops has taken place so far and, as noted above, the industry has argued that this is, in part, due to overly restrictive rules on co-firing. We believe that modifications to the rules can be made to enhance the prospects for energy crops without a radical change to the Obligation.

2.10 For the purposes of this technical review, we are not proposing to change the definition of energy crops. It has been suggested to us that, in order to boost the development of energy crops, we might consider broadening the definition to include, for example, managed woodland, chestnut coppice and crop by-products. We are pre-disposed not to accept such a change because it would be disadvantageous to energy crops as currently defined, i.e. plant crops planted after 31 December 1989 and grown primarily for the purpose of being used as a fuel (e.g. short rotation coppice).

2.11 The present rules on co-firing permit ROCs to be earned for the

amount of generation calculated to have been produced from biomass by existing generating stations fuelled by both biomass and fossil fuel. Until 31 March 2006 any biomass material will qualify. After 1 April 2006, 75% of the energy content of the biomass fraction of the fuel supply must be derived from crops grown specifically for energy use. Co-firing ceases to be eligible after 31 March 2011. In order to prevent the Renewables Obligation being met by large quantities of ROCs generated by co-firing, a safeguard measure was included whereby a maximum of 25% of a supplier's Obligation could be met by co-firing ROCs. A large volume of co-firing ROCs could have undermined incentives to develop other renewables technologies with potential beyond the life of existing fossil generating plant and might also have led to increases in carbon emissions if co-firing altered the current balance of fossil fuels used in electricity generation.

2.12 We considered adjustments to the variables on co-firing under alternative scenarios based on suggestions put forward by stakeholders and others. ILEX were commissioned to develop and analyse the scenarios in order to inform our thinking on the amendments needed.

2.13 The ILEX study is available at: <http://www.dti.gov.uk/energy/renewables/policy/rooamend.shtml>. It examined the impact of options to change the co-firing rules on the following variables compared with a "Do Nothing option":

- the level of generation from co-firing;

- other forms of renewable generation;
- national resource costs;
- carbon emissions;
- the wider use of biomass for energy; and
- effectiveness in establishing energy crops as a longer term renewables option.

2.14 Two options for changes to these rules were considered by ILEX: one for a minor relaxation and the other for extended eligibility. Additionally, the sensitivity of the proposed changes was tested against alternative levels for the Obligation beyond 2010; and cases where RO targets were broadly met (and hence ROC prices settled around the buy-out price) and cases where the 2010 target and the 20% aspiration for 2020, were not fully met and ROC prices were higher.

2.15 The ILEX analysis concluded that co-firing biomass in fossil-fuelled generating plant is commercially viable, but will not achieve the objective to encourage the development of energy crops under the current rules. Although allowing co-firing to qualify under the terms of the RO has the potential to create a substantial demand for energy crops, the current rules do not allow sufficient time for a supply of energy crops to be developed. ILEX recommended that:

- the requirement to burn a proportion of energy crops should be delayed from 2006 to

2009 to allow more time for planting and cropping;

- the percentage of total biomass required to be sourced from energy crops should be increased in stages;
- co-firing should be eligible for the Obligation until 2016 to provide growers with a secure long-term market and time to exploit improvements in cultivation.

2.16 The study also considered how best to maintain investor confidence in the Renewables Obligation and ROC prices. The changes to the co-firing rules recommended by the study could produce a small price effect that would be mainly confined to the period 2007 to 2010. However, the perception amongst investors could be more significant than the rise projected by ILEX and, to mitigate this, ILEX recommended progressively tightening the existing cap of 25% on the contribution that co-firing can make to the RO. They proposed reducing the cap from 25% to 10% in the period 1 April 2006 to 31 March 2011 and to 5% for the period 1 April 2011 to 31 March 2016.

2.17 We are satisfied that this regime offers the benefit of providing a stimulus to energy crops. We note that:

- ILEX have projected that the rule changes would increase carbon savings by 8 million tonnes of CO<sub>2</sub> over the period to 2016; and
- although it may lead to a small drop in ROC prices in some

years, particularly in the period 2007-09, the ILEX study shows that the proposed regime provides stability and a secure framework for renewables investment. The cap on the contribution that co-firing can make to the suppliers' obligation constrains the impact of co-firing on the Obligation as a whole and offsets the possibly negative impact of lower ROC prices on the development of other renewables.

2.18 We are, therefore, proposing that co-firing with biomass will attract ROCs as follows:

- any biomass can be co-fired until 31 March 2009 with no minimum % of energy crops;
- 25% of co-fired biomass must be energy crops from 1 April 2009 until 31 March 2010;
- 50% of co-fired biomass must be energy crops from 1 April 2010 until 31 March 2011;
- 75% of co-fired biomass must be energy crops from 1 April 2011 until 31 March 2016.

2.19 To balance the above changes and reduce the risk of flooding the ROC market with co-firing ROCs, thereby affecting ROC prices and investor confidence adversely, we propose that the 25% cap on an individual supplier should be changed, from 1 April 2006 to:

- 10% from 1 April 2006 until 31 March 2011;
- 5% from 1 April 2011 until 31 March 2016.

Co-firing will cease to be eligible for ROCs after 31 March 2016.

2.20 These proposals will allow farmers three full cropping cycles for energy crops planted in the spring of 2005, making this a much more attractive option in terms of establishing a market for energy crops (willow coppice, once established as coppice, is harvested every third year - see guide below).

### Planting/Harvesting Guide

A planting guide is shown in the table below to illustrate planting to harvest cycles.

### Short Rotation Coppice

Planting	2004	2005	2006
Cut back	2004/05	2005/06	2006/07
	2006	2007	2008
	2007	2008	2009
First harvest (70-75%)	2007/08	2008/09	2009/10
	2009	2010	2011
	2010	2011	2012
Second harvest (100%)	2010/2011	2011/12	2012/13
	2012	2013	2014
	2013	2014	2015
Third harvest	2013/14	2014/15	2015/16
Large Combustion Plant Directive (final stage)	2015 onwards	2015 onwards	2015 onwards

NOTE: Planting takes place April to June. Harvesting takes place November to February. New varieties may be able to be harvested every two years rather than every third year but these varieties are not yet available.

### Miscanthus

Plant rhizomes (negligible crop)	2005
50% crop	2006
75% crop	2007
100% crop	2008
100% for 15 years or so.	

### **Conversion of Fossil Fuel Generating Stations to burn Biomass**

2.21 Under the existing Order, coal or gas or other fossil fuel power stations that convert to biomass must refurbish by renewing their main components in order to qualify for ROCs. This could be a disincentive to the conversion to biomass.

