Consultation on implementation proposals for the Carbon Reduction Commitment (formerly the Energy Performance Commitment)

June 2007
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This consultation follows the publication of the Energy White Paper, 2007. The wide range of measures set out in the White Paper take forward our commitment to meeting the two long-term energy challenges. They are:

- Tackling climate change by reducing carbon dioxide emissions both within the UK and abroad; and
- Ensuring secure, clean and affordable energy as we become increasingly dependent on imported fuel.

This consultation will further help to formulate our long-term energy policy. Other consultations will take place later in the year.
Foreword

Climate change is the most serious long-term threat to our prosperity and way of life. Earlier this year, the UN’s Intergovernmental Panel on Climate Change (IPCC), in their Fourth Assessment Report, stated that warming of the climate system is unequivocal and that the role of human activities in the observed changes is now clearer than ever. The IPCC also confirmed Sir Nicholas Stern’s findings in his report on the economics of climate change that the costs of inaction outweigh the costs of action.

It is clear that we must take action to avert the threat of climate change. Every country must play its part, according to common but differentiated responsibilities, with developed countries taking the lead. Every part of our economy and society, from central and local government, to businesses large and small, to individuals and communities, must do its bit.

The UK is leading the way – with all four countries of the UK doing their bit to tackle climate change. We are on track to almost double our Kyoto commitment, and we expect the long-term downward trend to continue. But we need to do more.

The UK Government’s goal is to put the UK on a path to cut carbon dioxide (CO₂) emissions by at least 60% by 2050, with real progress by 2020. The Scottish Government recently announced that it would put Scotland on track to reducing emissions by 80% by 2050. The Welsh Assembly Government is committed to contributing its fair share towards UK Government targets for emissions reduction, and will be considering what additional targets for Wales might be appropriate. Northern Ireland has set a target of 25% reduction in greenhouse gas emissions by 2025 (30% reduction in CO₂) with longer-term targets to be agreed. The UK Climate Change Bill will put the UK on course to be the first country to set a long-term legal framework for reducing emissions over the next 45 years and beyond. The Bill demonstrates decisive international leadership, showing the UK is committed to taking its responsibility for reducing global emissions. The Scottish Government will introduce its own Climate Change Bill. This too will set a long-term legal framework for reducing emissions and will complement the UK Bill. The Northern Ireland Executive will discuss this issue in Autumn 2007.

Our ambition must be to show environmental objectives can be achieved alongside maintaining a vibrant economy and fair society. This is the start of a new phase of the UK’s climate change strategy, and a foundation for the actions that individuals, businesses and the public sectors must take.

It is against this backdrop that Government presents this consultation on the Carbon Reduction Commitment (CRC), a new mandatory ‘cap and trade’ emissions trading scheme that we announced in the Energy White Paper. Energy is essential to almost every aspect of our lives and the success of our

2 http://www.dti.gov.uk/files/file39387.pdf
economy. The Energy White Paper highlights the challenges we face in addressing climate change and ensuring security of energy supplies. The White Paper sets out the Government’s new international and domestic energy strategy to address the long-term energy challenges set out above and to deliver our goals. The CRC is a key part of responding to this challenge.

The CRC is a new measure to reduce emissions primarily from large non-energy intensive organisations in the private and public sectors. Together with the provisions of the Energy Performance of Buildings Directive, the CRC will deliver emissions reductions from these sectors totalling 0.5 million tonnes of carbon (MtC) per year by 2015, rising to 1.2 MtC per year by 2020. The sectors being targeted include large retail organisations, banks, large offices, universities, large hospitals, large local authorities and central government departments.

Last year we consulted stakeholders on policy options to achieve emissions reductions from large non-energy intensive public and business sector organisations. Our aim is to reduce absolute carbon emissions whilst growing the economy – and CRC is geared accordingly to help organisations save money through improved energy efficiency. Without new policies, emissions from these types of organisation are set to increase over coming years and yet this group of organisations has significant potential to achieve cost-effective carbon reductions. As the Stern report said, there are clear benefits from strong and early action to tackle climate change, particularly where there are substantial gains in efficiency to be achieved. We are committed to ambitious targets to reduce the UK’s CO₂ emissions, and this will require contributions from all sectors of the economy and from across all parts of the UK.

We published analysis of the previous consultation responses alongside the Energy White Paper. Stakeholders were clear in their response that the urgency of action and the level of emissions savings required to tackle climate change could only be delivered through a mandatory instrument. On the basis of this consultation and further analysis we have decided to implement the CRC. This policy will apply a more balanced approach to emissions reductions across the economy by requiring the large non-energy intensive business and public sectors - not currently covered by a targeted, quantity based climate change instrument - to make their contribution to meeting the UK’s climate change obligations. It will apply to both public and private sector bodies, providing an effective mechanism for achieving our targets. We want to engage senior managers in energy management, by providing a policy framework that spreads the existing best practice of our leading firms, so that emissions are reported and published on a common basis and the public can make their own judgements about the contributions each is making to tackling climate change. We believe that the CRC achieves these aims.

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This consultation explores the detailed implementation options of the CRC. We seek your feedback on the design of the CRC. Our vision for CRC is of a light touch yet robust scheme which provides both financial and reputational incentives for the target sector to deliver emissions reductions.

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Executive Summary

Background

The UK Government\(^4\) has four long-term goals for energy policy:

- to put the UK on the path to reducing carbon dioxide emissions by 60% by 2050;
- to maintain reliable energy supplies;
- to promote competitive markets in the UK and beyond; and
- to ensure that every home is adequately and affordably heated.

Government is committed to ambitious targets to reduce CO\(_2\) emissions, and this will require contributions from all sectors of the economy across all parts of the UK. Our most recent updated long-term energy projections indicate that without further measures, emissions by end use from this group of large non-energy intensive organisations will increase by approximately 11% by 2030 compared to 2010 levels.

In the Energy Review\(^5\), Government committed to deliver carbon savings of 1.2 million tonnes of carbon (MtC) – equivalent to 4.4 million tonnes of CO\(_2\) per year by 2020 from large non-energy intensive business and public sector organisations. Government consulted in November 2006 on a range of potential measures for reducing emissions by this amount from the target sector organisations. Two measures given detailed consideration in the consultation were:

- The Carbon Reduction Commitment (CRC)\(^6\) – a mandatory ‘cap and trade’ scheme covering energy use emissions from large business and public sector organisations.
- A system of voluntary benchmarking and reporting of energy use covering large business and public sector organisations.

The results of this consultation indicated strong support for a mandatory approach, with the majority of respondents considering that a voluntary measure would not deliver the required target reductions. Around a third of respondents actively supported the proposed mandatory CRC, around a third

\(^4\) For the purpose of this consultation document generic references to government includes the UK Government, the Scottish Executive, the National Assembly of Wales and the Northern Ireland Executive (Between 14 October 2002 and 7 May 2007 Northern Ireland’s devolution was suspended and was subject to Direct Rule from Westminster. References to ‘Government’ in this period refer to the Northern Ireland Administration when advice on CRC was provided by the Department of Environment NI).

\(^5\) http://www.dti.gov.uk/files/file25079.pdf

\(^6\) The Carbon Reduction Commitment was formerly known as the Energy Performance Commitment (EPC). This shared an acronym with the Energy Performance Certificates introduced as a result of the EU Energy Performance from Buildings Directive. Government renamed the policy to the Carbon Reduction Commitment (CRC) to avoid any confusion.
considered it to be unsuitable, with the remaining third being unsure or giving no answer. The official Government response to the November consultation is being published alongside this document⁷.

In light of the results of the consultation and additional analysis undertaken alongside it by both NERA and Enviros⁸, Government announced in the recent Energy White Paper its intention to implement the CRC. The CRC, together with the provisions of the Energy Performance of Buildings Directive, will secure carbon emissions reductions of 1.2 MtC per year by 2020 from large, non-energy intensive organisations.

The CRC will target business and public sector organisations that have annual electricity consumption from mandatory half hourly meters in excess of 6,000 megawatt-hours (MWh). This threshold has been increased from the 3,000 MWh proposed in the first consultation exercise in order to help further ensure that the organisations covered will benefit from the scheme through reduced energy bills. However, it is not expected that this threshold will result in a substantially lower number of organisations being involved – we expect between 4,000 and 5,000 will be covered. The forecast emissions coverage at this level is 14 MtC, and the forecast emissions savings from the scheme will fall by 0.1 MtC to 1.1 MtC per year by 2020. The new threshold will continue to include a wide variety of organisations, such as supermarkets, hotel chains, transport operators, large offices, hospitals, universities, central government departments and large local authorities. At current energy prices, it will generally involve organisations with annual electricity bills above £500,000.

The CRC is a UK wide proposal, which seeks to secure cost-effective emissions reductions across the whole of the UK. The UK Government is therefore working closely with the Scottish Executive, the National Assembly of Wales, and Department of Environment Northern Ireland on this policy. Following the recent elections in the Devolved Administrations, new Ministers are considering their strategic responses to climate change. All of them support the CRC in principle and will work with the UK Government to ensure that it is implemented in such a way that it represents an appropriate fit with their climate change strategies. We therefore seek your views on how this would best be achieved and on how savings from the CRC would be delivered if it was implemented separately in different parts of the UK.

This Consultation – a summary

The responses to the November consultation identified key barriers and drivers to the uptake of energy efficiency broadly similar to those barriers and drivers identified by analysis carried out by the Carbon Trust and NERA. As stated in the recent Energy White Paper, this consultation invites views on how Government, including the Devolved Administrations, should implement CRC throughout the UK, in order to secure the required emissions reductions.

The scheme will introduce additional direct financial incentives (through downstream carbon pricing and the risks and rewards implied by the revenue recycling mechanism). These will act in combination with improving information at a corporate level (through the CRC monitoring and reporting requirements), leveraging reputational drivers (through the proposed CRC league table) and the quantity-based nature of the scheme, which encourages organisations to set themselves an emissions reduction target and develop a compliance strategy.

The CRC is a mandatory auction based cap and trade scheme in which participants will be required to purchase sufficient allowances either from the auction, the secondary market, or via the safety valve to cover their annual energy use \( \text{CO}_2 \) emissions. They will need to monitor their emissions throughout the compliance year and, at the end of that year, surrender allowances corresponding to their annual energy use emissions to the Scheme Administrator, via a simple web-interface. Under a cap and trade scheme, participants have the flexibility to set their own emissions targets and decide how they will comply. Participants may choose to reduce their own emissions or buy allowances from the market which give them the right to emit – this makes it possible for emissions reductions to be made where it is most cost-effective to do so. There will be a limit on the number of allowances available which will, in effect, set a cap on the emissions from these organisations.

To reduce administrative burdens further, a key issue raised during the consultation process, organisations will be covered by the CRC only if they have electricity consumption from mandatory half hourly meters in excess of 6,000 MWh / year. Analysis indicates that the financial benefits of participation in the scheme – by way of lower energy bills – should outweigh the administrative cost of participation. We expect that the CRC will cover around 4,000 – 5,000 organisations, but this is subject to further analysis as we work on detail of scheme implementation. By exempting organisations

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9. [http://www.carbontrust.co.uk/Publications/publicationdetail.htm?productid=CTC518](http://www.carbontrust.co.uk/Publications/publicationdetail.htm?productid=CTC518)

10. To enable triangulation of findings with the Carbon Trust analysis of policy options, Government commissioned additional analysis from NERA - to appraise a wide range of different policy options for the target sector, and to consider the extent to which each option would address key barriers and drivers. This analysis is available at: [http://www.defra.gov.uk/environment/climatechange/uk/business/crc/pdf/nera-report.pdf](http://www.defra.gov.uk/environment/climatechange/uk/business/crc/pdf/nera-report.pdf)

11. Government intends to approach the Environment Agency to act as the Scheme Administrator. The proposed respective roles of the Scottish Environment Protection Agency and the Department of the Environment – Northern Ireland as Devolved Regulators is set out in the Monitoring, Reporting and Audit section of this consultation.
using less than 6,000 MWh / year of electricity from mandatory half hourly meters, analysis indicates that 70% of the emissions coverage from all organisations with such meters is retained, while 90% of the administrative burden is removed compared to the original proposal targeting all half hourly metered sites.

CRC will target both direct CO\(_2\) energy use emissions and indirect CO\(_2\) emissions (i.e. from electricity). However, emissions that are covered under Climate Change Agreements (CCAs) and direct emissions included in the EU Emissions Trading Scheme (EU ETS) will not be covered by CRC. In this way there will be no administrative overlap in terms of the emissions targeted by CRC and other schemes. As with all downstream policy impacting on the efficiency of electricity use, the impact of CRC will need to be taken into account when the EU ETS cap is set in future rounds to reflect projected improvements in energy efficiency – given that the EU ETS includes electricity generation.

Any mandatory half hourly metered electricity use will count towards the 6,000 MWh / year inclusion threshold, irrespective of whether this electricity use is covered by CCAs. However, organisations with more than 25% of their emissions in CCAs will be completely exempt from CRC.

In order to allow participants to familiarise themselves with the new scheme, and to establish more accurate data on emissions across the target sector, CRC will feature a three year introductory phase, with a simple fixed-price sale of allowances. During the capped phase of the scheme allowances will be allocated via an auction. As committed to in the Energy White Paper, the scheme will be broadly revenue neutral to the Exchequer i.e. it is not designed to be a revenue raising measure. Revenue raised by the auction will be recycled to participants in proportion to their average annual emissions since the start of the scheme, with a bonus / penalty depending on their position in a CRC league table. The design and timing of the auction as well as criteria used to calculate the league table are important questions for this consultation.

To minimise administrative burdens further, the reporting and auditing requirements have been designed to be as ‘light touch’ as possible without compromising the integrity of the scheme. Participants will be required to self certify their own energy use using their own meter readings or with reference to annual energy bills. Government proposes that self-certification will be backed up by an independent risk-based audit of around 20% of organisations per year. Government will consider, in light of the results from the introductory phase, whether the percentage of organisations being audited each year can be reduced.

