

## Calculating the Level of the Renewables Obligation

The Renewables Obligation Order (ROO) 2009 introduced changes that require the Secretary of State to announce the level of the Obligation six months preceding an Obligation period. The Secretary of State will therefore announce the size of the Obligation for the 2011/12 period on 1 October 2010. This paper sets out the methodology to be used in calculating the size of the Obligation.

Before setting the size of the Obligation, we need to make two calculations:

- A) The number of Renewable Obligation Certificates (ROCs) that would be needed for suppliers to meet a **fixed target** of 0.114 ROCs per MWh from eligible renewable sources in England, Scotland and Wales and 0.05 ROCs per MWh in Northern Ireland
- B) The amount of renewable electricity we expect to be generated, and based on this the number of ROCs that we expect will be issued, uplifted by 10% (**headroom**)

The Obligation level is set as one of these calculations, determined as:

- **Fixed targets:** If fixed targets (A) is greater than headroom (B).
- **Headroom:** If headroom (B) is greater than the fixed target (A).

Following further evidence of expected generation from industry the run of the model suggests that Calculation B will determine the number of ROCs to be supplied for the 2011/12 period. Calculation A sets the total obligation at 34.85m ROCs using DECC forward electricity demand figures Central scenario, compared with Calculation B which sets it at 37.99m ROCs.

This means that the number of Renewable Obligation Certificates (ROCs) that would be needed for suppliers to meet their targets will be 0.124 ROCs per MWh from eligible renewable sources in England, Scotland and Wales and 0.055 ROCs per MWh in Northern Ireland

Annex A provides further information

## ANNEX A

### Calculation A

For 2011/12 DECC UEP predictions are that 310.03TWh of electricity will be supplied by Licensed Supplier Electricity. At 0.114 ROCs per MWh for England and Wales and Scotland; and 0.05 ROCs per MWh for Northern Ireland, this gives a total of 34.85 million ROCs for Calculation A.

### Calculation B

Calculation B works by taking the potential amount of ROCs to be generated by stations accredited as of 27 September 2010 – multiplying together the MW capacity set out below, the number of hours in a year<sup>1</sup>, the banding level of that technology and the load factors set out below. This is then added to the potential new build (calculated as above) and our assumptions for co-firing.

ROCs (Millions)	DECC
Potential ROCs from existing stations	27.22
Potential ROCs from new build	5.82
Co-firing assumed	1.5
Sub Total	34.54
<b>Total (with 10% headroom)</b>	<b>37.99</b>

### Total

DECC calculations give a total of 34.54 million ROCs before headroom. With headroom this amounts to 37.99 million ROCs. According to legislation, this means that Calculation B sets the obligation.

### Capacity and Generation for existing and new stations

	GW	TWh
Hydro	0.7	2.1
Landfill and Sewage Gas	1.1	5.7
Biomass (including ACTs)	0.7	3.2
Onshore Wind	4.4	9.7
Offshore Wind	2.5	6.4
Co-firing		3.0
<b>Total</b>	<b>9.3</b>	<b>30.3</b>

### Co-firing Assumptions

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<sup>1</sup> 2012 is a leap year

In setting the 2010/11 Obligation we assumed that co-firing uses up the whole of the co-firing cap<sup>2</sup> (12.5%). Industry at the time were concerned that this over-estimated the contribution from co-firing. Looking at the amount of co-firing currently being seen in the RO, as well as that in 2008/9 and 2009/10, we feel that industry's view has been borne out, and therefore believe we should reduce the co-firing cap assumption for this year.

Looking at the amount of co-firing ROCs produced by co-firing generation in previous obligation periods we feel that it is probable that co-firing will not exceed a high scenario of 2 million ROCs for this obligation period, with a low scenario of 1 million ROCs.

### **Load Factors:**

The Load Factors we have used in the above calculations are:

Type	Load Factor
Onshore	27.3%
Offshore	31.6% 40% new <sup>3</sup>
Hydro	33.9%
Landfill Gas	63.7%
Fuelled	55.5%
Sewage Gas	39.1%

These are mostly higher than those achieved in the last two obligation periods, but are based on generation recorded in DUKES and discussed with industry.

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<sup>2</sup> The RO includes a co-firing cap - this means that licensed suppliers are restricted to producing only 12.5% of their overall obligation from co-firing of regular biomass ROCs.

<sup>3</sup> Offshore generation accredited after 1 April 2010