2.22 We propose to allow fossil fuelled generating stations e.g. coal or gas-fired power stations, to qualify for ROCs if they convert entirely to biomass, allowing for minimal fossil fuel use, without requiring replacement or refurbishment of equipment. This would apply to conversions taking place from 1 April 2004 (to avoid the retrospective issue of ROCs) and would apply to those generating stations which during the period prior to 31 March 2003 derived at least 75% of the energy content of the fuel used by the generating station from fossil fuel. Amendment of the Order in this way may be attractive to some coal fired stations that have been closed or mothballed. They could be brought back into service as biomass stations without requiring investment in new infrastructure and this would enhance the prospects for biomass to make a significant contribution to the 10% by 2010 target. To deter a later switch back to fossil fuels, they would become permanently excluded generating stations if they reverted back to 75% fossil fuel or more after March 2004.

### **Micro hydro**

2.23 Currently “micro” hydro stations of 1.25 MW or less that were built before 1990 and have always been in private ownership and not received NFFO or SRO support, are eligible for the Obligation without first having to refurbish. All other stations built before 1990 must refurbish to qualify. The rationale behind this was that stations of 1.25 MW or less had never previously benefited from any kind of public support, whereas all others had, in one way or another, and should not get a double subsidy. However, this rationale does not apply to stations which have been operated by a public company or privatised nationalised industry for instance, under lease, but where ownership has remained in private hands. We have been asked to consider dropping the restriction related to private ownership (i.e. to allow eligibility for the RO to micro hydro stations that have been publicly owned in the past – without the need for refurbishment) but we believe there is no justification for allowing such stations to be eligible for ROCs without first having to refurbish.

2.24 To clarify the position, and ensure the purpose of the original policy is served, we propose that only micro hydro stations that have always been in private ownership and have always operated privately, should get ROCs without having to refurbish.

### **Definition of “fuel used”**

2.25 Under the Obligation, a generating station is eligible or

ineligible for ROCs according to the fuel used at the station as a whole. Ofgem have asked us to consider changing this so that a station is classified only in terms of the fuel used in the combustion chamber to generate electricity. This would have the effect of allowing fossil fuels to be used, possibly extensively, at an accredited generating station provided the fuel used in the combustion chamber to generate electricity was either wholly renewable, or complied with the requirements for co-firing of biomass with fossil fuels. It would also mean that generators could use char, a residue produced from pyrolysis and gasification, for example to heat the combustion chamber, without the generating station being considered co-fired. This may help make the gasification or pyrolysis process more economic and may also provide a greater incentive for operators to develop these technologies. In this way, the Obligation can support the development of waste disposal by means of “advanced conversion technologies” as intended.

2.26 We propose:

- that, in determining whether a generating station is fuelled by a particular fuel, regard is to be had only to fuel which it uses to generate electricity;
- adding “standby generation” to the list of permitted uses for fossil fuel in a minimal fossil use generating station. This would allow electricity used in standby generation and the testing of standby generators in such stations to be generated using fossil fuel without the station being regarded as co-fired. The

condition that the energy content of the fossil fuel used by a minimal fossil use generating station must not exceed 10 per cent of the energy content of the renewable fuel sources used would remain applicable. “Standby generation” would be defined so that it would only include generation by equipment that is not in normal use and where none of the electricity generated by that equipment was exported from the generating station;

- adding a new provision defining a new type of excluded generating station – one that uses fossil fuel for a purpose for which it may be used in a minimal fossil use generating station but in such quantity that the energy content exceeds 10% of the energy content of the renewable sources used. This exclusion would discourage the use of large amounts of fossil fuel in the combustion chamber by an operator claiming that the fossil fuel was not being used to generate electricity but was instead being used for one or more of the permitted purposes.

### **Input electricity**

2.27 Input electricity (i.e. electricity used for the operation of the generating station) is deducted from output electricity in determining the amount of electricity used to calculate the number of ROCs to be issued in any one month.

2.28 In some cases, the input electricity is minimal, but it still has

to be measured. For the ease of both generators and Ofgem, we propose that an allowance be made for minimal use of input electricity. This allowance will be equal to a maximum of 0.5% output and shall be disregarded for calculating input electricity where input electricity is 0.5% of output electricity or less. To avoid placing too much of a burden on generators, we also propose that when a generator can show that his input electricity will always be less than 0.5% output, he will be deemed not to use input electricity. Where input electricity is more than 0.5% of output electricity, then it will all be deducted.

2.29 At present, electricity used during maintenance periods is interpreted by Ofgem as input electricity and this is an interpretation with which DTI agrees. It has been put to us that this should not be counted as input electricity since the station is not generating and earning ROCs at the time. Nevertheless, we consider it reasonable to regard electricity used for maintenance purposes as a routine part of the operation of a generating station and do not propose any change on those grounds. However, we do propose that it should be made explicit that maintenance electricity counts as input electricity to help Ofgem administer the Obligation and so that generators are not in any doubt about the position.

### **Definition of energy content**

2.30 At present Ofgem uses gross calorific value (calorific value is used to calculate the renewable output (Article 9) and the biomass

element) but some generators have indicated that that they would like to use net calorific value at times. Gross calorific value is the total energy content per unit mass. Net calorific value is a smaller value which takes account of the fact that there is some water in the fuel (or it is formed when a fuel containing hydrogen is burned). This is not considered ideal as it allows for errors caused by generators who accidentally submit a gross calorific value for renewables fuel and a net calorific value for the fossil fuel element.

2.31 We wish to clarify matters by making the rule in the Obligation consistent with that under NFFO and with Ofgem's practice i.e. all energy content will be calculated on gross calorific value. The motive for change is to bring clarity to the situation rather than the need for technical amendment. However, the choice of gross calorific value should make a small positive difference to what is counted as biomass.

### **ROCs for small generators and annual export declarations**

2.32 The rationale for the proposed change is to make ROCs available to a wider range of smaller generators. Consultation on this issue is an Energy White Paper commitment.

2.33 At present, generators must generate a minimum of 0.5MWh in any one month in order to qualify for 1 ROC (generation from 0.5MWh to 0.9MWh is rounded up to 1MWh and one ROC is issued for every 1 MWh of eligible generation). Smaller generators,

such as photovoltaic and small wind generators, are often not able to gain any advantage from the Obligation as a result of this requirement and they feel strongly that they should not be excluded. The possession of a ROC could be of both symbolic and financial importance to small generators and also make a worthwhile contribution to the winning of public confidence which would support the development of renewables more generally.

2.34 A notional one-off payment to the generator in respect of electricity supplied is an option but would not provide ROCs. Another option would be to calculate output on the basis of annual calculations rather than monthly calculations for this group of generators. We favour the latter approach as it satisfies the small generator's wish, as a point of principle, to be treated like other renewable electricity generators and qualify for ROCs.

2.35 We therefore propose allowing small generators to accumulate output and be awarded ROCs on the basis of their annual output. Eligible generating stations with a declared net capacity of 50kW or less would be able to accumulate output over 1 year and be issued with ROCs on the basis that annual output between 0.5MWh and 1MWh shall be rounded up so as to qualify for 1 ROC.