The scheme regulation and administration costs will be levied as appropriate by a charging scheme, as opposed to being ‘top-sliced’ from the auction revenue. This means that no funds will be deducted from the ‘recycling pot’ with all revenue being recycled back to participants.
Government aims to begin the scheme in January 2010, or as soon as possible thereafter, with the introductory phase covering the first three years. The first capped phase would therefore begin in January 2013.

Stakeholder feedback during the consultation process indicated significant concern about the potential inclusion of benchmarks within CRC. Government therefore does not propose to proceed with this option.

Subject to Parliamentary (Legislature) approval, Government will seek to use the enabling powers outlined in the draft Climate Change Bill to introduce the CRC through secondary legislation. Given the UK wide nature of the CRC proposal, UK Government will continue to work closely with the Scottish Executive, the National Assembly for Wales and the Northern Ireland Executive. Government recognises that the Scottish Executive’s Climate Change Bill forms an important part of the overall policy context for CRC. The Welsh Assembly Government’s consideration of potential additional climate change targets underlines the increasing importance placed on policy measures that can help deliver climate change targets. In the case of Northern Ireland, Government recognises that different requirements for half hourly metering operate, and will develop CRC policy accordingly. The Committee on Climate Change will advise Government on the level of contribution that CRC should make towards meeting the UK’s Carbon Budgets.

Updated cost benefit analysis of the CRC proposal is described in detail in the accompanying updated partial Regulatory Impact Assessment (RIA). Overall, the CRC is estimated to have a positive net present value of £755m to participants. The benefits to society overall (using a social discount rate of 3.5% and taking account of various externalities) would be significantly greater, approximately £3,245m.

Key issues for this consultation include:

- the proposed definition of CRC organisation;
- how CRC organisations will be identified for the purposes of CRC;
- possible de minimis thresholds to exempt small sources of emissions;
- treatment of specific types of emissions sources – schools, rail, and un-metered supplies such as street lighting;
- the design of the auction and league table; and
- the approach to monitoring, reporting, audit, and penalties.

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12 A Carbon Budget refers to the aggregated quantity of CO\(_2\) emissions permitted during a specified period of time. It is proposed that the Carbon Budget period would be five years long. For example the first budget would cover the years 2008 – 2012, which runs concurrently with the first Kyoto protocol commitment period and the second Phase of the EU ETS.

Introduction

In November 2006, Government consulted on measures to reduce emissions from the large non-energy intensive business and public sectors. Government has concluded from that consultation process and the additional analysis commissioned, that the most effective means of achieving carbon savings of 1.2 million tonnes of carbon (MtC) per year by 2020 from target business and public sector organisations would be through the implementation of the mandatory Carbon Reduction Commitment (CRC) ‘cap and trade’ scheme, alongside implementation of the Energy Performance of Buildings Directive (EPBD). At the agreed threshold of 6,000 megawatt-hour (MWh), instead of the 3,000 MWh threshold proposed in the previous consultation document, the CRC is projected to deliver 1.1 MtC reductions per year by 2020, in comparison to 1.2 MtC at the lower threshold. Government estimates that the additional 0.1 MtC emissions saving will be delivered by implementation of EPBD\textsuperscript{14}. Government announced its intention to implement the CRC in the recent Energy White Paper, as well as its intention to consult on how to design and implement a cost-effective, workable scheme.

The November consultation contained key questions on CRC design issues such as coverage, auctioning, revenue recycling and monitoring, reporting and auditing. The results of the consultation, together with further detailed analysis carried out by NERA and Enviros, have allowed Government to make a number of decisions about the design of CRC. These are as follows:

- Only organisations which have annual electricity consumption in excess of 6,000 MWh from mandatory half hourly meters will be included, to minimise administrative burden. Government will use the experience we gain from the first phase of the CRC to determine whether, over time, it would be cost effective and proportionate to extend the scheme to organisations with lower energy consumption.

- The entry criteria is based on electricity consumption from mandatory half hourly meters, and subject to the exceptions described here, all energy use for the relevant organisations will be included. The exceptions are that, to avoid overlap with existing measures, the CRC would not include emissions covered by the Climate Change Agreements (CCAs) or direct emissions covered by the EU Emissions Trading Scheme (EU ETS). In addition, organisations with over 25% of their energy use emissions in CCAs will be completely exempt. Questions on de minimis sites and fuel use are posed within this document.

- CRC allowances will be issued to participants via an auction process to secure low administrative burdens. Participants will be able to determine their own emissions targets within the scheme. CRC will

\textsuperscript{14} Note the Department of Communities and Local Government (DCLG) have committed to consult on widening the coverage of the EPBD and therefore the range of buildings that must display Energy Performance Certificates. Depending on the outcome of future consultation, this could increase the emissions savings from CRC participants driven by EPBD.
also allow self-certification (i.e. monitoring and reporting) of energy use and emissions, backed-up by an independent risk-based audit of around 20% of organisations each year.

- CRC will be broadly revenue neutral to the Exchequer. The auction revenue will be recycled to participants by means of a simple, direct, annual payment proportional to average annual emissions since the start of the scheme, with a bonus / penalty depending on position in a CRC league table.
- The scheme will feature an introductory phase of three years, with a simple annual fixed price sale of allowances, which will allow participants to become familiar with participating within a trading scheme. Moreover, it will enable Government to establish the total emissions across the target sector in order to set the cap for the auction phase.
- Government will implement a safety valve, to avoid spikes in the price of allowances. The CRC will feature a moderated buy-only link to the EU ETS, through which the CRC participants will be able to buy allowances at the higher of the prevailing EU ETS price and a minimum CRC floor price. There will be no link between CRC and the current CCA (previously UK ETS\textsuperscript{15}) market.

Outline of this consultation

Government recognises the importance of engaging interested parties to tailor the detailed design and implementation of the scheme as closely to their needs as possible. This consultation document is split into five sections as follows:

**Section A:** looks at the strategic policy context and the role and relationship of CRC with other climate change polices.

**Section B:** looks at coverage and participation, including geographical scope, definition of organisation, methods for identifying qualifying organisations, the policy interface with CCAs and EU ETS, landlord tenant relationships, site and fuel *de minimis* proposals, voluntary opt-in, treatment of specific emissions and entry and exit from the scheme.

**Section C:** looks at cap setting, including the length of phases.

**Section D:** looks at the design of the emissions market including setting the fixed price for the introductory phase, the type of auction and restrictions on the auction, the secondary market – including banking and borrowing of allowances and the safety valve, recycling of revenues,

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\textsuperscript{15} The Direct Participant element of the UK ETS ended in December 2006. The UK ETS market will continue to be available for emissions trading by Climate Change Agreement holders until the end of the current agreements - i.e. in order to comply with targets covering the period up to December 2010
construction of the performance league table (including a new proposal for a growth metric), and powers to amend scheme parameters.

**Section E**: looks at monitoring, reporting and audit, including composition of the evidence pack and reporting of energy use, the treatment of Green Electricity, Renewables and CHP, proposals for audit and administration, and registry design. This section also looks at enforcement, offences and penalties.

**Timetable and Arrangements for this consultation**

This consultation will run for a 15 week period commencing on 26 June 2007 and will close on 9 October 2007.

Please refer to the updated partial Regulatory Impact Assessment (RIA) which accompanies this consultation document for information on the costs and benefits of the options identified.

Please forward either electronic or paper copy responses to this consultation document to:

- **By email**: [crc@defra.gsi.gov.uk](mailto:crc@defra.gsi.gov.uk)
- **By Post**: Brian Rapose  
  Carbon Reduction Commitment Team  
  Climate & Energy: Business and Transport Division  
  Department for the Environment, Food and Rural Affairs  
  4A Ergon House  
  17 Smith Square  
  London, SW1P 3JR

Enquiries: 020 7082 8738

Respondents in Scotland, Wales and Northern Ireland are invited to copy their submission to the appropriate Devolved Administration:

**Scotland**

- **By email**: [climate.change@scotland.gsi.gov.uk](mailto:climate.change@scotland.gsi.gov.uk)  
- **By Post**: Scottish Executive  
  Brian Winning  
  Environment Directorate  
  Climate Change - Emissions Trading  
  Area 1-G North  
  Scottish Executive  
  Victoria Quay  
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Wales

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Climate Change Policy
Environmental Protection and Quality
Welsh Assembly Government
Cathay Park
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Climate Change Unit
Department of the Environment
River House
48 High Street
Belfast BT1 2AW
Enquiries: 0289 054 7716

When responding please indicate your organisation’s sector (e.g. business, public sector, NGO) and operational purpose (e.g. retailers, hospitals, environmental charities).

An electronic template for responses is available on the Defra website[^16]

Section A

1. Strategic Policy Context

As highlighted by the 2007 Energy White Paper, the draft Climate Change Bill proposes a new legal framework for the UK achieving, through domestic and international action, at least a 60% reduction in carbon dioxide emissions by 2050, and a 26-32% reduction by 2020, against a 1990 baseline. The Government will be required to set five-year carbon budgets, placing binding limits on aggregate carbon dioxide emissions. There is provision in the draft Bill for the targets to be amended in light of significant developments in climate science or in international law or policy.

Domestically, the UK has already put in place a wide range of measures to reduce its CO₂ emissions; these include the Climate Change Levy (CCL), which applies to all but the smallest businesses, as well as CCAs and the EU ETS. These measures are primarily targeted at the heaviest direct emitters such as power generators in the EU ETS and heavy industry under CCAs. We estimate that only a small percentage (5%) of the 4,000 – 5,000 CRC organisations will have some of their emissions captured by the EU ETS, with the remaining emissions covered by CRC or CCAs. The great majority of CCA organisations should be exempt, given Government’s proposal to exempt organisations with over 25% of their energy use emissions in CCAs.

The UK Government considers, therefore, that there is the potential for large business and public sector organisations to contribute more to achieving the UK’s long-term emissions reductions targets and that a new mandatory instrument – CRC - is needed to target these organisations more effectively. This will deliver a more balanced approach to reducing carbon emissions across the economy by placing absolute limits on sectors not previously facing a targeted emissions reduction instrument.

It is important to acknowledge that there will be no administrative emissions overlap between CRC and EU ETS and CCAs. This is illustrated in Figure 1 below.

CRC will operate as part of a wider package of measures to secure carbon savings cost-effectively from the sector. The CCL and the price effect of the EU ETS cap on electricity generators will provide a basic price signal on the value of energy savings – internalising external costs. These and other policy measures will continue to help address barriers and market failures, not only within CRC organisations but also the much larger population of organisations outside of CRC. Building Regulations will play a valuable role in setting minimum standards for new and newly refurbished buildings.

The CRC will also operate in the context of two key Directives – the Energy End Use Efficiency and Energy Services Directive (ESD), and the Energy Performance of Buildings Directive (EPBD). Within the framework of the
ESD, Government has for example announced proposals for better metering and billing. The full implementation of EPBD will further influence the market and encourage additional investment by extending requirements to provide key information, enabling comparison of buildings with respect to energy performance at the time of construction, sale or rental. It is estimated that an additional 0.1 MtC per year by 2020 will be saved through EPBD in CRC organisations, over and above the 1.1 MtC per year by 2020 carbon saving impact of the CRC alone.

These policies aimed at energy use in buildings help to address information barriers and landlord-tenant issues. The Carbon Trust and Salix provide advice and interest free loans to organisations across the public and private sectors, helping organisations to overcome information gaps and financial barriers. Finally, industry led voluntary agreements – such as the Carbon Disclosure Project\(^\text{17}\) – can also play an important role in fostering leadership and helping organisations to share best practice amongst themselves.

![Figure 1: Schematic Map of UK emissions covered by Climate Change Instruments](image)

2. Better Regulation Principles

Government welcomes the stakeholder emphasis on Better Regulation, and is determined to work closely with stakeholders to implement CRC in line with Better Regulation principles. We believe that the CRC meets the seven

\(^{17} \text{http://www.cdproject.net}\)
Better Regulation tests as set out by the Better Regulation Commission (BRC) in its report “Regulating to Mitigate Climate Change: a response to the Stern review”\textsuperscript{18}. The analytical tool upon which the seven tests will be based has not yet been developed. However, our assessment of how CRC meets the Better Regulation principles of the seven tests is as follows:

**Test one – Ensure climate policy is consistent with a healthy UK economy.**

CRC has been designed so that the benefits of the scheme in lower energy costs outweigh the potential costs of participation. At the proposed threshold of 6,000 MWh, the Net Present Value (NPV) of the scheme from the point of view of regulated organisations (at a commercial discount rate of 10% per year) is £755m. The threshold has been increased from the 3,000 MWh / year that was proposed in the previous consultation to help further ensure that the organisations covered are higher energy users with potential to make significant energy savings, which will benefit the organisations concerned.

**Test two – Government must develop and act consistently with a climate change strategy: avoiding piecemeal announcements.**

CRC has been developed in full consultation with stakeholders as part of the Energy Efficiency Innovation Review, Climate Change Programme Review, Energy Review and Energy White Paper. It is a central part of the Government’s strategy for a more balanced approach to tackling climate change, where all parts of the economy play their part.

**Test three – Test policy against a carbon price benchmark and in terms of their contribution to other goals.**

The BRC stresses that climate change policies must be backed up by robust analysis of the costs and benefits and that value-for-money assessment of policy measures must be consistently applied across Departments. The CRC has been subject at various stages to thorough cost-benefit analysis, the latest version of which is included in the updated partial RIA accompanying this consultation document. This shows that the proposed scheme should be cost-beneficial to participant organisations and society as a whole. Moreover, the analysis indicates that this conclusion is robust to a series of scenarios.

