

Maximising the efficiency of the CRC.

A proposal to ensure energy efficiencies translate into genuine emissions reductions.

03 March 2011.



Executive summary.

The Carbon Reduction Commitment Energy Efficiency Scheme (CRC) was introduced by the Government to encourage organisations using more than 6,000MWh electricity per year to invest in energy efficiency.

The CRC creates a price on carbon for non-energy intensive large businesses, which is a welcome step in the move to a low carbon UK.

However, for the most part it will not create emissions reductions.

If the CRC works, participants will invest in energy efficiency and reduce their electricity and gas use. Reductions in energy use by CRC participants will mean energy production goes down. But this is not where the chain of causation stops.

Power companies are covered by the EU Emission Trading Scheme (EU ETS). If energy production goes down, power companies will need to purchase fewer EU allowances (EUAs or allowances) to be compliant within the EU ETS. Allowances left unpurchased by power companies can then be purchased by other industries.

This means that the more successful the CRC is in driving energy efficiency, the more allowances will be available to heavy industry in Europe.

Carbon Retirement suggests two practical and comprehensive ways that the CRC and EU ETS could be more closely linked to ensure absolute emission reductions.

The Department for Energy and Climate Change (DECC) have acknowledged this overlap in their current consultation and are asking stakeholders to respond.¹ Carbon Retirement is calling for all businesses covered under the CRC to include the need for an adequate resolution to this issue in their response to the open consultation.

This short paper explains the issue and two possible options for resolving it in more detail. Detailed definitions of terms and abbreviations used can be found in the appendix.

¹ See fourth bullet point 'Reducing the overlap between the CRC and the EU ETS' under the heading 'Priority Areas for Simplification' here http://www.decc.gov.uk/en/content/cms/what_we_do/lc_uk/crc/crc.aspx

The Problem:

**Overlap between CRC
and EU ETS means
CRC will make almost
no net impact on
emissions.**

The CRC is in an introductory phase. The current open consultation acknowledges “the overlap between the CRC and the EU ETS” for the first time.² This presents an opportunity to address an historic issue: that the CRC will result in very limited environmental benefit due to an overlap with the EU ETS.

Emissions from power companies and other industrial sectors are capped under the EU ETS.³ Under this scheme, power companies have to buy pollution permits, called EU Allowances (EUAs or allowances), to cover their emissions.

If the CRC succeeds in its goal of incentivising participants to reduce their electricity use, UK electricity consumption, and therefore electricity production, will go down. As a consequence, power companies will need to buy fewer allowances to cover their emissions. This will make more allowances available to other sectors – cement and steel or energy companies for example - across the rest of the Europe.

So although CRC participants will have worked hard to reduce their electricity use, no net reduction in emissions will result from their actions. Allowances that are left unused by UK power generators will be used instead by other companies; the emissions will be displaced, not eliminated.

Of the 60-74 million tonnes of emissions currently covered by the CRC,⁴ an estimated (70%) are from electricity use.⁵ This is where the overlap occurs. The remaining emissions are primarily from gas used for heating.

Between 2011 and 2020, CRC participants will see the 90 million tonnes of savings they are expected to achieve being absorbed instead by heavy industry.⁶

Moreover, this overlap could be seen as a Government attempt to make money by selling the same emissions twice whilst reductions will only occur once. This represents a risk to the Government's reputation as an environmental leader, both domestically and on the international stage.

² Consultation paper on 'Reducing the overlap between the CRC and the EU ETS', DECC, March 2011. Accessed at: http://www.decc.gov.uk/en/content/cms/what_we_do/lc_uk/crc/crc.aspx

³ The cap is equivalent to a reduction in emissions across Europe of 20% on 1990 levels by 2020. Source: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0063:0087:en:PDF>

⁴ The lower end of this range was reached by dividing the £715m anticipated in revenue from the sales of CRC permits in 2011-12 by the £12 cost per allowance. Source: Comprehensive Spending Review, UK Treasury, October 2010. The upper end of this range is from the SKM Enviro report for the Committee on Climate Change, Modelling the 2013-18 Cap for the CRC Energy Efficiency Scheme (CRC), July 2010 http://downloads.theccc.org.uk.s3.amazonaws.com/CRC/SKM_FinalReport_v3_0.pdf

⁵ *The CRC Energy Efficiency Scheme – advice to Government on the second phase*, Committee on Climate Change, September 2010.