2.36 In practical terms, this change would require proper metering to be in place to measure output; distribution connection charges would need to be borne in mind; and a contract allowing the generator to sell the electricity to a

supplier and buy back would be needed (to allow 'own use electricity' to qualify as having "been supplied to a customer in Great Britain" under the Obligation). We wish to reduce the practical difficulties in the acquisition of ROCs and so we propose to allow eligible generating stations to make the declaration to Ofgem on an annual rather than monthly basis. We welcome suggestions for any further ways in which administrative procedures can be eased for small generators.

### **NFFO and Non-NFFO Generating Stations at the same location**

2.37 The Non-Fossil Fuel Obligation (NFFO), in England & Wales, and the Scottish Renewables Obligation preceded the Renewables Obligation Order 2002 as the main instrument promoting the development of renewables capacity. Five rounds of legal contracts were made under the Non-Fossil Fuel Obligation.

2.38 NFFO 1 and 2 generating stations are now out of their contract period and no longer receive support for their above-market costs and so their output attracts ROCs. NFFO 3, 4 and 5 generating stations are either not yet built or are built and receive their NFFO contracted price for the remainder of their contract period. Although there were variations, the general pattern for the more recent NFFO rounds was an allowance of 5 years to build and commission a project, then a contract period of 15 years when they receive the contracted price for their output. The last of these contracts will expire in 2018 so they will have an

impact for many years to come and indeed constitute the bulk of our present renewables capacity, apart from large hydro.

2.39 ROCs for NFFO 1 and 2 projects go to the operator of the generating station who can sell them on to the supplier as part of the sale of the electricity. ROCs for NFFO 3, 4 and 5 projects are held by the NFPA and auctioned along with the electricity. The income is used to offset costs to the Fossil Fuel Levy and any surplus is held in an account administered by Ofgem i.e. the NFFO developer only receives his NFFO contracted price, not that and the value of the ROCs.

2.40 The current Article 8(11) is intended to deny ROCs to a party (a "NFFO contractor") who has contracted with the NFPA to build and commission a station at a particular location until they have fulfilled their NFFO obligation.

2.41 The current wording achieves this objective. However it is ambiguous, and has the unintended effect of capturing situations outside the policy rationale for the provision. For example, if a NFFO contractor has built a generating station at the location in question and for some reason that station does not generate electricity during a particular month, then any other generating station on the same site, whether or not it is owned or operated by the same party, is not eligible for ROCs in respect of renewables electricity which it generates during that month. If a NFFO contractor fails to build the NFFO station, the effect is to discourage any other development

on the site, because any other development would be denied ROCs. We wish to make it easier for the unused portion of locations specified in NFFO contracts to be used for other stations, and to encourage the commissioning of NFFO projects. This could enable the UK to increase its overall renewables capacity. We propose that, in amending Article 8(11), we shall take steps to clarify its meaning and ensure that separate owners of generating stations at the same location should not be able to affect each other's entitlement to ROCs through failing to generate from renewable sources.

2.42 The draft amended article 8(11) is intended to have the following effects:

- a party to a NFFO 3, 4 or 5 contract which owns or operates one or more stations at a single NFFO contract location will not receive ROCs in respect of electricity generated by any of its stations at that location during any month in which it does not generate electricity which is sold to the NFPA under any one or more of its NFFO contracts. This applies to connected parties as if they were the same party. A party which has failed to build a station as required by a NFFO 3, 4 or 5 contract will be considered as falling under this principle and so that party will not get ROCs for its other stations at the contract location. However, any ROCs derived from a qualifying arrangement at the contract location will not be affected and will continue to pass to the NFPA.

- a party to a NFFO 3, 4 or 5 contract which owns or operates two or more stations at a single NFFO contract location shall receive ROCs in respect of electricity generated at that location but outside those contracts (whether or not by stations which formerly generated pursuant to NFFO 1 or 2 contracts) during any month in which it generates electricity which is sold to the NFPA under all its NFFO contracts at that location.
- The actions of unconnected parties at the same or different locations shall not affect each other's eligibility for ROCs.

### **NFFO generated electricity**

2.43 Where electricity is generated under a NFFO contract the electricity is sold to the Non Fossil Purchasing Agency (NFPA), who then auction the electricity as well as any ROCs associated with it. Similar arrangements exist in Scotland for SRO contracts although there the electricity and the ROCs are auctioned separately.

2.44 ROCs are only issued by Ofgem upon receipt of a declaration from the operator of an accredited generating station. Some operators of NFFO stations are not providing the declarations (they do not benefit from the ROCs so there is little incentive to do so), with the result that fewer ROCs are being issued, so fewer than expected are being auctioned. The electricity in question will not get counted towards the 2010

renewables target. This could be avoided if the suppliers were permitted to provide the declaration to Ofgem in respect of NFFO electricity.

2.45 We propose that suppliers be allowed to make the necessary declarations to OFGEM with regard to the amounts of electricity generated by accredited stations under NFFO contracts.

### **Banking days**

2.46 We have considered how best to allow Ofgem slightly more flexibility for transfer of ROCs on the Register. We propose an amendment to schedule 2 paragraph 6 on banking, changing from "on the 10<sup>th</sup> banking day in September and on the 5<sup>th</sup> banking day from receipt of request in all other instances" to "...in any September, within 10 banking days and in all other instances, within 5 banking days after...".

### **State Aid Clearance**

2.47 We will notify the European Commission of our proposed changes to the Obligation, and all proposals are subject to state aid approval.

### **Issues considered but where no change is proposed**

### **Single buy-out fund for Great Britain**

2.48 At present there are separate 'buy out funds' for England & Wales and for Scotland. The money from these funds is paid back to suppliers according to the number of ROCs that each supplier presents to discharge its obligation compared to the number of ROCs presented by all suppliers. Some have suggested that there is potential for abuse, particularly gaming opportunities for certain suppliers, and that this would be prevented by creating a single GB wide buy out fund.

2.49 There is, however, no evidence of actual abuse. It also seems incongruous to create a single Great Britain fund at the same time as a separate one is about to be created in Northern Ireland. There is also an argument that the advent of BETTA in 2005 will remove the potential problem. In these circumstances we propose that

no action is taken at present, but that the matter is reconsidered in the main review in 2005 in the light of any actual abuse.

### **Fossil Fuel generating stations with dedicated renewables generating sets**

2.50 Fossil fuel generating stations that have a number of generating sets may convert one or more of them to burn biomass. Such a switch from fossil fuel to renewables is clearly something to

be encouraged. Under the present rules, any fossil station where one or more of the generating sets is converted and dedicated entirely to renewable fuel qualify for the ROCs as co-firing stations. This may be sufficient incentive, but may become less so as the co-firing regime becomes more prescriptive with regard to the amount of energy crops and a reducing cap on co-firing.