**Test four - Carbon policy choices must be efficient: don’t do things twice.**

Double administrative burdens in respect of the same emissions will be avoided, as CRC does not include CCA emissions or direct emissions covered by the EU ETS. In addition, organisations with over 25% of their energy use emissions covered by CCAs would be completely exempt from CRC.

\textsuperscript{18} \url{http://www.brc.gov.uk/upload/assets/www.brc.gov.uk/climate_change.pdf}
There is an element of multiple carbon pricing, in so far as the CCL applies to all energy use in these organisations and electricity generation is covered by the EU ETS (and the cost of this is reflected in electricity prices). Importantly, this multiple carbon pricing does not impose any double administrative burdens. However, for the target sector, we believe that a focused downstream instrument (CRC) is needed in addition to existing carbon pricing to secure the necessary carbon savings cost-effectively. Relying on the CCL and the pass through effect of the EU ETS alone will not drive energy efficiency on the scale required from the sector.

**Test five - Keep administrative costs to a minimum.**

CRC has been designed to keep administrative costs to a minimum.

The coverage of the scheme has been reduced from potentially 37,000 organisations with mandatory half hourly meters to between 4,000 and 5,000. This will generally capture organisations whose electricity bills are greater than £500,000. This maintains 70% of the emissions coverage whilst reducing the admin burden by 90% compared with the original proposal targeting all mandatory half hourly metered sites.

To avoid any double administrative burdens in respect of the same emissions, the CRC will cover neither energy use emissions in CCAs nor direct emissions covered by the EU ETS. CCA participants will be completely exempt from the CRC, providing their CCA energy use exceeds 25% of total organisation energy use – which should exempt the great majority of CCA firms. A small percentage of the organisations covered by CRC would have some of their emissions in EU ETS, with their remaining emissions (principally electricity use) in the CRC.

In addition, the CRC will be broadly revenue neutral to the Exchequer through the recycling of auction revenues to participants.

The proposal to rely on self-certification backed up by risk-based audit will remove third party verification costs.

Government has also taken steps to ease the burden in Phase II of the EU ETS, and in particular to allow for the removal of a number of small emitter installations. In addition, the UK is working with other Member States and the European Commission to establish a suitable means of defining and excluding small emitters from Phase III of the EU ETS as part of the Commission’s review of the EU ETS Directive. Given this context, a majority of the estimated 5% of CRC organisations with some emissions in EU ETS, a majority could be removed from the EU ETS from Phase III.

**Test six - Do not use climate change as a justification for other policy goals.**

CRC is a focused, targeted climate change instrument, rather than a measure that also seeks to achieve other goals such as revenue raising. Accordingly,
CRC helps spread action to tackle climate change to more areas of the economy, and the benefits to CRC participants of lower energy bills should outweigh the costs of participation.

CRC’s focus on carbon abatement reflects a context of Government having made tackling climate change a priority. The Government’s chief science adviser has warned that climate change is the most serious threat facing us, while Sir Nicholas Stern highlighted the cost of action now is outweighed by the costs of inaction. The impacts of climate change will affect everybody. Therefore all parts of the economy need to take responsibility for their emissions.

Test seven – If it isn’t working – change it.

Government will keep the implementation and performance of the CRC under review, in consultation with stakeholders. It will build flexibilities into the scheme to enable fine-tuning for smoother operation and simplification. Government recognises that any significant changes to the design of the scheme will impact on certainty for participants. They will, therefore, be undertaken on as well-defined a basis as possible, so that business can plan accordingly.

In the first instance Government is committed to completing a post-implementation review after the introductory phase of the scheme.

3. Climate Change Simplification Project

Government recognises that it is important to keep the mix of policy instruments – including CRC – under regular review, to assess the cost-effectiveness of schemes in light of experience, and to ensure that the overall policy framework is delivering emissions reductions efficiently and in a balanced way across the economy. As stated in the Energy White Paper, Government will use the experience we gain from the first phase of the CRC to determine whether, over time, it would be cost effective and proportionate to extend the scheme to organisations with lower energy consumption.

In response to recommendation 5 of the BRC’s report, Defra is undertaking a Climate Change Simplification Project to examine scope for rationalising and streamlining requirements within the package of climate change policies. This study will, in particular, focus on the three major climate change instruments of EU ETS, CCAs, and the CRC – and will include looking at the overlap in coverage between EU ETS and CCAs which arose when industry chose not to take EU ETS emissions out of their CCA targets for Phase I of EU ETS. Findings will be taken into account in the detailed planning of the CRC. The study will also consider the scope for rationalising reporting arrangements between various climate change and wider environmental instruments, including the Integrated Pollution Prevention and Control (IPPC) Directive. It will report in the autumn.
Section B - Coverage: Which organisations and emissions will be covered by CRC?

4. Overview

The CRC, as set out in the Energy White Paper, is a UK wide proposal, which seeks to secure cost-effective emissions reductions across the whole of the UK. The UK Government is therefore working closely with the Scottish Executive, the National Assembly of Wales, and the Department of Environment Northern Ireland on this policy. Following the recent elections in the Devolved Administrations, new Ministers are considering their strategic responses to climate change. All of them support the CRC in principle and will work with the UK Government to ensure that it is implemented in such a way that it represents an appropriate fit with their climate change strategies. We therefore seek your views on how this would best be achieved and on how savings from the CRC would be delivered if it were implemented separately in different parts of the UK.

It is Government’s intention that the rules determining coverage of the CRC are simple and give clarity and certainty to participants. In light of this, the Government’s proposal for defining CRC coverage has been the focus of a major piece of consultancy work by Hedra and extensive stakeholder engagement.

Government’s current thinking and proposals for CRC coverage have been considerably refined from those presented in the previous consultation document. Government is now proposing that organisations whose annual electricity consumption from mandatory half hourly meters is greater than 6,000 MWh will be included in the scheme. This threshold corresponds to a total annual electricity bill (i.e. not limited to half hourly meters) of approximately £500,000 at current prices. Government estimates that this will cover up to around 5,000 organisations, accounting for around 14 MtC (though these figures are subject to significant uncertainty). More detailed analysis on the 6,000 MWh threshold can be found in the accompanying updated partial RIA.

As proposed in the previous consultation document, the CRC will exclude organisations with more than 25% of their energy use emissions in CCAs. This should avoid a substantial percentage of CRC organisations also being covered by CCAs – helping to minimise policy overlap. In addition, organisations with emissions covered by the EU ETS or CCAs will have these EU ETS and CCA emissions excluded from the CRC. In this way administrative overlap – whereby two schemes apply administrative

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20 Government estimates that around 20% of organisations may potentially be exempt under the proposed CCA exemption rule, which would bring the coverage down to around 3,800 organisations, and 11 MtC. Note that these estimates sit within a broader overall range of 2,000 – 5,000 organisations.
requirements in respect of the same emissions – will be avoided. In contrast to the CCA interface, Government estimates that only around 5% of CRC organisations will have some of their direct emissions in the EU ETS, with the remainder (i.e. electricity and other non-EU ETS direct emissions) included within the CRC. Government will not be exempting these EU ETS organisations, as their non-EU ETS emissions account for a significant quantity of CRC emissions coverage, and analysis indicates that there is cost-effective abatement opportunity across these emissions.

A key consideration for this consultation is how we define an organisation for the purposes of CRC. This was a particular focus of the work carried out by Hedra. In the light of this analysis and discussions with stakeholders, Government proposes to take a ‘top-down’ approach to define a CRC organisation. Using this approach we expect to identify UK parent companies from the business sector, as well as public sector organisations, such as central government departments, independent non-departmental public bodies and large local authorities, as ‘CRC participant organisations’.

In addition to their work on the definition of a CRC organisation, Hedra examined ways to accurately identify those organisations that would be covered by the CRC, through records of their annual electricity consumption in excess of 6,000 MWh from mandatory half hourly meters.

Questions:

1. Should the CRC apply on a UK-wide basis, or should the Devolved Administrations develop separate schemes?
   Yes / No / Not Sure / Comments

   • If separate schemes, how can we guarantee a level playing field for operators and that the required carbon reductions estimated from the CRC would be realised?

5. Definition of Organisation for the purposes of CRC

The previous consultation document outlined the Government’s proposal for the definition of a CRC participant organisation as ‘the entity to whom the half hourly meters are registered’. Government commissioned consultants Hedra to investigate in detail, the practicality of the proposed definition and the means of identifying covered organisations. Their recommendations are considered in this consultation document and their final report is available on the Defra website21.

Through the work undertaken by Hedra, and in discussion with stakeholders it is clear that the definition of a CRC organisation - as the ‘entity to whom the

half hourly meters are registered’ - is unsuitable, particularly in the case of group undertakings within the UK. In light of this, and as recommended by Hedra, Government proposes that the group as a whole should participate in CRC – with legal responsibilities under the scheme assigned in the first instance to the highest UK parent organisation (a ‘top-down’ approach). This approach is illustrated in the Figure 2 below:

**Government considers that the ‘top-down’ approach of identifying and placing the CRC obligation on the highest UK parent organisation is consistent with the scheme’s aim to stimulate greater awareness of energy use emissions within an organisation’s senior management. Therefore, in the case of a group company structure, the approach would ensure that any UK subsidiary companies are covered by CRC as part of the UK parent company’s participation if the whole UK parent company – including its subsidiaries – exceeds the threshold criteria. Non-UK operations of a UK parent company (and overseas subsidiaries of a UK parent company) would not count towards the 6,000 MWh / year of mandatory half hourly metered electricity use inclusion threshold.

In practice, this is likely to identify – alongside UK parent companies – central government departments, separate non-Departmental Public Bodies, universities and large local authorities as likely organisations to participate in the CRC scheme. Not all public sector bodies will fall within the remit of their respective Government departments – for example, it would not be appropriate for the entire National Health Service (NHS) to simply be covered under the Department of Health. Taking health as an example, England is split into 10 Strategic Health Authorities (SHA), and within each SHA, the health service is split into various types of Trusts, with Primary Care Trusts controlling the majority of the NHS budget. Government will therefore
consider further the relevant CRC organisation in respect of public sector bodies.

In cases where the parent company is outside the UK, any UK subsidiaries over the 6,000 MWh / year of mandatory half hourly metered electricity use inclusion threshold will be covered by CRC as the highest UK organisation in their own right. Government is also considering whether to go further – to include all UK subsidiary organisations across a group headed by a non-UK parent company if the combined UK mandatory half hourly metered electricity use of these UK subsidiaries exceeds 6,000 MWh / year. For example, given this approach, a US firm with 10 UK subsidiaries, with each UK subsidiary using 600 MWh / year of mandatory half hourly metered electricity would meet the 6,000MWh inclusion threshold. Government is considering how it could potentially include such groups of subsidiaries.

Questions:

2. Is the ‘top-down’ approach of defining a CRC organisation a suitable way of identifying large, non-energy intensive organisations?
   Yes / No / Not Sure / Comments

• If not, can you suggest a preferable alternative?

3. Do you have a view as to what would be the appropriate highest UK parent organisation for public sector participants?

5.1 Options for the treatment of organisations

It has been suggested that some organisations may wish some of their subsidiaries to report separately in the league table – or indeed to take part fully in CRC as separate participants - for Corporate Social Responsibility (CSR) and energy management reasons. Whilst mindful of the additional complexity that further flexibility could bring, Government invites views on the following options:

**Option A:** Separate publication of results of subsidiaries in addition to the parent company.

Prior to the start of each phase, CRC organisations would be allowed to voluntarily put forward some (or all) of their subsidiaries for separate inclusion within the league table – but this would be for publication purposes only. All the legal requirements of CRC (together with the auction and revenue recycling) would continue to fall on the CRC organisation (the highest UK parent organisation). The CRC organisation would continue to report in respect of all its emissions (including those of its subsidiaries). As such, the only result from this option would be that the CRC organisation and its selected subsidiaries would be separately identifiable in the league table.
Option B: Separate participation in CRC.

On entry to the scheme, CRC organisations could be allowed to opt for their subsidiaries to take part fully and independently in the scheme (with these emissions then removed from the parent CRC organisation). The full CRC legal requirements would apply equally to all such independent participants. CRC organisations could be allowed to let some (or all) of their subsidiaries take part separately, providing: (i) that there would be no loss in CRC emissions coverage, and providing (ii) that all such independent CRC participants used over 6,000 MWh / year of mandatory half hourly metered electricity use (to avoid a large increase in the number of participating organisations). Once in the scheme, organisations would not be able to split themselves up, given that there would be no collection of emissions data on which to base a split.

Questions:

4. Do you have a view as to whether Government should proceed with either option (A) or (B) above?
Option A / Option B / Neither – do not allow any split / Not Sure / Comments

5.2 Decision on voluntary opt-in of organisations below the 6,000 MWh threshold

As Government has decided to focus CRC on organisations using more than 6,000 MWh / year of mandatory half hourly metered electricity, Government has decided not to allow smaller organisations to voluntarily opt-in to CRC.

This approach draws on analysis by NERA/Enviros (published in November 2006) on policy options for energy efficiency in the SME and public sectors\(^{22}\). The analysis explored the options for allowing organisations outside the scope of the CRC to participate voluntarily – and highlighted a number of concerns about allowing organisations to voluntarily opt-in to the scheme. In particular, the number of organisations who would voluntarily choose to participate would likely be small, given the level of incentives offered by the revenue recycling mechanism, and the upfront auction costs. Developing a mechanism to cater for voluntary opt-in would also increase administrative costs and complexity. In addition, allowing such voluntary opt-in would carry risks of adverse selection – whereby organisations with growing emissions would likely stay outside whilst organisations with naturally declining emissions would choose to opt-in, in order to obtain revenue recycling benefits at the expense of those included on a mandatory basis. Alongside possible criticisms of unfairness, the extent of environmental additionality would therefore be open to question.

– and Government is mindful of National Audit Office (NAO) criticism of the voluntary UK Emissions Trading Scheme (UK ETS) along such lines.