⁶ Cumulative saving between 2011 and 2020 due to reduction in electricity consumption is a Carbon Retirement calculation based on a) the 42 million saving identified by the CCC's 'central scenario' and b) a 4% reduction each year from then until 2020, 87% of which is anticipated to be from reduction in electricity use. Source: *The CRC Energy Efficiency Scheme – advice to Government on the second phase*, Committee on Climate Change, September 2010.

3 

The Solution:

**Link CRC to EU ETS to
ensure genuine
reductions.**

Option 1: Government retire EU Allowances to match CRC participants' reductions.

Under this approach, the Government would calculate the volume of emissions reductions achieved by CRC participants each year. It would then retire allowances from its national allocation in the EU ETS to match this volume. This would ensure that the allowances left unpurchased by power companies due to energy efficiencies in the CRC were not then available to other industries.

This proposal simply ties the number of allowances being removed from the market to the electricity savings being made – ensuring that, where participants have achieved electricity savings, these go on to create a genuine reduction in global greenhouse emissions.

Advantages over the current system:

It ensures the environmental integrity of the scheme. Retiring EU Allowances would ensure that emission reductions will take place as a direct result of efficiencies made in electricity use by CRC participants.

It creates a greater incentive for CRC participants to reduce their emissions, as participants will see that their increased energy efficiency results in a decrease in global emissions.

It protects the UK's global reputation as an environmental leader. By ensuring emission reductions take place, the Government can protect itself against accusations of 'double selling' the same tonne of carbon for no environmental benefit.

The Government retains the revenue stream from the sale of CRC allowances. The Government's revenue from the CRC will not be affected.

There would be little or no opportunity cost. The Government could choose to retire allowances that were due to be freely allocated, in which case this measure would not incur a cost to public finances. If instead the Government chose to hold back allowances that were due to be auctioned, the opportunity cost would be equivalent to the price it could have obtained for those allowances at auction. Costs of doing this are low – in 2011-12 it is estimated that this would cost around 4% of the total annual revenue generated by the CRC.⁷ This would be a small price to pay for the environmental integrity and global reputation of the UK.

⁷ EUA price used is £12.70. EUA price from EEX 28 February 2011; 28 February 2011 exchange rate. Revenue anticipated from the CRC is £715m in 2011-12, Comprehensive Spending Review, UK Treasury, October 2010.

Option 2: CRC participants buy and retire EU Allowances rather than buying CRC permits.

An alternative solution is that the Government could work with the existing system, the EU ETS, by selling non-energy intensive companies EU Allowances instead of creating and selling a new kind of 'CRC permit' arbitrarily priced at £12 per tonne. By requiring the EU Allowances to be 'retired' (cancelled) at the end of each year, this would have the dual effect of generating revenue for the Government, whilst also crucially reducing emissions.

EU Allowances are currently priced at £12.70, reasonably close to the £12 charged for CRC allowances. However, the EU Allowance price may increase over the coming years disproportionately to the increase in CRC prices planned or anticipated by the Government. If this was deemed to be a risk, the Government could mitigate against this risk by altering the ratio of allowances required from CRC participants to cover emissions. For example CRC participants could be required to buy one allowance per two tonnes they emit instead of an allowance for every tonne.

If ratios were set each year or each phase, the Government could maintain price control and flexibility and ensure participants were not exposed to rapidly inflating costs.

The flexibility would also allow the Government to ease the pressure on companies later on in the scheme, when they were faced with higher energy costs as a result of the higher carbon price being passed on by utilities. This would ensure participants didn't pay the cost of carbon twice.

Advantages over the current system:

It makes the scheme more environmentally effective. The overlap between the two schemes is eliminated, so emissions reductions related to electricity use by CRC compliant businesses will create net emission reductions.

It supports the Government's ambition to bolster the carbon price, by decreasing the supply of allowances. Approximately two billion allowances are released across Europe each year under the EU ETS. The volume of emissions covered under the CRC represents 3% of this amount. Requiring CRC participants to retire EU Allowances would have the effect of removing 3% of the current supply from the market. This could help to bolster the carbon price, which the UK Government is currently trying to do unilaterally through floor price mechanisms.