2.51 We considered amending article 8(13)b by providing that a minimal fossil use generating station would include "a generating station where all the fossil fuel not used for the purposes specified in article 8(13)(b) above is not used in the same generating set as the renewable fuel". However, the Electricity Act 1989 and the Obligation Order 2002 are based on "generating stations" rather than "generating sets". So, such a change would be a very extensive one indeed and too large and complex a change for this statutory consultation. Moreover, anyone making such a conversion at present will be entitled to the appropriate quantity of ROCs under the co-firing regime. The position will only change when the co-firing regime becomes more prescriptive. We, therefore, conclude that further consideration should await the 2005/6 major review.

### **Hydro Compensation Flows**

2.52 At present we treat as eligible for the Obligation, output from statutory compensation flows in a natural water course.

2.53 We received representations for more clarity surrounding the

definition of “hydro generating station” and a number of suggestions on how we might extend the existing provision for ROCs for output from hydro compensation flows. After investigation, we concluded that the revisions suggested to us would not result in any additional hydro output overall at the stations concerned. We are, therefore, not proposing any change to the Obligation on this issue.

#### **Discounting Input Electricity used to power sewage sludge incinerators**

2.54 We have considered whether the electricity used to power the sewage sludge incinerators should no longer be regarded as input electricity. This would amount to special treatment for input electricity used to power such incinerators and we do not propose such an amendment.

#### **Definition of electricity eligible for ROCs**

2.55 We have been asked to consider a change to the definition of electricity eligible for ROCs. This would address cases where a generator gives Ofgem wrong information inadvertently and ROCs are issued. Where the mistake is realised and the re-issue of ROCs is requested, ROCs which have already been issued cannot be revoked or re-issued if to do so would result in a change to the

gross output and input electricity. The reason for this is that freezing records of gross output and gross input of electricity 2 months after generation helps ensure smooth implementation of the Obligation and running of the ROC market.

2.56 Our view is that this problem is relatively minor compared with the advantages of freezing gross output/input electricity as described above. We are not proposing any amendment.

#### **Revocation of ROCs**

2.57 We have been asked to consider removing the provision allowing Ofgem to revoke ROCs and publishing details of the action in Ofgem’s ROC Register. This occurs, for example, where it is shown that the ROCs have been fraudulently obtained. No such cases have arisen since the Obligation came into force suggesting that the provision is working well and encouraging industry self-regulation and good practice. We are not proposing any amendment.

## **Section 3: Conclusion**

3.1 The net impact of the changes we are proposing should positively help in the achievement of the UK's current 10% target for renewable energy.

3.2 We are making firm proposals for the specific amendments in paragraphs 2.9 to 2.46 discussed above and invite interested parties to alert us to any details that require amendment before the draft Order (see Annex A) is laid before Parliament. A copy of the Renewables Obligation Order 2002 is also enclosed purely for ease of reference.

3.3 We would also welcome your comments on the Draft Regulatory Impact Assessment which is attached at Annex B.

3.4 We look forward to receiving your responses on the content of this consultation paper.



# Annex A: The Renewables Obligation (Amendment) Order 2003

*Draft Order laid before Parliament under section 32 of the Electricity Act 1989, for approval by resolution of each House of Parliament.*

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## DRAFT STATUTORY INSTRUMENTS

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2003 No. [        ]

### ELECTRICITY, ENGLAND AND WALES

#### The Renewables Obligation (Amendment) Order 2003

*Made* - - - - - *[2003]*

*Coming into force* - - - - - *[2004]*

Whereas a draft of this Instrument was laid before Parliament in accordance with section 32(9) of the Electricity Act 1989(1) and approved by resolution of each House of Parliament;

Now, therefore, the Secretary of State, in exercise of the powers conferred upon her by sections 32 to 32C of the Electricity Act 1989(2) and having consulted the Gas and Electricity Markets Authority, the Gas and Electricity Consumer Council, electricity suppliers to whom this order applies, generators of electricity from renewable sources and such other persons as she considers appropriate, hereby makes the following Order:

#### Citation, commencement and extent

1.—a. This Order may be cited as the Renewables Obligation (Amendment) Order 2003 and shall come into force on [        2004].

(2) This Order extends to England and Wales only.

#### Amendment

2.—(1) The Renewables Obligation Order 2002(3) shall be amended as set out in the following paragraphs of this article.

(2) Article 2(1) shall be amended by substituting the words “an owner or operator of a generating station, or a party to a qualifying arrangement” for the words “an operator of a generating station”, in the definition of “connected person”.

(3) Article 2(1) shall be amended by the deletion of the words “, in relation to a hydro generating station,” from the definition of “declared net capacity”.

(4) Article 2(1) shall be amended by the insertion of the following definition of “energy content” after the definition of “eligible renewable sources”:

“ “energy content” of a fuel means the gross calorific value of that fuel (as expressed by weight or by volume) multiplied by the weight or volume of that fuel.”.

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(1) 1989 c. 29. Section 62 of the Utilities Act 2000 (c. 27) substituted a new section 32 of the Electricity Act 1989 for the section 32 which was originally enacted.

(2) Sections 32A to [32C] of the Electricity Act 1989 were inserted by sections 63 to 65 respectively of the Utilities Act 2000.

(3) S.I. 2002/914.

(5) Article 2(1) shall be amended by replacing the definition of “micro hydro generating station” with the following definition:

“micro hydro generating station” means a hydro generating station which:

(a) has a declared net capacity of 1.25 megawatts or less;

(b) has always been in private ownership and operation; and

(c) has never generated electricity under an arrangement which has ever been a qualifying arrangement as defined in section 33 of the Act (as that section was originally enacted);”

(6) After article 2(4) there shall be inserted the following paragraph:

“(5) In the case of a generating station with a declared net capacity of 50 kilowatts or less the reference to “month” in each place where it occurs in articles 2(1) (definition of “biomass”), 3(4), 4, 5, 8 and 9 and Schedule 2 shall be taken to be a reference to “obligation period”, subject to the following exceptions:

(a) in article 4(12)(a) the references to “the second month” and to “the said second month” shall remain unchanged;

(b) in article 4(13) the words “of each month” shall be omitted, and the reference to “the end of the second month” shall remain unchanged; and

(c) in paragraph 2(b)(i) of Schedule 2 the words “the month and year” shall be replaced by “the obligation period”.

(7) Article 3(4) shall be replaced with the following:

“(4) In respect of any obligation period which falls within:

(a) the period up to and including 31st March 2006, no more than 25 per cent;

(b) the period from 1st April 2006 up to and including 31st March 2011, no more than 10 per cent; and

(c) the period from 1st April 2011 up to and including 31st March 2016, no more than 5 per cent

of a designated electricity supplier’s renewables obligation may be satisfied by the production of certificates issued in respect of generating stations which, during the month to which a certificate relates, have been fuelled partly by fossil fuel (as defined in article 8) and partly by biomass (and by no other fuel) and are not minimal fossil use generating stations.”