Government has therefore decided not to allow organisations to opt-in voluntarily to the CRC.

6. Identification of Participants

An organisation will potentially be covered by the CRC if its mandatory half hourly metered electricity consumption, including any such consumption in a part of the organisation covered by a CCA is greater than 6,000 MWh / year. (See Box 1 for more details on the requirements for mandatory half hourly meters in the UK) At a later stage in the assessment process, organisations will be able to claim exemption for any organisation with over 25% of its energy use emissions covered by CCAs. If such an exemption then brings the total for the remainder of the organisation below 6,000 MWh / year, the whole organisation will be exempt.

There is currently no single source of information to identify CRC organisations across the UK - i.e. linking all mandatory half hourly meters with the organisation that consumes energy from individual meters. Energy suppliers hold the data on consumption from mandatory half hourly electricity meters, together with the contact names and addresses of the organisations that pay the electricity bills for these meters (as well as customer contract information). We would require the energy suppliers to pass on this information to Government in order that we could create a database of all mandatory half hourly meters. However, this information, whilst necessary, would not be sufficient for Government to identify the CRC organisations, because many different organisational names will appear under different billing addresses, rather than all bills being registered to the same overall CRC organisation (the highest UK parent organisation).

In order to identify the CRC organisation, therefore, Government would require bill payers of half hourly metered electricity to pass the billing information to their parent organisation for them to assess the status of the organisation as a whole. The parent organisation will be responsible for returning the aggregated information to the scheme administrator. This process will provide Government with a database of all mandatory half hourly meters, with annual consumption, billing contact details and – by the end of the process – the appropriate CRC organisation for each meter. Using this database, Government will be able to identify which organisations have electricity consumption above the 6,000 MWh threshold and which meters are not associated with a CRC organisation. If there are meters within the list with no highest UK parent organisation associated with them Government will be able to use the billing and contract information to follow up with the customers responsible for paying the bill for those meters – to identify the highest UK parent organisation in each case.
Box 1 – Requirements for Mandatory Half Hourly Meters in Great Britain and Northern Ireland

Mandatory half hourly electricity meters are required to be installed in England, Scotland and Wales by electricity suppliers as set out in the Balancing and Settlement Code. According to the NERA/Enviros analysis, there are approximately around 100,000 sites in the UK with a half hourly meter, belonging to approximately 35,000 organisations.

Government recognises that within Northern Ireland, the requirement for mandatory half hourly meters is slightly different from that within Great Britain and work is ongoing between Defra, the Northern Ireland departments and other NI organisations in respect of the NI energy market.

Half hourly capable meters in Northern Ireland are already widely used (a mandatory requirement for sites with a peak demand above 70 kW). The fact that a 70 kW threshold is in use in Northern Ireland (rather than the 100 kW threshold across the rest of the UK) should not in itself be a major issue – given that the proposed CRC is only targeting organisations using over 6,000 MWh / year of mandatory half hourly metered electricity, the focus is clearly on large organisations for whom energy efficiency benefits should outweigh administrative costs.

However, half hourly meters connected to modems / communications currently exist in Northern Ireland on a voluntary basis (though from November 2007 half hourly meters connected to modems / communications will be required in respect of new sites passing the 70 kW threshold). Given this context, options for consideration include placing the current voluntary half hourly metering regime in Northern Ireland on a mandatory basis (for both new and existing sites) – or, alternatively, using electricity bills (e.g. of £10,000 / year or more) as a proxy for half hourly metered sites in Northern Ireland (i.e. the Northern Ireland energy supply companies would write to such bill payers).

23 A half hourly electricity meter must be installed by the electricity supplier where the average of the maximum monthly electrical demand in the three months of highest demand, either in a) the previous twelve months or, b) the period since the most recent Significant Change of Demand (whichever is the shorter) exceeds 100 kW. Additionally, for sites where maximum demand metering is not installed, the Supplier has an obligation to identify 100 kW premises where the Profile of a Customer’s electrical demand implies that an average of the maximum monthly electrical demand exceeds 100 kW. Elexon August 2006 “Guidance note for change of measurement class and change of profile class - version 6.0”http://www.elexon.co.uk/ Non Half Hourly Data Collectors (NHHDCs) are required to identify any sites which qualify as 100 kW Metering Systems, and Suppliers have three months in which to install a half hourly meter. If the metering has not been changed after three months, the Supplier will be charged (the charge for not installing a Half Hourly Metering System is currently £3.11 per calendar day). - Elexon Newscast Issue 130 – 29 January 2007. http://www.elexon.co.uk/Publications/newscast/default.aspx?year=2007
6.1 The Participant Identification Process

Full details of the proposed approach can be found in the Hedra report. However, there are essentially only three steps:

**Step 1 – Obligation on energy suppliers**

Energy suppliers would be required to:

- Supply bill payers of half hourly metered electricity with an information pack, listing their mandatory half hourly meters and their annual consumption for the ‘qualification’ year (e.g. 2008). The pack would also include guidance developed by Government explaining the CRC and the organisation’s obligations.
- Supply Government with a list of all mandatory half hourly meters, with billing organisation name / address and annual consumption figures in each case.

**Step 2 – Obligation on bill payers of mandatory half hourly metered electricity**

Bill payers of mandatory half hourly metered electricity would be required to collate the information they have been given from each of their electricity suppliers (if there is more than one) and pass this aggregated information to their highest UK parent organisation. The parent organisation will be responsible for ensuring all their subsidiaries’ mandatory half hourly metered electricity use is covered in its return to Government.

The guidance within the Government information pack will make clear that the CRC is aimed at their highest UK parent organisation, so that the receiver can pass the request upwards to the appropriate organisation. In some circumstances this will be straightforward. In other circumstances (i.e. if the billing address is a subsidiary of a larger company) the receiver of the information pack may need to do some further work to find the appropriate contact in his / her highest UK parent organisation.

The guidance will also include clear guidelines and instructions on how the highest UK parent organisations (i.e. potential CRC organisations) should respond, ensuring they pull together the data provided by their subsidiaries and multiple energy suppliers. The potential CRC organisation will need to add up the electricity use from mandatory half hourly metered electricity use, and check if the total consumption is greater than 6,000 MWh. The potential CRC organisations would also need to check any CCA information to identify if they or any of their subsidiaries are exempt from the CRC. Please note the nature of the proposed CCA exemption is set out in more detail later in this consultation document.

In each case, the highest UK parent organisation would need to specify in its return to the Scheme Administrator:

- that it is indeed the highest UK parent organisation, rather than a subsidiary of another UK organisation;
- its organisation name, address and contact person;
- the mandatory half hourly meters under its portfolio;
- the total organisation wide electricity use from mandatory half hourly metered electricity use.

In the case of a CRC organisation seeking exemption of certain subsidiaries from the CRC on CCA grounds, the CRC organisation would also need to provide information to demonstrate that each subsidiary had more than 25% of its total energy use emissions in CCAs. In the case of a CRC organisation seeking exemption of the entire organisation on CCA grounds, the organisation would need to demonstrate that:

- it did not have any subsidiary organisations; or
- that, once the CCA subsidiaries are removed, the remaining CRC organisation consumes less than 6,000 MWh / year of electricity use from mandatory half hourly metered electricity use.

**Step 3 – Obligation on Government**

Government, through the Scheme Administrator, would check the information:

- Firstly, if there are meters within the list with no highest UK parent organisation associated with them, Government will be able to use the billing and contract information (received from the suppliers) to follow up with the customers responsible for paying the bill of those meters – to identify the highest UK parent organisation in each case.

- Secondly to check that the highest UK parent organisations had been correctly identified, Government would expect to be able to use commercially available ‘Who Owns Whom’ directories \(^{24}\) (which provide a parent-subsidiary and subsidiary-parent look-up facility). This directory could be used for a sample audit of organisations, to find the ‘apparent CRC organisation’ and write directly to the ‘apparent CRC organisation’ in respect of their CRC obligation.

**6.2 Administrative cost on non-CRC organisations**

Government recognises there will be a small administrative effort from organisations that do not qualify for the CRC – since they will still have to provide Government with the name of their CRC organisation and a list of their mandatory half hourly meters. However, this effort would only be required once every phase (where Government proposes an introductory three year phase, followed by five year capped phases). Moreover, analysis indicates that it should only take a short time to complete as all the information is readily available, from the electricity suppliers in “Step 1”. Hedra estimates that this process would take no more than three hours to respond to for those organisations that clearly do not qualify for the CRC.

\(^{24}\) For example Dun & Bradstreet’s corporate directory which is available at: [http://www.dnb.com](http://www.dnb.com)
This task has been included within the administrative burden costs in the accompanying updated RIA.

6.3 Key benefits of the identification process

The identification process would enable Government to establish a fair scheme, in that all those organisations using over 6,000 MWh / year of mandatory half hourly electricity would be identified – since the process enables Government to check up with the bill payers of half hourly meters to ensure that all mandatory half hourly meters have a highest UK parent organisation associated with them.

In addition, the process will also enable Government to take a more informed view on whether to extend the scheme over time (and, if so, to what extent), since the process will yield data on the extent of additional carbon coverage to be gained from lowering the CRC threshold.

Questions:

5. Could your organisation manage these procedures to correctly identify the CRC organisation?
   Yes / No / Not Sure / Comments

   • If not, which particular aspects of the organisation identification procedure would cause a problem?

6. Could the procedures be simplified and still allow Government to identify non-compliant organisations? If so, how?

It is clear that the identification of organisations to be covered by the scheme needs to be carried out ahead of the scheme starting in 2010. It is important that this is done as close to the start of the scheme as possible to ensure the right organisations are captured according to their mandatory half hourly metered electricity consumption. Hedra estimates that this process may take up to six months for Government to collate this information into a list of actual participants who qualify for CRC. This does not include the time taken for organisations to collate information on their own energy use and identify their appropriate CRC organisation.

Therefore Government proposes that qualification for CRC would be based on mandatory half hourly metered electricity consumption during 2008. Consumption would be taken from January to December 2008. This means that organisations with over 6,000 MWh mandatory half hourly metered electricity consumption during 2008 would be included in the CRC from January 2010. This allows one year for organisations and Government to confirm which organisations will be included before the scheme starts in January 2010.
Question:

7. Do you agree that 2008 should be used as the qualification year?
   Yes / No / Not Sure / Comments

   • If not, which time period would you recommend?
     Other Calendar Year / Other 12 month period (please state)

7. Treatment of Landlords and Tenants

The first consultation recognised that potential difficulties may arise from institutional arrangements such as franchises and landlord-tenant relationships (e.g. where mandatory half hourly meter bills are paid for by landlords with tenanted properties). A consequence is that where these meter bills are paid for by the landlord, the landlord’s UK organisation may qualify for CRC, and will be obliged to manage CRC trading costs and energy management in liaison with its tenants.

As a result of Hedra’s findings, and from discussion with stakeholders, Government’s further proposals for consultation are as follows:

1. Where the tenant is paying the mandatory half hourly metered electricity bill, this electricity counts towards the total mandatory half hourly metered electricity use for the highest UK parent organisation of the tenant.

2. Where the landlord is paying the mandatory half hourly metered bill on behalf of a tenant, this electricity counts towards the total mandatory half hourly metered electricity use for the highest UK parent organisation of the landlord.

In those cases where the tenants do not pay the electricity bill directly and are part of a CRC organisation, and the landlord is also a CRC organisation (e.g. an Alliance Boots store within a shopping centre), Government proposes that the legal obligation for CRC could be handed over from the ‘landlord organisation’ (the highest UK parent organisation of the landlord) to the ‘tenant organisation’ (the highest UK parent organisation of the tenant) if both the tenant and landlord agree at the start of each phase.

This means that the emissions from some small organisations, which would be exempt if they had their own meter, will be covered by the scheme through their landlord, if their energy use is billed through their landlord. This proposal will help tackle the difficult split incentives in landlord / tenant relationships by retaining emissions from smaller tenants within the scheme – whilst not imposing the CRC administrative requirements and burdens on these small organisations. Government recognises that some leading landlords are already taking voluntary action, to seek to influence the energy management
of their tenants. The CRC will provide an additional lever for landlords to influence their tenants’ energy management.

**Box 2 - Case Study: Alliance Boots**

Alliance Boots, the health and beauty group, comprises 3,000 retail outlets (including associates) and a wholesale network of over 380 depots (including associates) serving over 125,000 outlets in 14 countries. Alliance Boots in the UK is expected to qualify for the CRC scheme in its own right as the company pays the utility bills for most of its sites. The Alliance Boots (UK) portfolio comprises:

- about 200 mandatory half hourly metered sites;
- a small number of sites where the utilities are the responsibility of the landlord (some shopping centres but mainly airports and train stations); and
- around 400 stores within shopping centres, where Alliance Boots pays its own energy bills, but there is a service charge covering the cost of energy for shared areas.

Where shopping centres qualify for the CRC scheme, landlords will have to purchase allowances for the energy they buy (in respect of both shared areas and energy used by tenants). Landlords could then seek to recover their costs from their tenants, such as Alliance Boots.

Where all tenant unit energy costs are charged via the landlord/shopping centre, Alliance Boots has found that such charges are best based on metered consumption (rather than, for example floor area). As part of its energy management, Alliance Boots has also found that (a) landlords giving tenants access to sub-meter information (for example via the internet) helps tenants to manage their energy use themselves during the year, and (b) sub-metering of the shopping centre is best managed by the shopping centre rather than by tenants, for accuracy, consistency and economies of scale.

Currently the cost of energy used in shared areas of shopping malls where Alliance Boots is present is generally proportioned on a pro rata basis (based on ‘weighted’ floor area) and passed onto tenants via the service charge. Landlords have direct control over the energy used in the shared areas, although it is related to the operational requirements of the centres’ tenants.
Questions:

8. Do you agree that the proposed approach to establishing which CRC organisation is responsible for energy use in a tenanted property is workable?
   Yes / No / Not Sure / Comments

- If not, what prevents it from being workable?
- Can you suggest an alternative approach that is preferable and retains the emissions coverage of the current proposal?