It raises as much revenue for Government as the current plans for the CRC. The price of CRC allowances and EU Allowances are similar at the moment, so currently the revenue generated from selling participants EU Allowances instead of a new 'CRC permit' would be equivalent.⁸ If necessary, the Government could introduce a ratio of allowances to

⁸ The Government currently auctions 7% of the 246.2m EU Allowances which are allocated to UK industry each year. The rest are given away for free. The Government could sell an additional percentage of EU Allowances onto the market equivalent to the volume of CRC emissions. In the current phase of the EU ETS, the UK is restricted to auctioning a maximum 10% of its allocation of allowances. This restriction will apply until 2013. As

emissions for CRC participants, as suggested above, in order to control the price for these parties.

It avoids the creation of a parallel cap-and-trade scheme. Running the CRC as a separate trading scheme would create additional administrative burden – and therefore cost – to the Government.

It avoids business exposure to a potentially volatile secondary CRC market. After the introductory phase of the CRC, the price will not be fixed and will be determined through the demand at auctions and secondary market. This secondary market is likely to be more volatile than the EU ETS, being smaller and with much fewer participants. Being exposed to this may present more of a risk to businesses than being exposed to price fluctuations in the EU ETS, particularly if in the latter case the Government chose to control the price somewhat for CRC participants through introducing a ratio of allowances to emissions for CRC participants, as suggested above.

There would be no extra cost to participants. Brokerage costs could be avoided by using the Environment Agency, as suggested in a previous iteration of the CRC.⁹ In the event that the EUA price were to diverge from the CRC permit price planned by the Government, the Government could control the price somewhat for CRC participants through introducing a ratio of allowances to emissions for CRC participants, as suggested above

It fits with other Government policies and proposals. The Government has previously promoted the retirement of EU Allowances by CRC participants through the 'safety valve' mechanism. The Government also encourages voluntary retirement of EU Allowances through their Quality Assurance Scheme for carbon offsetting.

CRC participants need to purchase permits for the first time in 2012, the number of allowances purchased in the first year may need to be restricted; alternatively, the Government could balance its revenues in 2013 when the limits on the volume of allowances available for auction are relaxed.

⁹ The 'safety valve' was a mechanism proposed in a previous iteration of the CRC, whereby CRC participants that under-estimate their energy use and purchase too few allowances could buy and retire EUAs from the Environment Agency to plug the gap (at a cost of £14/tonne or at the market price of EUAs, whichever is higher).



Glossary.

Carbon Reduction Commitment (CRC)

The CRC is a UK Government policy which introduced to regulate and incentivise energy efficiency in low-energy intensity UK businesses that use over 6000MWh of energy per year. The scheme charges qualifying organisations £12 per tonne for the carbon emissions arising from their energy use. The scheme will mature into a cap-and-trade system (where price is determined by the market) in Phase 2 which runs from April 2013 to April 2020.

EU Emission Trading Scheme (EU ETS)

The EU ETS is a European wide cap-and-trade system introduced to force emission reductions across energy intensive industries (those that use over 20MW of thermal energy). The EU ETS is expected to achieve a 378 million tonne reduction in carbon by 2020.

EU Allowance (EUA or allowance)

These are the credits traded in the EU Emission Trading Scheme. They are 'permits to pollute', each allowance being an allowance to emit one tonne of carbon. The number of allowances that are issued each year is limited, which provides a cap on emissions from heavy industry in Europe.



Who we are.

Carbon Retirement is a carbon offsetting company that leverages the European Emission Trading Scheme (EU ETS) to reduce emissions.

We work on behalf of organisations and individuals that want to offset their unavoidable emissions.

The approach involves buying EU Allowances from the EU ETS and permanently removing them from the scheme so they cannot be used. This reduces emissions from heavy industry in Europe and incentivises investment in low carbon technology.

Carbon Retirement provides an innovative and robust alternative to traditional project-based offsetting. Our clients range from FTSE 100 private equity firm 3i, to the Church of England and the UK Committee on Climate Change.

Our aim is to increase the transparency and effectiveness of the two markets we bring together: voluntary carbon offsetting and the EU ETS.

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