(8) After article 4(10) there shall be inserted the following paragraph:

“(10A) Where a ROC, if issued, will be issued to an electricity supplier pursuant to paragraph (8)(a) or (b), the requirement in paragraph (10)(c) shall be regarded as a requirement for that electricity supplier to provide the Authority with the declaration, and the references in sub-paragraph (10)(c)(i) and (ii) to “he” and “the operator” shall be regarded as references to the electricity supplier.”

(9) Article 5(1)(a) shall be amended by inserting, after the words “pursuant to article 4(10)(c)”, the words “or by the electricity supplier pursuant to article 4(10A)”.

(10) Article 8(3) shall be replaced with the following:

“(3) A generating station shall be an excluded generating station in any month during which it is fuelled wholly or partly by waste unless:

(a) the only waste by which it is fuelled in that month is biomass; or

(b) all the waste by which it is fuelled in that month which is not biomass has first been manufactured into fuel which is in either a gaseous or liquid form (or both) by means of plant and equipment using advanced technologies only.”

(11) After article 8(5) there shall be inserted the following paragraph:

“(5A) After 1st April 2004 a generating station shall not be an excluded generating station by virtue of paragraph (2)(b) in any month during which it is fuelled wholly by biomass, if:

(a) during the period prior to 1st April 2003 at least 75 per cent of the energy content of the fuel used by the generating station was derived from fossil fuel; and

(b) in no month after March 2004 has the energy content of the fuel used by the generating station been derived as to more than 75 per cent from fossil fuel.”.

(12) In article 8(6) the date “31<sup>st</sup> March 2006” shall be replaced by the date “31<sup>st</sup> March 2009”, and the words “75 per cent” shall be replaced by the words “25 per cent”.

(13) Article 8(7) shall be replaced by the following:

“(7) After 31<sup>st</sup> March 2010 a generating station which in any month is fuelled partly by fossil fuel and partly by biomass (and by no other fuel) shall be an excluded generating station during that month if, in that month, less than 50 per cent of the energy content of the biomass derives from energy crops unless during that month it is a minimal fossil use generating station.”

(14) After article 8(7) there shall be inserted the following paragraphs:

“(7A) After 31<sup>st</sup> March 2011 a generating station which in any month is fuelled partly by fossil fuel and partly by biomass (and by no other fuel) shall be an excluded generating station during that month if, in that month, less than 75 per cent of the energy content of the biomass derives from energy crops unless during that month it is a minimal fossil use generating station.

(7B) After 31<sup>st</sup> March 2016 a generating station shall be an excluded generating station in any month during which it is fuelled partly by fossil fuel and partly by biomass (and by no other fuel) unless during that month it is a minimal fossil use generating station.”

(15) Article 8(11) shall be replaced with the following:

“8(11) (a) This paragraph applies where an extant qualifying arrangement provides for the building of a generating station at a specified location (“the location”) and one or more generating stations are situated partly or wholly at the location.

(b) A generating station –

(i) which is situated partly or wholly at the location; and

(ii) which is owned or operated by a person who is a party to the qualifying arrangement or is a connected person in relation to any such party;

shall be an excluded generating station in any month during which no generating station which that person owns or operates and which is situated partly or wholly at the location generates electricity which is sold pursuant to the qualifying arrangement.

(c) Sub-paragraph (b) shall not apply in any month to a station which, during that month, generates only electricity which is sold pursuant to another extant qualifying arrangement.”

(16) After article 8(11) there shall be inserted the following paragraphs:

“8(11A) A generating station shall be an excluded generating station in any month during which it uses fossil fuel for one or more of the following purposes:

- (a) the ignition of gases of low or variable calorific value;
- (b) the heating of the combustion system to its normal operating temperature or the maintenance of that temperature;
- (c) emission control; or
- (d) standby generation or the testing of standby generation capacity,

and where in that month the energy content of the fossil fuel used for the above purposes exceeds 10 per cent of the energy content of the renewable sources used (and for this purpose the term “renewable sources” includes any waste or component of biomass that is fossil fuel or is derived directly or indirectly from fossil fuel).”

(17) Article 8(13)(b) shall be replaced with the following:

“(b) “minimal fossil use generating station” means, in relation to any month, a generating station which in that month uses fossil fuel only for one or more of the following purposes –

- (i) the ignition of gases of low or variable calorific value;
- (ii) the heating of the combustion system to its normal operating temperature or the maintenance of that temperature;
- (iii) emission control; or
- (iv) standby generation or the testing of standby generation capacity,

and where in that month the energy content of the fossil fuel used for the above purposes does not exceed 10 per cent of the energy content of the renewable sources used (and for this purpose the term “renewable sources” includes any waste or component of biomass that is fossil fuel or is derived directly or indirectly from fossil fuel); and”.

(18) After article 8(13)(c) there shall be inserted the following paragraph:

“(d) “standby generation” means the generation of electricity by equipment which is not used frequently or regularly to generate electricity and where all the electricity is used by the generating station.”

(19) After article 8(13) there shall be inserted the following paragraph:

“(14) In this article and in article 3(4), in determining whether a generating station is fuelled by a particular fuel regard is to be had only to fuel which it uses to generate electricity.”

(20) Article 9(1) shall be amended by replacing the words “Subject to paragraph (2)” with “Subject to paragraphs (2) and (3A)”.

(21) After article 9(3) there shall be inserted the following:

“(3A) Where the operator of a generating station satisfies the Authority that in any month the input electricity of the generating station does not exceed 0.5 per cent of its gross output, no input electricity shall be deducted from the gross output in calculating the net output of the generating station for that month and, accordingly, the net output shall be equal to the gross output in that month.”

(22) Article 9(4)(c) shall be replaced with the following:

“(c) “input electricity” means, in relation to any month, all the electricity used by a generating station in that month (whether or not it is generated by the generating station and whether or not it is used while the generating station is generating electricity) for a purpose directly relating to the operation of that generating station, including fuel handling, fuel preparation, maintenance and pumping water.”

(23) Article 10 shall be amended by inserting the words “by an electricity supplier” after the word “supplied”.

(24) Paragraph 6(b) of Schedule 2 shall be replaced with the following:

“(b) the Authority shall, in any September, within 10 banking days and in all other instances, within 5 banking days after the banking day on which it is first in receipt at the commencement of its working hours of requests which comply with paragraph 6(a) amend the particulars of the ROC recorded in the Register to show the substitute as the registered holder.”

[Date]

Department for Trade and Industry

**EXPLANATORY NOTE**

*(This note is not part of the Order)*

**[To be completed]**

## **Annex B: Draft Regulatory Impact Assessment**

### **Title of Proposal**

1. This is the first draft of the Regulatory Impact Assessment (RIA) relating to Proposals arising from the Technical Review of the Renewables Obligation Order 2002 (ROO). These proposals are subject to a Statutory Consultation, prior to being laid before Parliament as a draft Order amending the ROO.