8. Coverage of the scheme

8.1 Electricity Consumption Threshold

Government is mindful of the need to minimise administrative burdens, a key issue raised during the previous consultation process. The intention is to focus the scheme on large organisations for which the energy efficiency benefits would outweigh administrative costs. Within the previous consultation, we consulted on a number of possible inclusion thresholds – ranging from 3,000 MWh / year to 10,000 MWh / year of electricity use from mandatory half hourly meters. Analysis carried out in advance of the previous consultation demonstrated that for the majority of participants that would be covered by the scheme under an annual consumption threshold of 3,000 MWh, benefits would outweigh the costs of participation.

Following the feedback received from stakeholders regarding the appropriate consumption threshold, Government has decided to take a cautionary approach and implement an initial threshold of 6,000 MWh / year mandatory half hourly metered electricity use\(^\text{25}\). Government analysis described in the RIA that accompanies this consultation document, illustrates that this threshold would generally capture organisations with total annual electricity bills above £500,000. A consumption threshold of 6,000 MWh / year further reduces the residual risk (of administrative costs outweighing energy efficiency benefits) in respect of those organisations using between 3,000 and 6,000 MWh / year mandatory half hourly metered electricity use. In terms of Net Present Value (NPV) under a 6,000 MWh threshold, the scheme would have a £755 million private NPV (based on a 10% commercial discount rate). Using a social discount rate of 3.5%, as recommended by HM Treasury’s Green Book guidance, the NPV is £1,919 million. When the carbon savings and air quality benefits are also valued in monetary terms the overall NPV becomes £3,245 million. The 6,000 MWh threshold will target 95% of the emissions that would be covered with a 3,000 MWh threshold, approximately

\(^{25}\) Note that all mandatory half hourly metered electricity use will count towards the threshold, irrespective of whether it is covered by CCAs. However, organisations with over 25% of their energy use emissions covered by CCAs will be completely exempt.
14 MtC per year, and will help minimise the number of organisations who may be at “risk” (of administrative costs potentially outweighing energy efficiency benefits) from participating in the scheme. Taking into account the effect of the proposed exemption for CCA firms, Government estimates that the CRC will cover around 4,000 to 5,000 organisations. The range, which is subject to significant uncertainty, reflects the effect of the proposed exemption for CCA firms.26

As stated in the Energy White Paper, Government will consider extending the CRC over time, in the light of experience with the first phase, in particular to organisations with lower energy consumption. Analysis indicates that the majority of organisations using more than 3,000 MWh / year of mandatory half hourly metered electricity use would see net benefits from the scheme. At the same time, however, Government will take into account the extent to which this group of organisations independently take sufficient action to address their energy use emissions.

8.2 Inclusion of significant sites without Half-Hourly Meters and consideration of a de minimis threshold

The criteria for organisations’ inclusion in the scheme will be based on electricity use from mandatory half hourly meters. Once an organisation is included in the scheme, all of its fuel use (i.e. electricity, gas and other fuels) at all of its sites with such meters will be covered by the scheme. The previous consultation asked stakeholders whether other sites with significant energy use, belonging to a participant organisation, should also be covered by CRC.

Stakeholders generally thought that an organisation’s performance in CRC would be reflected better if significant sites without mandatory half hourly meters were included. In the previous consultation Government suggested inclusion of other significant sites, subject to a de minimis threshold to exclude sites with very low emissions to minimise any additional reporting burden. Some stakeholders agreed that a suitable de minimis threshold should be adopted to balance wider emissions coverage whilst minimising additional administrative burden. However, others thought that the scheme would be improved, both in terms of environmental integrity and by providing organisations with more opportunities for energy efficiency, if all sites of participating organisations were captured by the scheme - i.e. that, subject to a suitable fuels de-minimis (see paragraph 8.4), there should not be a de minimis to exclude small sites.

In light of stakeholder support for including sites without mandatory half hourly meters Government proposes two options - 1) the inclusion of all sites, and 2) a flexible emissions based site de minimis threshold:

26 Government estimates that up to around 20% of these organisations could be removed as a result of the proposed CCA exemption.
Option 1: Including all sites with metered electricity – no site based *de minimis*.
This would include all sites with mandatory half hourly meters, with discretionary half hourly meters\(^{27}\) and with meter profile classes 3 – 8.

Option 2: A flexible *de minimis*.
Under this option all sites with mandatory half hourly meters, with discretionary half hourly meters, and with meters with profile classes 5 – 8 would be covered by the scheme. In addition, organisations would be required to have at least 90% of their total energy use emissions\(^{28}\) covered by CRC, EU ETS or CCAs. If the combined energy use emissions do not meet this threshold, then organisations would be required to choose further sites to include in the CRC until the threshold is met.

Importantly, under either option, all energy use at the sites included will be captured by the scheme (subject to the fuels *de minimis* proposed in paragraph 8.4).

**Box 3 – Profile Class**

Electricity meters are classified by profile class. Profile classes range from half hourly meters and unmetered supplies (profile class 00); domestic customers (profile classes 1 and 2); non-domestic customers (profile classes 3 – 8). A recent Carbon Trust pilot\(^{29}\) on the costs and benefits of advanced metering indicates that meters with profile classes 5 – 8 typically use between 80,000 kWh and 140,000 kWh of electricity annually. Using a £0.05 / kWh price for electricity, this would indicate that a meter with profile class 5 would typically have an annual electricity bill of around £4,000, whilst a meter with profile class 8 would typically have an annual electricity bill of around £7,000.

Government favours Option 2. This option recognises the diversity in the CRC target sector. Many organisations would have more than 90% of their emissions covered by half hourly meters and profile class 5 – 8 metered sites alone and so would not need to choose extra sites to include. However some organisations have large numbers of small sites, which account collectively for a significant proportion of the organisation’s emissions (e.g. in the telecoms sector). The flexible option would ensure parity of emissions coverage between organisations in that all CRC organisations would have at least 90% of their total energy use emissions covered by a trading instrument (CCAs, CRC and EU ETS). By contrast, a *de minimis* threshold based solely on site

\(^{27}\) Discretionary half hourly meters are half hourly meters installed by organisations voluntarily; even though their consumption pattern does not require their supplier to install a mandatory half hour meter.

\(^{28}\) Note that the 90% threshold is 90% of total reported emissions across EU ETS, CCAs and CRC – i.e. Government recognises that *de minimis* fuel use emissions will not be reported.

\(^{29}\) For the full report, Advanced metering for SMEs, see [http://www.carbontrust.co.uk](http://www.carbontrust.co.uk)
size might mean that some sectors have proportionally fewer emissions covered.

Option 1 benefits from being simple to apply. Like the flexible option it also achieves parity of emissions coverage between participants. However, it does increase the burden of monitoring and reporting. Option 2 has the advantage that it gives participants with small sites an element of flexibility in choosing which smaller sites to include in the scheme. Such organisations could, therefore, minimise any reporting burden by choosing those sites that can be monitored most easily, or choosing those sites with the most cost effective abatement opportunities.

Question:

9. Which option should Government take forward to ensure wide emissions coverage of CRC?
   Option 1 / Option 2 / Not Sure / Comments

8.3 Voluntary opt-in of additional sites by eligible CRC organisations (if option 2 above is implemented)

Government will further consider, if it decides to adopt Option 2 above (i.e. the flexible de minimis option), whether organisations should be allowed to opt in all of their sites to provide complete coverage for the organisation. Some stakeholders have suggested that for some organisations, who may already voluntarily report on total emissions or energy use, that this would be administratively simpler. To maintain scheme simplicity and integrity, the option of including all sites would be strictly one-off decision – only available to organisations on entering CRC. Organisations would not be allowed to pick and choose which sites they wished to opt-in – organisations either choose to include all sites, or they choose to participate in CRC in respect of the basic coverage (all mandatory and discretionary half hourly metered sites, sites with meter profile class 5-8, and any further sites necessary to ensure that the CRC organisation has at least 90% of its emissions covered by EU ETS, CCAs and CRC).

Moreover, CRC organisations would not be allowed to remove sites that remained under its ownership for the duration of the scheme. This would prevent organisations from voluntarily opting-out sites over time – whereby reported emissions would appear to go down, whilst actual emissions did not. Finally, it should be recognised that, for some CRC organisations, all sites will be half hourly metered or in profile class 5 – 8. For such organisations, the issue of voluntary opt-in does not arise – since all of their sites will be included in the scheme on a mandatory basis.
8.4 A fuels *de minimis* threshold - exempting small fuel sources to minimise administrative burden

Government proposes that, if an organisation wishes, it could make use of an exemption for very low use fuel types from the scheme, thereby minimising administrative burden. This fuels *de minimis* could be applied, on a site-by-site basis, to those fuels which emit small proportions of a site’s total energy use emissions. This is unlikely to apply to the main fuel sources of gas and electricity (since generally these each account for a significant percentage of total site energy use emissions). However, it could well apply to fuel types such as fuel oils or Liquid Petroleum Gas (LPG), where these fuel types account for only a very small percentage of site energy use emissions.

Government invites views on the appropriate percentage for a site level fuels *de minimis*. Government suggests two options: 3% and 5% of site energy use emissions, i.e. where a particular fuel makes up less than 3% or 5% of the site’s overall emissions, it could be excluded from the scheme. For example an LPG unit at one site contributes 2% of the site’s emissions, so the LPG would be exempt under both options. At another site an LPG unit emits 4% of the site’s total energy use emissions. In this case it would only be exempt under the 5% option.

Government recognises that at some sites the fuels *de minimis* could be applied to more than one fuel. For example if a site used LPG, fuel oil and diesel and each of these emitted 2% of the site’s total emissions, the *de minimis* could be applied to exempt all three fuels. In general, however, Government understands that it is unlikely that an individual site would use more than two fuels to which the *de minimis* could apply.

Government also proposes that organisations can choose whether to apply the fuels *de minimis*. This is because in some cases organisations may find it less administratively burdensome to include fuels than to calculate whether the *de minimis* could be applied, or because organisations see scope for cost effective emissions abatement from these sources.

In considering the appropriate percentage for a site level fuel *de minimis*, Government seeks views on whether to apply the 3% or 5% figure – and

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**Question:**

10. **Do you agree that organisations should be able to include all their sites in the scheme?**
   Yes / No / Not Sure / Comments

- If so do you agree that they should not be able to remove them at a later date?
  Yes / No / Not Sure / Comments
whether this percentage should apply to site energy use emissions, or to total site energy spend. On the one hand the 5% option may be valuable to avoid any administrative burden that would arise from the inclusion of emissions from very low use fuels. However, Government is concerned that setting the *de minimis* too high could create a perverse incentive for gaming therefore the 3% option or lower maybe preferable. For example gaming could occur through fuel switching whereby an organisation switches to using small amounts of many different fuels to make increasing use of the *de minimis* over time. In the event of this an organisation’s reported emissions would appear to go down, whilst actual emissions did not. Given this context, the 3% option may be preferable. With an appropriate *de minimis* level, this should not pose a significant problem, since organisations would largely choose to make use of the *de minimis* from the very first year, to minimise administrative burdens.

Given the proposed site level fuels *de minimis*, Government does not consider that a further organisation level fuels *de minimis* is required. The rationale for the fuels *de minimis* is to eliminate very small fuel sources (e.g. a LPG unit), and this should be achieved by the proposed site level fuels *de minimis*.

Questions:

11. Do you agree with the Government’s proposal to implement a site level fuels *de minimis*?
   Yes / No / Not Sure / Comments

- Should this be set at 5% of site energy use emissions, 3% or some other percentage?
  <3% / 3% / 5% / >5%

- If <3% or >5% please state a level and explain why.

- Do you think that this percentage should be based on site energy use emissions (as proposed) or total site energy spend?
  Energy use emissions / Energy expenditure / Comments

8.5 Coverage interface with the CCAs

To avoid double administrative burdens in respect of the same emissions, the CRC would cover only energy use emissions outside CCAs. In addition, organisations with more than 25% of their emissions covered by CCAs will be exempt from the CRC.

As recommended by the Hedra analysis, Government proposes to exempt only the subsidiary that operates the CCA site(s) as shown in Figure 3 below. This is to avoid the situation where an entire large organisation is exempt simply because one of its subsidiaries has a CCA. Government proposes to use a ‘bottom-up’ approach to define the subsidiary organisation that operates
the CCA site. Therefore, in the case of group company structures, this means that only the specific subsidiary company with the CCA is exempt, not the group as a whole. The remainder of the overall organisation (providing it uses over 6,000 MWh / year of mandatory half hourly metered electricity) remains in CRC. For example in the diagram below, the CRC participant would be ‘Organisation A’. The organisation includes itself and all of its subsidiaries except for M and N, which have more than 25% of their emissions in CCAs.

This approach is important both to secure reasonable coverage and cost-effective carbon savings, and also for reasons of equity. This is because if the entire organisation were exempt it could create a situation where some companies were exempt but their competitors were not. For example under the proposed approach, if subsidiary X, in the diagram below, was a large retail chain, then it would be included in the scheme as part of Organisation A, despite subsidiaries M and N having CCAs. By contrast, exempting the entire organisation A with all its subsidiaries would mean one large retailer X would be exempt, whilst its competitors would be covered.

Participants would be required to provide appropriate evidence to the Government to support a claim to exempt any of their subsidiaries (or the entire CRC organisation, if appropriate) from the CRC. Such evidence would include details of their CCA based on the CCA evidence pack. The onus would be on organisations to provide sufficient evidence for their exclusion, which would be done prior to the start of each phase.

In the case of a CRC organisation seeking exemption of certain subsidiaries from the CRC on CCA grounds, the CRC organisation would need to provide information to demonstrate that each subsidiary had more than 25% of its total energy use emissions in CCAs. In the case of a CRC organisation
seeking exemption of the entire organisation on CCA grounds, the organisation would need to demonstrate that the CCAs did not belong to any subsidiary organisations – or that, once the CCA subsidiaries are removed, the remaining subsidiaries of the CRC organisation consume less than 6,000 MWh / year of mandatory half hourly metered electricity use.

Government plans to start the CRC scheme in January 2010. The targets under the existing CCAs run until December 2010 (with CCA firms scheduled to receive a CCL discount for 2 years after the target period). As reported in the 2006 Energy Review Government is committed to consider the future of CCAs in good time before the end of the current agreements. Given this context, it follows that for a CCA firm to continue to be exempt from CRC, it would need to be in a CCA target post-2010. If there were any firms falling out of CCA targets in December 2010, then such firms would join CRC in January 2011 if they exceed the electricity threshold.

Government is interested in the views of stakeholders as to whether the proposed approach to CCA exclusion is practicable and workable.

**Question:**

12. Do you agree that CCA organisations with more than 25% of their energy use emissions in CCAs should be excluded as described in the diagram above?

Yes / No / Not Sure / Comments

8.6 Coverage interface with the EU ETS

Government estimates that around 5% of CRC organisations will have a proportion of their emissions in the EU ETS – leaving the CRC to target the remaining emissions. For these organisations, Government proposes that the CRC would cover both electricity use and all direct energy use emissions not covered by the EU ETS.

Government does not propose to exempt these organisations from the CRC, as they account for a significant proportion of CRC emissions coverage, and analysis indicates that the scheme could deliver net financial benefits to such organisations.

Government is working with its EU partners to remove “small emitter” installations from the EU ETS. In March 2007 Defra invited stakeholder views on an Issues Paper, a part of which focused on the specific question of how to remove small emitter installations from the EU ETS\(^\text{30}\). Many of these installations belong to large non-energy intensive organisations, and to that

\(^{30}\) See section 4.3.1 of
extent these emissions will be covered by CRC if they fall out of EU ETS. Importantly, the CRC has been specifically designed as an administratively “light touch” scheme for large non-energy intensive organisations – with a self-certification approach to reporting (backed up by independent risk-based audit), rather than requirements for third party verification of 100% of organisations (as in UK ETS) or third party verification of 100% of sites (as in EU ETS).

9. Coverage treatment of specific activities

Government has decided to take CRC forward with no exemptions for any particular sectors. At the same time, there are particular issues with the treatment of emissions from street lighting, trains and schools. Government’s proposals regarding these specific issues are outlined below.

9.1 Unmetered Supply (UMS) including street lighting

Unmetered electricity is typically supplied to small, common electrical apparatus where the cost of fitting individual meters is prohibitive. The main types of unmetered electricity supply (UMS) Government expects to be captured by the CRC are street lighting and other electrical street furniture. Much of this is operated by Local Authorities, but some of it is the responsibility of other bodies and commercial firms e.g. lighting in privately operated car parks. Mobile phone masts are also unmetered in some, but not all, instances.

Government’s preference is that UMS is included in the CRC. Through discussions with Local Authorities and telecoms operators, Government understands that it makes a substantial contribution to energy use amongst the target group and we understand that there is considerable scope for cost-effective emissions abatement. However we recognise that we need to better understand the implications of the CRC on UMS to ensure that the scheme effectively incentivises carbon savings.
**Box 4 - Methodology for billing UMS**

Elexon, the Balancing and Settlement Code company for Great Britain, issues Regulations and guidance to UMS users and electricity suppliers on how to calculate unmetered electricity usage. This process is summarised as follows:

1. The UMS user is required to supply their Distribution Network Operator (DNO) with an inventory of its unmetered apparatus and the switch regime for each item.
2. The DNO (or its agent) estimates the electricity used by the apparatus listed in the inventory and issues a Certificate of Unmetered Supply to the user and their electricity supplier.
3. The electricity supplier then calculates the electricity bill.

This methodology results in an electricity use figure that can be used in CRC reporting. Some organisations already use a more advanced form of monitoring for UMS (pseudo half hourly metering, see below) and this also delivers an electricity use figure. Government, therefore, considers it feasible to include UMS in the CRC. Government will consider, alongside this consultation, whether a suitable de minimis is necessary (where UMS makes up just a small quantity of emissions) or whether the site and fuels de minimis proposals will prevent placing an unnecessary burden on organisations with relatively small amounts of UMS electricity.

We recognise that the electricity consumption figure is an estimate based on a calculation rather than actual measurement. Its accuracy depends on the completeness and accuracy of the UMS inventory and the switch profile. Government considers that the provision of more accurate and timely consumption data for UMS would help to demonstrate its impact on an organisation’s costs and could incentivise energy savings. Government expects that including UMS in the CRC (and so attributing to it a cost of carbon) will encourage organisations to pay greater attention to their UMS energy use and so achieve carbon savings.

**Question:**

13. Do you agree that unmetered supplies (UMS) should be included in the CRC, subject to a suitable de minimis?

   Yes / No / Not Sure / Comments

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31 BSC Procedure BSCP520 [http://www.elexon.co.uk/](http://www.elexon.co.uk/)
32 The DNO is the electricity company which maintains the electricity network in a particular area – this can be different to a user’s electricity supplier. DNOs are required by law to be separate to suppliers.
33 The switch regime estimates the number of hours for which the apparatus is operational each day.
9.1.1. Best Practice in UMS

Government recognises that the standard inventory method used to calculate UMS has scope for error and poor data quality. We are therefore keen to explore ways that the CRC can promote best practice in measuring UMS. Pseudo half hourly metering is a considerably more accurate method of calculating UMS electricity use than the standard billing methodology.

### Box 5 - Pseudo Half Hourly Metering

Like the standard billing methodology, pseudo half hourly metering is based on an inventory of the unmetered apparatus but, importantly, the inventory is submitted to the DNO more regularly, generally on a monthly basis. Regular updates to the inventory mean that changes of apparatus are taken into account more quickly and also that temporary apparatus can be captured in the energy use calculations.

The UMS use is calculated by an independent meter administrator. The DNO passes the inventory to the meter administrator each month who calculates the usage on a half hourly basis using actual activity data, rather than switch regimes. For example, the meter administrator will use a light sensitive meter to monitor the hours of darkness in the inventory area. This is then used to calculate the actual activity of light sensitive street lights on the inventory.

Government understands that the main driver for moving to pseudo half hourly metering is that it reduces energy costs (both by giving users greater insight into their electricity use and also through access to lower cost electricity). In addition, in some areas, the DNOs have encouraged users to move to pseudo half hourly meters.

The pseudo half hourly metering methodology directly supports Government’s aim of drawing attention to electricity use and energy costs in order to identify opportunities for energy efficiency. As a result, Government is minded to incentivise the use of pseudo half hourly metering via the CRC and seeks stakeholder opinion on how best to do this.

One option would be to count pseudo half hourly metered electricity use towards the extent of Automatic Metering (AMR) in the performance league table (if Government decides to implement this part of the league table – see

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34 The regularity is agreed between the user and the DNO so this can vary.
35 For example temporary traffic lights during road works.
36 Paid for by the electricity user.
37 This increased visibility can help organisations to identify opportunities for energy and carbon savings more easily.
38 Pseudo half hourly metered electricity is not typically subject to the penalties that some suppliers apply to energy billed using the standard methodology. In addition, it provides customers with access to the half hourly electricity market which, in some cases, can result in a lower electricity tariff.
paragraph 21.1.4). This would support the overall position of organisations that have installed pseudo half hourly metering.

It would also be possible to apply the adjustment factor for estimated bills (which Government is also consulting on – see paragraph 28.2) to the standard UMS billing methodology but not to pseudo half hourly metered bills. This would reinforce the incentive to move to best practice energy monitoring.

Questions:

14. Do you agree that pseudo half hourly metering should be incentivised by the CRC?
   Yes / No / Not Sure / Comments

- If yes, do you think:
  a) that pseudo half hourly metering should be treated in the same way as AMR for the purposes of the performance league table?
     Yes / No / Not Sure / Comments

  b) that the standard UMS billing methodology should be treated as an ‘estimate’ for the purposes of the adjustment factor and that pseudo half hourly metering should not be?
     Yes / No / Not Sure / Comments

9.2 Energy use emissions from the light and heavy rail sector

There are two elements for consideration here:

1. **Non-rail energy use emissions** from within the rail sector (e.g. from offices, stations, depots etc) – where Government has decided that these emissions will be targeted by CRC, and where the detailed questions within this overall consultation on how best to design CRC apply to all sectors, including the rail sector. As determined by the standard coverage criteria, CRC will apply to emissions from organisations above the threshold without any sector specific exemptions (CRC includes other transport sector emissions such as those from airports, bus depots, ports). Government would welcome views from the rail industry on the practicalities of implementing the CRC to cover non-rail energy consumption.

2. **Energy use emissions from rail itself** – i.e. from underground trains, overland trains, and trams. As confirmed by the Energy White Paper, Government is committed to exploring the potential inclusion of surface transport within the EU ETS. Government is therefore currently minded to exclude rail energy use (both haulage and passenger service) emissions from the CRC – but would welcome stakeholders’ views, in particular on
the best ways to ensure energy efficiency benefits and absolute emissions reductions from train energy use.

In relation to the non-rail emissions within the rail and wider transport sector, analysis indicates that CRC should deliver net benefits to the sector, with CRC administrative costs outweighed by the financial benefits of lower energy bills, as CRC encourages energy efficiency investments in stations, depots and other non-rail emission sources. Given this context, including non-rail emissions in CRC should not cause modal shift away from the rail sector. 39

On the second element, Government is committed to securing emissions reductions from the transport sector – including light and heavy rail. Under current CRC eligibility criteria, traction electricity use would be included (because it uses permanent track), unless this section of use is specifically excluded. If trains were included, CRC would target both electric and diesel trains to avoid creating perverse incentives.

Whilst the CRC specific analysis has not included energy use emissions from underground trains, overland trains and trams, train emissions are estimated at over 2 MtCO₂/year and separate rail industry research has highlighted a range of measures to reduce these emissions cost-effectively in both the short and longer term.40 It is clear to Government that the rail industry should work rapidly to implement these measures given both the carbon and financial savings they could deliver.

However, Government recognises that, even with the implementation of these measures, the extent of rail energy use emissions reductions will be rightly constrained by modal shift onto rail away from more polluting forms of transport – especially if additional and longer trains are introduced to carry more passengers and freight.

The Government is keen to ensure that the CRC does not result in a rise in total transport carbon emissions. Given that rail is a relatively carbon efficient mode of transport, the Government is aware of stakeholder concerns that including rail energy in CRC may result in modal shift from rail to other more carbon intensive modes such as road or air and a rise in total emissions. In particular, given that the CRC will not include the energy used by other modes, including rail traction energy could bias transport choices towards other modes.

More generally, the Energy Review Report committed the Government to engaging with key organisations, the European Commission and other EU member states to ensure that the potential for inclusion of emissions from surface transport in the EU ETS is given serious consideration. This was confirmed in the Energy White Paper. In relation to air transport, the

40 RSSB, T618 “Improving the efficiency of traction energy use” (2007) http://www.rssb.co.uk/index.asp
European Commission has published detailed legislative proposals to include aviation in the EU ETS.

To maintain consistency in transport policy and to avoid pre-empting the work on transport following the Eddington Review, the Government is, therefore, minded to exclude train energy from the CRC, but would welcome stakeholders' views, in particular on the best ways to ensure energy efficiency benefits and absolute emissions reductions from train energy use.

Government would also welcome stakeholder views of the overall potential impact of CRC on rail passenger and rail freight demand, if rail traction energy was included in CRC, and, in particular, on whether CRC would be likely to impact on modal shift. Government estimates that the financial incentives from the auction and revenue recycling would be equivalent to around up to a +/-2% impact on the energy bill for CRC organisations, depending on an organisation's position in the league table\(^41\) (i.e. Government estimates that an organisation at the bottom of the CRC league table could see a 2% increase on its energy bill).

Questions:

15. In terms of non-rail energy, would you highlight any key issues specific to the rail sector that Government should bear in mind in developing the CRC policy design?

16. Given the UK commitment to consider the inclusion of surface transport within the EU ETS, do you agree that rail energy should currently be excluded from the CRC?
   Yes / No / Not Sure / Comments

- If excluded, what other policy approaches (including voluntary action) would be most suitable to deliver energy efficiency benefits and emissions reductions from train energy use?

9.3 Schools

Government does not, in general, expect individual schools to qualify as organisations in their own right under the electricity use inclusion threshold (of 6,000 MWh / year of mandatory half hourly metered electricity use). However, a significant number of stakeholders at the stakeholder workshops argued that schools should be included within local authorities’ portfolios on a

\(^41\) This applies to any CRC organisation rather than only rail organisations. A CRC organisation would receive a recycling payment proportional to its annual average emissions since the start of the scheme, with a +/-10% bonus / penalty, depending on its league table position. The estimate of around a +/-2% on the energy bill assumes an auction price of £8 / tCO\(_2\) (around the current level of the Climate Change Levy), that the CCL accounts for around 10% of the energy bill.
mandatory basis, since there are substantial cost-effective energy efficiency opportunities available in schools (as well as the potential educational value).

Government does not propose to mandate the inclusion of all schools within local authorities’ portfolios at this stage. Such an approach would be counter to the general drive within education policy to devolve decision making to school level. Moreover, Government intends to consider in more detail the relationship between schools and local authorities and how this might operate in the CRC before deciding whether to mandate the inclusion of all schools in future phases. In particular, Government is interested in the relationships between schools’ governing bodies and senior management teams, and their local authorities and local education authorities.