### **Purpose of the RIA**

2. The purpose of the RIA is to assess the impact of the proposed amendments to the ROO. A full RIA was produced as part of the three consultations conducted on the Obligation prior to its implementation.

3. The scope of the RIA is proportionate to that of the Technical Review and is therefore limited to assessing the effects of the proposals for modifications to the ROO arising from the technical review. The RIA does not repeat the previous RIA undertaken as part of the consultation on the ROO.

### **Purpose and Intended Effect of Proposed Modifications arising from the Technical Review of the Renewables Obligation**

#### **Background**

4. The Renewables Obligation is the Government's main policy measure to encourage the development of renewable forms of energy in the UK, although it is supported by a raft of other measures. The Obligation is intended to provide an impetus for new generating capacity that will be required to meet our current targets for renewable energy and as a basis for further reductions in carbon dioxide emissions.

5. The Renewables Obligations (Renewables Obligation Order 2002 in England & Wales and the Renewables Obligation (Scotland) Order 2002, hereafter referred to as the Obligation or RO) on electricity suppliers require all licensed electricity suppliers in Great Britain to supply a specified and growing proportion of their sales from renewable sources – with the ultimate aim of achieving 10% by 2010. The Obligation is underpinned by a substantial package of financial and non-financial supporting mechanisms and, through the Renewables UK unit, active assistance to the industry to develop its competitive potential.

6. Eligible renewables generators receive Renewables Obligation Certificates (ROCs) for each MWh of electricity generated. These

certificates can then be sold to suppliers. In order to fulfil their obligation, suppliers can either present enough certificates to cover the required percentage of their output, or they can pay a 'buyout' price for any shortfall. The level of the buyout price was set at £30 per MWh in 2002/03 and is adjusted annually in line with the Retail Price Index. It is set at £30.051 per MWh for 2003/04. All proceeds from buyout payments are recycled to suppliers in proportion to the number of ROCs they present compared to the number presented by all suppliers.

#### Issue

7. The Obligation aims, among other things, to encourage the use of biomass (anything derived from plant or animal matter including agricultural, forestry wastes/residues and energy crops) as a renewable fuel for power stations replacing the use of fossil fuels. In the longer term, the availability of biomass by-products and wastes suitable for energy use is expected to be limited and the area with greatest potential for expansion will be using crops grown especially for energy use, so called "energy crops". The co-firing rules under the Obligation are designed to encourage farmers to grow energy crops and electricity generators to co-fire the crops along with fossil fuel in existing power stations as a means to develop an energy crop supply that can eventually be used in purpose built power stations using only biomass fuel. As it stands, the Obligation requires that from April 2006 until the end of March 2011, at least 75% of the biomass used

for co-firing must be energy crops and co-firing can contribute no more than 25% of an individual supplier's renewable obligation. Beyond March 2011, biomass co-firing will no longer be eligible for the Obligation. We commissioned an independent study of the co-firing rules which concluded that the existing rules do not allow sufficient time for a supply of energy crops to be developed. It is clear that action is required to get our policy back on track. We are not seeking to go beyond the original policy.

8. This issue provides the main focus for the technical review. The review concluded that modifications to the co-firing rules should be made, provided the wider working of the Obligation is not unbalanced as a result and proposals to that effect are set out in the Statutory Consultation document. Alongside the proposed changes to the co-firing rules, we also propose allowing the conversion of gas or coal fired stations to burn biomass without having to refurbish to provide a further boost to the development of biomass. Other measures will enable smaller generators to earn ROCs more easily. There are also a number of proposed changes to enhance the smooth working of the ROO after its first year of operation, in particular to ease the administrative processes for Ofgem who administer the Obligation.

#### Objective

9. The main objective of this review is to get our co-firing/energy crops policy back on course without destabilising the Obligation. We

have therefore considered adjustments to the variables on co-firing under alternative scenarios. ILEX Energy Consulting were commissioned to develop and analyse co-firing scenarios in order to inform our thinking on what amendments would be needed to get us back on course and assess their implications.

10. Other significant proposed changes are:

- to allow coal, gas or other fossil fuelled power stations to convert entirely to biomass, allowing for minimal fossil fuel use, with no replacement or refurbishment of equipment, and qualify for ROCs.
- that small eligible generating stations of 50kW or less can earn ROCs more easily through being allowed to accumulate output on an annual basis. The overriding impact is on small generators (often private householders) themselves. This change will enable smaller generators to offset some of the cost of their investment in renewables generation through the value of ROCs.

11. The proposed co-firing modifications will have an impact on generators of electricity in Scotland, England and Wales. The generators in question are likely to be larger companies and the producers of the energy crops and biomass are likely to be individual farmers sometimes forming part of a wider collective.

12. This RIA does not cover Northern Ireland. The RO only applies to Great Britain.

## **Risk assessment**

### *Co-firing*

13. Serious concerns have been expressed to us that our existing rules on co-firing are too restrictive to encourage the development of energy crops for electricity generation and this carries a significant risk. Energy crops are one of the renewable energy sources with substantial long term potential and because of potentially significant transport costs, local production is likely to be needed if their use for electricity generation in the UK is to be commercially viable<sup>1</sup>.

14. The risks associated with modifying the co-firing rules include destabilising the working of the Renewables Obligation; having a negative impact on ROC prices; and, increasing CO<sub>2</sub> emissions by encouraging extra combustion of coal.

15. The ILEX analysis (see <http://www.dti.gov.uk/energy/renewables/policy/rooamend.shtml>) concluded that co-firing biomass by fossil-fuelled generating plant is commercially viable, but will not achieve the central objective of encouraging the development of energy crops under the current rules. Although allowing co-firing to qualify under the terms of the RO has the potential to create a substantial demand for energy crops, the current rules do not allow sufficient time for a supply chain to be developed. ILEX's analysis indicated that if the

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<sup>1</sup> For example, ILEX estimate that haulage over 50 miles makes up some 10% of the delivered cost of the crops.

existing rules are retained, many generators are likely to co-fire only up to March 2006. This will prevent co-firing acting as a means to encourage the production and use of energy crops in the UK. This could significantly delay the establishment of this form of renewable energy in this country. The proposed rule changes would establish a potential market for energy crops worth up to £30 million per annum in the period April 2011 to March 2016<sup>2</sup>, a timescale which gives growers plenty of time to respond.

16. We are, therefore, proposing that co-firing with biomass will attract ROCs as follows:

- any biomass can be co-fired until 31 March 2009 with no minimum % of energy crops;
- 25% of co-fired biomass must be energy crops from 1 April 2009 until 31 March 2010;
- 50% of co-fired biomass must be energy crops from 1 April 2010 until 31 March 2011;
- 75% of co-fired biomass must be energy crops from 1 April 2011 until 31 March 2016.

To balance the above changes and avoid flooding the ROC market with co-firing ROCs, thereby affecting ROC prices and investor confidence adversely, we propose that the 25% cap on an individual supplier should be changed, from 1 April 2006 to:

- 10% from 1 April 2006 until 31 March 2011;
- 5% from 1 April 2011 until 31 March 2016.