At the same time, Government recognises that a variety of different arrangements currently exist in respect of who pays school energy bills and school energy management – and would not wish to discourage good practice. In some cases, local authorities have voluntarily agreed arrangements whereby they pay the energy bills of a number of schools (generally to use bulk purchasing power to secure a better price per unit of energy). In such cases, school energy use, by definition, would be included within the CRC local authority’s portfolio (if the local authority was large enough to be included in CRC) – and the scheme would provide an additional reason for the local authority to drive energy efficiency investments within schools (in terms of securing lower energy bills and improving the local authority’s position in the CRC league table). This approach follows the overall scheme wide approach within the CRC – of including the energy use paid for by the CRC organisation. Just as the scheme should, in general, give CRC landlords an additional incentive to influence their tenants’ energy use, so the CRC should provide local authorities that pay school energy bills with an additional incentive to encourage their schools to improve their energy management.

To prevent local authorities being unfairly penalised from including additional schools within their energy management portfolio (or indeed from being unfairly rewarded if schools drop out of the local authority portfolio over time), CRC local authorities would need to report to the Scheme Administrator, each year, the list of schools within their portfolios; highlighting any schools that have been added / removed. The Scheme Administrator would then be able to update baselines accordingly. Government is in general keen to avoid any changes to baselines within the CRC for simplicity – but in this particular case – given the wider policy importance of school energy efficiency (and the fact that, by definition, it would only apply to a minority of CRC participants) Government considers it justified.
Questions:

17. Do you think there are significant cost-effective opportunities for energy efficiency within schools?
   Yes / No / Not Sure / Comments

18. Do you agree with the Government’s decision not to mandate the inclusion of all school energy use within local authority portfolios for CRC?
   Yes / No / Not Sure / Comments

19. Do you agree with the proposed approach – of including school energy use within CRC local authority portfolios where such authorities pay the energy bill?
   Yes / No / Not Sure / Comments

10. Entry to and Exit from the CRC: Updating baselines

To minimise admin burden on organisations and the scheme regulators, organisations will not move into and out of the scheme on an annual basis, as a result of their falling above / below the 6,000 MWh inclusion threshold. Therefore, once an organisation is identified at the start of a phase to be included in the scheme, it will remain in the scheme for the duration of that phase. Before the beginning of the next phase, organisations’ eligibility would be re-assessed.

Figure 4 below illustrates an example of organisational change – until the next phase, CRC Organisation A would remain in the scheme for the remainder of the phase, even if it fell below the threshold. At the start of the next phase, Organisation X, including subsidiary M, may enter the CRC, if it passes the 6,000 MWh / year of mandatory half hourly metered electricity use threshold.
1. Organisation A is a UK parent company that qualifies for CRC. The emissions from A and all its subsidiaries are covered by the scheme. Organisation X and its subsidiaries do not meet the inclusion threshold so are not in CRC.

2. Organisation X buys subsidiary M

3. Organisation A and its remaining subsidiaries stay in the scheme, even if the sale means A no longer meets the inclusion criteria. However, organisation A will drop out the scheme for subsequent phases. Organisation X and all its subsidiaries, including M, stay outside the scheme. If X now exceeds the inclusion threshold, then it will enter the scheme at the start of the next phase.

To minimise administrative burden and maintain the emphasis on scheme simplicity, there will in general be no need for organisations to report changes of operation during the year. Organisations will only have to report emissions for the year and surrender sufficient allowances to cover their emissions. This will include emissions from sites which have been sold during the year, up to the point of sale, as well as emissions from sites bought during the year, from the point of ownership. The reported emissions should cover the organisation subject to any de minimis exemptions. Further information on the reporting process is in paragraph 26 on ‘Reporting energy use’.

There is, however, a case for certain exceptions to the overall approach in which Government will update an organisation’s CRC baseline i.e the organisation’s annual average emissions since the start of the scheme. To minimise administrative burden and to maintain scheme simplicity, Government wishes to keep these exceptions to a minimum. Nonetheless, Government considers that organisations will need to notify the Scheme Administrator (as the organisation issuing the recycling payments) of the following specific changes of operation:
1. **Emissions transfers between EU ETS / CCAs and CRC:**
   By definition, this would apply only to the minority of CRC organisations with some emissions in EU ETS / CCAs. If there is any transfer of emissions from EU ETS to CRC or vice-versa, then the CRC organisation would need to notify the Scheme Administrator. The organisation’s baseline (annual average emissions since the start of the scheme) would need to be amended, otherwise organisations would be unfairly penalised (or rewarded) simply on account of emissions transferring between schemes.

   An example of this would be if an EU ETS installation was removed from EU ETS coverage - for example if small emitters are excluded from the EU ETS. Equally, if an installation’s capacity was reduced below the EU ETS inclusion threshold the installation would exit EU ETS. Any direct emissions from remaining technical units would enter CRC. Similarly if an organisation installed extra boilers at a site, increasing capacity above the EU ETS threshold, the site would enter the EU ETS as a ‘new entrant’ and these emissions would be removed from CRC.

   The same process would apply in respect of any transfer of emissions between CCAs and CRC (e.g. a supermarket removing its bakeries from CCAs, in order to be wholly covered by CRC). Any updates to baselines would be carried out each year, rather than waiting until the next phase.

2. **Addition / removal of schools within a local authority portfolio** – recognising the specific context that local authorities would be free to change each year which (if any) schools they were paying the energy bills for, a CRC local authority would need to report each year the list of schools within its CRC portfolio, and the energy use it pays for, for each of these schools. The local authority’s CRC baseline (annual average emissions since the start of the scheme) would need to be updated each year that schools were added or removed from the portfolio, to prevent local authorities benefiting (or suffering) from the removal (or addition) of schools. For simplicity, and to encourage local authorities to bring schools within their portfolio, if a school was added to the portfolio, each year’s emissions since the start of the scheme would be increased by an amount equal to the school’s latest annual emissions.

3. **Emissions transfers from landlord to tenant** – If there is any transfer of emissions from CRC landlord organisations to CRC tenant organisations (which Government proposes could take place only at the beginning of each phase and only if both parties agree), this will need to be notified to the Scheme Administrator prior to the beginning of the phase. Both landlord and tenant baselines (annual average emissions since the start of the scheme) would then need to be amended, otherwise tenants would be unfairly penalised for (and effectively discouraged from) taking responsibility for additional emissions coverage. Since the scheme does

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not require reporting of emissions on a site-by-site basis, there would be no reported historical data to update baselines. For simplicity, therefore, each year’s emissions since the start of the scheme for the CRC tenant organisation would be increased by an amount equal to the site’s latest annual emissions (i.e. for the year before the handover). The CRC landlord organisation’s baseline would be similarly adjusted (i.e. each year’s emissions since the start of the scheme would be reduced by this same fixed quantity).

Importantly, the above changes are exceptional – as opposed to general changes of operation that may occur every year across the great majority of CRC organisations. The exceptions above should only affect a minority of CRC organisations and, in the case of the last exceptions, amendments would only be made on a phase-by-phase basis, rather than every year.

To minimise administrative burden, Government will not be updating baselines in respect of purchase or sale of specific sites, subsidiaries, or organisations. Government is aware of the administrative burdens of such changes of operation from the experience of the voluntary UK ETS – featuring 33 organisations – and would not wish to apply such an approach to the CRC scheme involving up to around 5,000 organisations. As stated in the previous consultation, addressing considerations of site closures and site rationalisation for the numbers of sites and organisations involved in CRC would be very complex and potentially unmanageable.

**Question:**

20. Do you agree with the overall principle of not having to report changes of operation during each phase of the CRC?
   Yes / No / Not Sure / Comments

21. Are each of the proposed exceptions to the overall approach reasonable?
   Yes / No / Not Sure / Comments
Section C – CRC Phases and Cap Setting

11. Phase Length

The current proposal is that the first capped phase of the CRC will start in January 2013, and that each of the capped phases will last for five years. This aligns with phase III of the EU ETS\(^{43}\) and subsequent phases, if EU ETS phase length continues to be five years. Aligning the two schemes in this way will be helpful in terms of creating commonalities between different carbon markets, especially given the safety valve link between the CRC and the EU ETS. However, if changes occur in the timing or length of EU ETS phases, the CRC phases will not necessarily be adjusted accordingly. Decisions in this respect will be taken with priority given the effective functioning of the CRC scheme and market. It should also be noted that, in common with other downstream policies (such as CCAs and the Energy Performance of Buildings Directive), decisions on the EU ETS cap would take into account emissions savings made as a result of the implementation of the CRC.

12. Phase Caps

In the 2007 Energy Review, Government committed to delivering emissions reductions of 1.2 MtC per year from the large non-energy intensive sector by 2020. As a scheme aiming to achieve absolute emissions reductions in a cost effective manner, the methodology for setting and reviewing the cap will be vital to its success. As set out in the draft Climate Change Bill, Government has proposed establishing a Committee on Climate Change to advise on climate change issues. Government has proposed that this Committee will advise UK Ministers on the setting of emissions caps for each phase. The Committee would take into account factors such as the extent of opportunity for cost effective abatement within the sector, and the economic competitiveness / vulnerability of the sector compared to other sectors when making its recommendations – bearing in mind the overall UK goal of achieving at least a 60% reduction in CO\(_2\) emissions by 2050 relative to 1990 levels.

Government is conscious of the need to balance setting caps early to provide participants with certainty against the value of setting caps later with the benefit of greater knowledge of emissions results. Analysis by consultants ERM / MDI\(^{44}\) highlighted the importance of this trade-off, noting the value of being able to set the cap in response to market conditions. Government suggests that the cap for the first capped phase should be set during the introductory phase, after the announcement of the second year’s result. This will give Government (and the Committee on Climate Change) two years data to inform the cap decision and will provide participants with around six months notice of the first cap decision. For subsequent capped phases, Government proposes that cap setting should take place as far in advance as possible of

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\(^{43}\) This may also align with the carbon budget periods proposed in the Climate Change Bill.

each phase. To help organisations prepare for CRC, UK Government has given an initial carbon saving commitment that extends to 2020.

**Question:**

22. **Do you agree with the proposed overall approach on cap setting?**

   Yes / No / Not Sure / Comments

Note that in paragraph 22 – Maintaining a Functioning Market, Government invites views on the option of “in-phase” changes to scheme parameters in exceptional circumstances.
Section D – Scheme Market Design

13. Overview

The CRC will operate as a cap and trade scheme in which participants are required to purchase and surrender allowances corresponding with their annual carbon dioxide emissions, with the total quantity of emissions allowances constrained by an overall cap. This cap will be steadily tightened so that a decreasing number of allowances are available to participants over time. Being part of the scheme should, therefore, encourage organisations to focus management attention and increase investment in energy efficiency measures that reduce the carbon emissions. As part of this process, it will be in the interest of participants to design and implement long term energy efficiency / carbon abatement strategies to reduce their carbon emissions to help them remain within the constraints of the emissions cap.

This will mean participants developing effective energy use and emissions forecasts. Effective forecasting will enable participants to predict better the number of allowances they require for each phase and the price they are prepared to pay for them, balancing the costs of abating emissions against the cost of buying allowances. In the capped phases allowances will be distributed via an online auction, rather than by fixed price sale – so participants will want to draw up carbon management strategies and forecasts that can be adapted according to different allowance auction prices.

The market is designed to be as flexible and liquid as possible to allow maximum scope for participants to obtain the allowances they require, whilst maintaining the scheme’s overriding environmental objectives. Participants will be able to purchase allowances from three sources:

- From Government at the auction in January of each scheme year (or fixed price sale during the introductory phase)\(^{45}\);
- On the secondary market from other participants or traders; or,
- Through the safety valve mechanism.

The introductory phase will last for three years, during which an unlimited number of allowances will be sold each January to participants at a fixed price. After January, the fixed price sale will end, and there will be a fixed quantity of allowances in the CRC market. As such, technically, there will be a cap in the introductory phase – albeit one set by the market rather than by Government. For all phases after the introductory phase, Government will set the cap. The first proper capped phase will start in the fourth year of the scheme when a fixed quantity of allowances (as outlined in paragraph 16) will be sold to participants by auction.

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\(^{45}\) In order to reduce administrative burden, the auction will take place over the course of a single day. The fixed price sale will cover the whole of the month of January.
The revenue raised by the Government through the sale / auction of allowances will be recycled back to participants. Payments will be proportional to their average annual emissions since the start of the Scheme, with a small bonus or penalty based on their position within a performance league table. As such the CRC will be broadly revenue neutral to the Exchequer.

14. The scheme year

Government consulted on the timing of the scheme year in the last consultation document. Stakeholders gave mixed responses as to whether the scheme year should follow the calendar, financial or other year. The slightly preferred response was to match the scheme year to the calendar year for the sake of simplicity and to coincide with the EU ETS year. Government agrees and has decided that for CRC the ‘emissions year’ – the period over which participants must monitor their emissions – will run from January to December.

Each emissions year will be followed by a reconciliation period – a period of three months during which organisations can collate their emissions data; buy or sell allowances on the secondary market; report their emissions figures to Government; and surrender emissions allowances. Government will then publish the results and calculate revenue recycling payments. Figure 5 indicates the approximate sequence of these events. Over the course of the year participants would undertake the following steps:

1. Forecast emissions for the compliance year, taking into account their energy efficiency / carbon abatement strategies;
2. At the start of each year, purchase allowances from the Government auction (fixed price sale in the introductory phase) according to the organisation’s abatement strategy;
3. Monitor, assess and manage emissions throughout the emissions year
4. If necessary / desired, buy or sell allowances on the secondary market, or through the ‘buy-only’ safety valve;
5. Report emissions and surrender sufficient allowances to cover its emissions. (Note that surrendering sufficient allowances will be a legal requirement);
6. Receive a recycling payment proportional to the organisation’s annual average emissions since the start of the scheme, with a bonus or penalty based on its position in the published performance league table.