Co-firing will cease to be eligible for ROCs after 31 March 2016.

17. ILEX also considered how best to maintain investor confidence in the Renewables Obligation and ROC prices. The assessment suggests that the changes recommended by ILEX to the co-firing rules could lead to a small reduction in ROC prices, compared to what they would otherwise have been. ILEX concluded that this reduction of itself would not be sufficient to threaten the development of other renewable technologies such as onshore and offshore wind. However, the perception amongst investors could be more significant than the predicted impact and to mitigate this ILEX recommended progressively tightening the existing cap of 25% on the contribution that co-firing can make to the RO. They proposed reducing the cap from 25% to 10% in the period 1 April 2006 to 31 March 2011 and to 5% for the period 1 April 2011 to 31 March 2016. ILEX's analysis suggested that caps at this level would not be a material constraint on the level of co-firing, but the caps would give confidence to investors in other renewables that, should that analysis be flawed, the Obligation would not be swamped by generation from co-firing.

18. In the light of the ILEX study, we are satisfied that the regime proposed in the consultation document offers the benefit of

<sup>2</sup> The maximum contribution would be 1.26 TWh per annum ROCs from co-fired energy crops, being 75% of 5% of the Obligation in that period. This in turn would require some 680,000 odt per annum at £45/odt (excluding haulage costs).

providing a stimulus to energy crops but will not lead to any increase in carbon emissions. Although there may be a small reduction in ROC prices, that is likely to be most significant in the period 2007-09, compared to what they would otherwise have been, the new rules will provide stability and a secure framework for investment. The reduced cap on the contribution that co-firing can make to the suppliers' obligation, constrains the impact of co-firing on the Obligation as a whole and, in view of the inevitable uncertainties associated with predicting the effects of changing the rules on eligibility for co-firing, provides confidence that their impact will be limited and reduces the risk of the market for ROCs being swamped by a large increase in ROCs from co-firing.

## **Benefits**

### **Issues of equity and fairness**

19. The benefits of the co-firing rule amendments will fall both to producers of energy crops and generators. Delaying the need for energy crops in co-firing generating sets until 2009 helps take advantage of yield and technical improvements, whilst enabling co-firing until 2016 is more likely to encourage the agriculture sector to enter into long-term contracts and for co-firing power generators to achieve a return.

20. The rule changes increase the potential for the use of non-energy crop biomass in co-firing compared to what it would have been under the existing rules. This could potentially lead to increases in the

price of that biomass and damage others users of that material, outside the energy sector. However, any such impact is expected to be small for a number of reasons.

21. Firstly, it is likely that a considerable portion of the extra biomass would be sourced from abroad. Biomass materials with few alternative uses can more readily bear international transport costs and still be competitive with local sources of biomass and be commercially attractive to generators. There is already considerable evidence that generators are using imported biomass materials such as milled palm nut and olive residues<sup>3</sup>.

22. Secondly, the analysis by ILEX suggests that even with the proposed rule changes that increase the eligibility of biomass co-firing for ROCs, the volume of ROCs from this source (and thus the volume of biomass used) will be lower in the period after April 2006 (when the rule changes take effect) than in the period before then<sup>4</sup>.

23. Thirdly, our proposals to reduce the cap on the contribution of co-firing to the Obligation will also limit the use of biomass in co-firing, even if ILEX's projections have underestimated the potential for biomass co-firing.

24. The ILEX Report expects any short term price impact on biomass supplies to be minimal<sup>5</sup>.

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<sup>3</sup> Platts Power UK May 2003 Issue111: pages 6 and 8.

<sup>4</sup> See Table 6 of the ILEX Report.

<sup>5</sup> See Paragraph 6.16 of the ILEX Report.

25. On the other hand, increasing the potential for biomass to be used to generate electricity is consistent with long term objectives to reduce carbon emissions from fossil fuel use and to the extent that this leads to prices for biomass materials that are higher than they would otherwise have been, it is consistent with wider environmental policy objectives and will encourage the greater recovery and use of biomass by-products and wastes for energy recovery.

26. The proposed rule changes mean that there would be no longer any requirement for a contribution from energy crops to co-firing in the period from April 2006 to March 2009. This could be viewed as reducing the value of the small quantities of energy crops that are expected to be harvested in the UK during this period. However, these crops would still be able to contribute to biomass co-firing and the effect of the rule changes, as projected by ILEX, is that the demand for biomass in general (including energy crops) for co-firing will be very much greater during this period than if the rules were not changed<sup>6</sup>. This extra demand will help ensure that existing energy crops can find a market at prices not very different to those they might otherwise have earned. Furthermore, existing energy crops will benefit beyond 2011 from the extended eligibility of co-firing under the Obligation. To the extent that existing energy crops have already secured long term contracts, their value would be unaffected.

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<sup>6</sup> See Table 6 of the ILEX Report.

## **Costs**

### **Compliance costs**

27. The Government believes that there are unlikely to be any direct financial costs incurred by business in general as a result of the co-firing modifications.

28. The ILEX Report notes that the cost of the Obligation to electricity consumers is determined principally by the level of the buyout charge. This is unaffected by the proposed rule changes. However, ILEX also note that the availability of additional eligible generation as a result of the proposed co-firing rule changes may serve to reduce suppliers' compliance costs with the Obligation. This could reduce national resource costs and, if passed through, could reduce electricity prices to consumers.

29. The measures to ease Ofgem's administration of the obligation are unlikely to result in a net increase in costs for Ofgem or for Ofgem's clients (the generator, the supplier or the consumer). The proposal to allow small generators to earn ROCs may lead to some small generators incurring costs in order to obtain the benefit, but we are devising a system to streamline the administrative procedures.

### **Consultation with Business, including Small Business**

30. We consulted stakeholder representatives informally whilst developing our thinking on the proposals for co-firing. We heard that farmers, often small or medium sized enterprises, would welcome

modifications to the co-firing rules along the lines proposed. These modifications will facilitate the development of the energy crops market which could be worth up to £30 million per annum between 2011 and 2016. The wider benefit of this is expected to be increased take up of energy crops, bringing us closer to achieving the 2010 renewable target.

31. We also heard from co-firers, usually large enterprises, that they too wanted to see modifications along the lines proposed put in place in order to make co-firing with energy crops more economic. Banks tended to stress, above all, the need for stability in the ROC market. We believe that extending the co-firing dates and percentages balanced by the reducing cap should provide the necessary stability in the ROC market. We have set out in the consultation paper the changes forecast by ILEX. Finally, bespoke biomass generators seemed to prefer no changes to the existing rules but we see these changes, long term, as a route to increasing the level of bespoke energy crops generating stations.

32. The Small Business Service have been consulted and, given the informal consultation with stakeholders that has already taken place in advance of the Statutory Consultation, are satisfied that stage one of the Small Firms test has been undertaken and that there is no requirement to carry out stage two.

33. The proposal to allow small generators to earn ROCs is expected to have a lesser impact than the co-firing modifications.

Currently small generators need to be able to generate a minimum of 0.5MWh in any one month in order to qualify for 1 ROC which means that smaller generators such as those with photovoltaic installations or small wind generators are often not able to gain any advantage for the Renewable Obligation and feel strongly that they would like to be included. We propose to allow small generating stations with a declared net capacity of 50kW or less to accumulate output, qualifying for ROCs on the basis of their annual output. This is seen as a positive move but may involve the generators in installing metering to measure output and perhaps negotiating new contract arrangements with electricity suppliers. Further Small Firms' testing is not required.

34. Other proposals which form part of the Statutory Consultation are designed mainly to ease the administrative burden for Ofgem and enhance the working of the Obligation. It would be disproportionate to undertake Small Firms' testing on those proposals.

### **Competition Assessment**

35. The co-firing modifications will impact upon producers of energy crops, other biomass fuel sources and fossil fuels. The measures will incentivise producers of energy crops to get into the market and develop energy crops. It should, therefore, help to stimulate competition within the market for fuel inputs.

36. To the extent that the proposals increase the potential for use of other biomass (apart from

energy crops) for co-firing, there will be greater competition in the market for renewable fuel inputs.

37. The impact on competition in the agriculture industry more widely is difficult to measure, but is not expected to be of significance.

38. As a fuel source for producing electricity, fossil fuels such as coal already compete against a number of different renewable and non-renewable sources.

39. As discussed earlier in this Assessment, the proposals have been designed to minimise any negative impact on other forms of renewable generation. Overall, the proposal should not cause a significant change in competition between electricity generators.

40. The impact on competition between electricity suppliers should not be altered by the current proposals.

41. Neither should the proposals cause a significant change in competition in the overall market for electricity generation, beyond those resulting from the Renewables Obligation Order more generally.

42. Our proposals for the co-firing rules do not place additional obligations on any party, but expand the options available to electricity generators, and to biomass and energy crop producers. These companies can choose whether to take advantage of these options and thus incur any costs that may be involved.

## **Environmental Assessment**

43. The Energy White Paper concludes that climate change is happening but the worst effects can be avoided if concentrations of greenhouse gases can be stabilised. Encouraging take up of energy crops by co-firers will help to establish an additional source of renewable energy, contribute to the growth of renewable energy in the UK and to reductions in carbon emissions.

## **Carbon impact assessment**

44. The ILEX Report concludes that the proposed modifications to the co-firing rules would increase carbon dioxide savings by eight million tonnes over the period to 2016. ILEX consider that the potential for additional co-firing would not increase emissions from coal fired plant since the use of coal in such plant is effectively constrained by the EU Large Combustion Plant Directive.

## **Enforcement and Sanctions**

45. The modifications proposed by our Statutory Consultation are designed to incentivise the development of energy crops. Sanctions would not be appropriate.

## **Monitoring and Review**

46. The Renewables Obligation is administered and enforced by Ofgem. Ofgem will report on take up of energy crops by co-firing power stations and also of the other measures taken as part of the technical review of the Obligation.

A further review of the Obligation is expected in 2005/06.  
Consultation Within Government

47. The proposals have been developed in close consultation with Ofgem, who are responsible for administering the Obligation and, on co-firing with DEFRA. The Scottish Executive has also been involved in the technical review and is to issue its own consultation paper.

48. The potential impact on industry has been discussed with both the Small Business Service and the Office of Fair Trading.

### **Public consultation**

49. The Order is mainly directed at its statutory consultees (the Gas and Electricity Markets Authority, the Gas and Electricity Consumer Council, electricity suppliers to whom it would apply and generators of electricity from renewable sources) and producers of energy crops and other forms of biomass. Accordingly they are the main focus audience for our public consultation exercise which will run for 12 weeks from 29 August 2003. The consultation is available to view on the DTI website and is also available in hard copy. The consultation will also be advertised in the national press in order to reach as many stakeholders as possible.

### **Summary and Conclusions**

50. The net impact of the changes we are proposing should positively help in the achievement of the UK's current 10% target for renewable energy.

51. The Government proposes that the measures recommended in the Technical Review and forming the Statutory Consultation should be adopted. Failure to action the co-firing rules, would delay the establishment of energy crops as a further renewables option for the UK to help us meet longer term targets for the development of renewable energy and reduction of carbon emissions.

52. Views on this assessment are invited.

## **Annex C: Glossary of Abbreviations**

<b>BETTA</b>	British Electricity Trading and Transmission Arrangements
<b>DEFRA</b>	Department for Environment, Food and Rural Affairs
<b>DTI</b>	Department of Trade and Industry
<b>MW</b>	Megawatt (1 million watts)
<b>MWh</b>	Megawatt Hour
<b>NFFO</b>	Non-Fossil Fuel Obligation
<b>NFPA</b>	Non-Fossil Purchasing Agency
<b>OFGEM</b>	The Office of Gas and Electricity Markets
<b>RIA</b>	Regulatory Impact Assessment
<b>RO</b>	Renewables Obligation
<b>ROO</b>	Renewables Obligation Order
<b>ROC</b>	Renewables Obligation Certificate
<b>SI</b>	Statutory Instrument
<b>SRO</b>	Scottish Renewables Obligation (NFFO equivalent)
<b>UK</b>	United Kingdom

## Annex D: DTI Consultation Criteria

1. Timing of the consultation should be built into the planning process for a policy (including legislation) or service from the start, so that it has the best prospect of improving the proposals concerned, and so that sufficient time is left for it at each stage.
2. It should be clear who is being consulted, about what questions, in what timescale and for what purpose.
3. A consultation document should be as simple and concise as possible. It should include a summary, in two pages at most, of main questions it seeks views on. It should make it as easy as possible for readers to respond, make contact or complain.
4. Documents should be made widely available, with the fullest use of electronic means (though not to the exclusion of others) and effectively drawn to the attention of all interested groups and individuals.
5. Sufficient time should be allowed for considered responses from all groups with an interest. Twelve weeks should be the standard minimum period for consultation.

6. Responses should be carefully and open-mindedly analysed, and the results made widely available, with an account of the views expressed, and the reasons for decision finally taken.

7. Departments should monitor and evaluate consultations, designating a consultation co-ordinator who will ensure the lessons are disseminated. The complete code is available on the Cabinet Office's web site, address

<http://www.cabinet-office.gov.uk/servicefirst/index/consultation.htm>

### **Comments or Complaints**

If you wish to comment on the conduct of this consultation or make a complaint about the way this consultation has been conducted, please write to

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or telephone him on 020 7215 6206

or mail  
to: [Philip.Martin@dti.gsi.gov.uk](mailto:Philip.Martin@dti.gsi.gov.uk)