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Note that it will not be a legal requirement to take part in the auction - participants could choose to only buy allowances on the secondary market, or through the safety valve.
15. The Introductory Phase

As proposed in the previous consultation document, the CRC will feature an introductory phase, featuring a simple fixed price sale of allowances. Government recognises that the scheme will cover a number of organisations that may have little experience in monitoring and reporting their emissions, or buying and trading allowances. The introductory phase is designed to give participants the chance to become familiar with the way the scheme operates without the complexity of a fixed volume auction and without the constraint of a Government imposed emissions cap. Furthermore, the introductory phase will generate data which will help Government to measure the emissions profile of the sector and enable Government to set an appropriate cap on the number of allowances for the subsequent capped phases of the scheme.

During the introductory phase, the price of allowances will be fixed and then sold to participants in a one-off sale in January of each year. There will be no limit placed on the total number of allowances available for purchase by participants in this sale. Organisations will, if they wish, be able to buy as many allowances as they need to cover their expected emissions for the year. To assist with learning by doing, once the sale is closed at the end of January, no more allowances will be available from Government during that year, and any further requirements will have to be met through trading on the secondary market or through the use of the safety valve.

The introductory phase will include all the other elements of the capped phase; revenue recycling; the performance league table; and the requirement to monitor and report emissions and surrender allowances to match these
emissions at the end of each year\textsuperscript{47}. Consequently, through participation in the introductory phase, participants will gain experience in forecasting their expected need for allowances; buying allowances using the CRC sale / auction facility\textsuperscript{48}; creating energy management strategies; trading on the secondary market; and monitoring and reporting their emissions.

There has been considerable support from stakeholders for the inclusion of an uncapped introductory phase and as such Government has decided that it is necessary for this phase of the scheme to run for three years. Government considers that a minimum of two years data is needed on which to base the cap for the subsequent capped phase – and therefore a three year introductory phase is required (since the data for the second year will only become available midway through the third year). While it is recognised that there could be some environmental advantages from making a more rapid transition to a capped scheme, Government considers that these would be outweighed by the benefits of creating a scheme based on accurate emissions data.

\textbf{15.1 Setting the Fixed Price Sale level for the Introductory Phase}

Government recognises that CRC participants would appreciate an early indication of the likely level of the CRC fixed price sale, so that they can budget and plan their business strategies accordingly.

ERM / MDI analysis suggested a range of values which might be appropriate for the safety valve floor price – from £8-16 / tCO\textsubscript{2}, concluding that a value towards the lower end of this range may be appropriate as an initial value\textsuperscript{49}.

In this context, Government invites views on the following options for a fixed price sale. Note that the associated safety valve floor price – the minimum price at which organisations will be able to buy EU ETS allowances – will be slightly higher than the level of the fixed price sale. This is to encourage organisations to decide how many allowances to buy in the fixed price sale (i.e. by setting their own emissions reduction / climate change targets), rather than to view the safety valve as the primary mechanism for buying allowances.

\textsuperscript{47} It should be noted that during the introductory phase Government will provide guidance to participants in respect of the auction process. It is also expected that the sale of allowances will use the same interface as the later auction, to allow participants to become familiar with the software.

\textsuperscript{48} It is anticipated that the web-based facility which participants will use during the fixed price sale will share many common features with that used for the auction.

\textsuperscript{49} see section 5.4.2 of the ERM / MDI report.

\texttt{http://www.defra.gov.uk/environment/climatechange/uk/business/crc/pdf/erm-report.pdf}
<table>
<thead>
<tr>
<th>Option</th>
<th>Level of CRC Fixed Price Sale (£ / tCO₂)</th>
<th>CRC Safety Valve Floor price (£ / tCO₂)</th>
<th>Context – each January CRC organisations could buy as many allowances as desired at the level of the Fixed Price Sale</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8</td>
<td>10</td>
<td>£8 / tCO₂ is around the level of the current Climate Change Levy</td>
</tr>
<tr>
<td>B</td>
<td>12</td>
<td>14</td>
<td>£12 / tCO₂ is roughly around the level that the market is currently anticipating for the EU ETS Phase II price</td>
</tr>
<tr>
<td>C</td>
<td>16</td>
<td>18</td>
<td>Depending on organisations’ abatement curves, £16 / tCO₂ may encourage more abatement to take place during the introductory phase</td>
</tr>
</tbody>
</table>

Analysis to date – based on the BRE/ENUSIM marginal abatement cost curves – indicates that additional carbon abatement with a fixed price of £16 / tCO₂ may be relatively small in comparison to a price of £8 / tCO₂ because of the cost effective nature of the available savings. Given this context – and the positioning of the introductory phase as a “learning by doing” phase – Government is therefore minded to adopt option (A). Noting that stakeholders may currently have limited knowledge of their organisation’s potential for cost effective abatement, Government is interested in whether stakeholders anticipate that CRC participants would undertake significantly greater carbon abatement with a fixed price of £12-16 / tCO₂ rather than £8 / tCO₂.

Government will consider further the exact value of the safety valve floor price compared to the fixed price, in light of consultation responses.

Questions:

23. Which price option do you think would be most appropriate for the introductory phase fixed price sale?
   Option A / Option B / Option C / None / Other (please specify)

24. Do you think CRC organisations would undertake significantly greater carbon abatement under the option with the highest carbon price?
   Yes / No / Not Sure / Comments

16. The Capped Phases

Following the three-year introductory phase, a limit will be placed on the number of allowances available to participants in accordance with the emissions reduction path targeted to 2020, i.e. the number of allowances sold
to participants will decrease each year. During the capped phases participants will be required to bid for allowances at auction. However, all other aspects of the scheme, such as the revenue recycling mechanism and the performance league table will be the same for both the introductory and capped phases of the scheme.

16.1 The auction

Drawing on experience gained from both the EU ETS and the voluntary UK ETS, allowances will be distributed to participants by auction. Auctioning allowances in the CRC scheme will avoid the complex and lengthy negotiations between participants and Government that could occur with a free allocation process. It will also provide participants with the flexibility to define their own emissions reduction targets, balancing their allowance needs against the cost of emissions abatement for their organisation, within the context of the overall scheme wide cap.

Auctioning received support from stakeholders in response to the previous consultation. It was also supported by the analysis carried out by ERM/MDI. This analysis suggested two types of auction that would lend themselves well to the CRC:

- **Option A**: a sealed bid, uniform price (SBUP) auction; and
- **Option B**: a dynamic, ascending clock (AC) auction.

Both have advantages and disadvantages, so Government seeks stakeholders views over which type of auction to use.

16.1.1. Sealed bid, uniform price auction

In the sealed bid, uniform price (SBUP) auction, each participant would submit a simple bid schedule specifying the amount of allowances they wanted at a range of different prices according to the organisation’s predicted energy use and carbon abatement strategy. At higher allowance prices more emissions abatement opportunities are likely to become cost effective, so an organisation is likely to bid for fewer allowances. These bids are aggregated by Government to form a scheme-wide demand curve, which can then be used to establish a market clearing price. The total number of allowances bid for by all participants at each price is compared against the quantity of allowances available. The price at which total demand equals supply is the market clearing price. Once the market clearing price is found, each participant is awarded the number of allowances they bid for at this price.

The main advantage of the SBUP auction is its simplicity - participants only need to submit a single bid schedule; they would not need to take part in a live auction. Consequently, once abatement opportunities have been identified, participation costs for the auction itself would be low. Such
auctions can also be highly efficient, have been widely used, and are easily scaleable to a large number of participants.\textsuperscript{50}

**Box 6 - Example of the Sealed Bid Uniform Price auction in practice**

Organisation X emits 1,000 tonnes CO\textsubscript{2} per year. It implements an energy management strategy which has a range of abatement measures, each of which become increasingly cost effective with the more it has to pay to emit a tonne of CO\textsubscript{2} - the CRC auction price for an allowance (ignoring revenue recycling) being the price it has to pay to emit a tonne of CO\textsubscript{2}.

Before the auction takes place Organisation X reviews its energy management strategy and concludes that at an allowance price of £5 it would be cost effective for it to reduce its CO\textsubscript{2} emissions by 100 tonnes, at £6 per allowance it would be cost effective for it to reduce its emissions by 150 tCO\textsubscript{2} and at £7 per allowance it would be cost effective for it to reduce its CO\textsubscript{2} emissions by 200 tCO\textsubscript{2}.

Organisation X would therefore submit the following bid schedule to the auction administrator:\textsuperscript{51}

<table>
<thead>
<tr>
<th>Allowance Price</th>
<th>Quantity bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>£5</td>
<td>900</td>
</tr>
<tr>
<td>£6</td>
<td>850</td>
</tr>
<tr>
<td>£7</td>
<td>800</td>
</tr>
</tbody>
</table>

This information is the demand curve for Organisation X.

The auction administrator would then aggregate the demand curves from all the auction participants. The allowance price at which the participants’ total demand matches the total number of allowances (the cap) available for auction is the market clearing price. All participants would receive the number of allowances they bid for at this market clearing price – i.e. all participants pay the same market clearing price per allowance.

16.1.2. **Dynamic, ascending clock auction**

The second option is a dynamic ascending clock (AC) auction. This auction design has the advantage of allowing a more efficient outcome, while still offering less sophisticated bidders the chance to pursue a ‘simple’ bidding strategy. In an AC auction, the auction would take place online, with a number of bidding rounds taking place over a fixed period of time - currently proposed to be one day. In each round, a price is announced, and

\textsuperscript{50} See section 2.4.1 of the ERM / MDI report.  
\textsuperscript{51} It may be possible for Government to suggest a range of prices to participants, against which quantity bids could be made. Such information would be included in auction guidance.
participants submit a bid for the amount of allowances that they would want at that price. If the total number of allowances bid for by all participants exceeds the number available to buy, the price is raised and a new bidding round opened. Participants can then place a new bid adjusting the number of allowances they bid for in light of the new price. This bidding process is repeated until demand for allowances matches the supply. Allowances are then distributed according to the bids made at the market clearing price.

The advantage of this approach is that it facilitates price discovery (see section 2.3.2 of the ERM report), since participants are able to revise their bidding strategy in the light of market information that is revealed between rounds. This potentially leads to a more economically efficient outcome.

The extended time and level of interaction needed to participate fully in an ascending clock auction means that the cost of participating is likely to be higher than for an SBUP auction. It may also be more complicated for participants to develop a dynamic strategy that enables them to take full advantage of the price discovery between rounds, especially for participants who would prefer a simple approach.

However, as noted above, scheme participants would not have to take part in the dynamic element of an AC auction. Rather than adjusting their demand schedule during the live auction, participants could submit a simple proxy bid schedule (i.e. a single, fixed bid schedule covering all allowances prices), similar to that used in an SBUP auction. This could result in a less efficient outcome for that organisation because the proxy bid schedule might buy slightly more or slightly less allowances at the market-clearing price than the participant would have done so with the benefit of the information released between bidding rounds. The allowance distribution of the AC auction may, to some extent, favour those bidders that invest the time to participate fully (because they only buy what they want at clearing price) which, of course, implies that such bidders are likely to benefit at the expense of other less sophisticated bidders. At the same time, however, those bidders taking part in the dynamic AC auction may also face increased administrative costs associated with the increased time invested in the auction, compared to those that submit proxy bids.

ERM / MDI's analysis suggests using an AC auction in the CRC if Government revealed tentative league table information between rounds. If this were the case the AC auction would in theory be more efficient since it would allow participants to judge what their likely recycling payment would be (see paragraph 21) and factor this into their bidding strategy. However, Government does not think this is feasible due to the quantity of information required to calculate the league table. If an AC auction was used Government proposes only to release simple ‘total quantity bid’ information between rounds, as was done in the case of the voluntary UK ETS. The potential efficiency gains and benefits for participants in an AC auction are,

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52 Much of this information would be unavailable at the time of the auction. See the discussion on section 2.5.3 of the ERM/MDI report.  
therefore, less clear. Notably, the National Audit Office (NAO) report into the voluntary UK ETS indicated that a sealed bid auction would have been preferable to the dynamic clock auction\textsuperscript{53}.

Box 7 - Example of the ascending clock auction in practice

As with an SBUP auction, Organisation X would establish its demand curve based on the number of allowances it wished to purchase at different allowance prices. However, rather than simply submitting this demand schedule to the auction administrator, the auction would be dynamic. Under the AC auction, the auctioneer announces a price, and bidders respond by indicating the quantity of allowances they wish to buy at the announced price. The process would be as follows:

**Round 1**
The auctioneer announces a price of £5 per allowance, so Organisation X submits a bid for 900 allowances. The auctioneer aggregates bids from all the participants to see if the number of allowances bid for equals the quantity available. If demand for allowances at this price exceeds supply, the price is increased and bidders are invited to bid again. The auctioneer also reveals the total quantity of allowances bid for in the round, so that participants can modify their bidding strategy if they so wish.

**Round 2**
The auctioneer announces a raised price of £6 per allowance so Organisation X bids for 850 allowances. The aggregate bid again exceeds supply so a third round is opened. However demand is only marginally higher than the supply, so the auctioneer only increases the price by 50 pence to £6.50 per allowance.

**Round 3**
If Organisation X sticks to its demand curve it might bid for 800 allowances, the amount at which abatement is cost effective at £7 per allowance. However, this bid schedule may mean that Organisation X buys fewer allowances than it needs, because abatement of 200 tonnes of CO\textsubscript{2} is not precisely cost-effective at £6.50 per allowance. Therefore Organisation X could choose to adapt its bid schedule and bid for 825 - thus achieving a more efficient outcome.

Although it is likely many participants will submit bids that correspond with their pre-established demand schedules, the AC auction allows participants to actively adjust the number of allowances they bid for between prices based on information provided during the live auction process.

Government has no preference over the choice of auction system, and is keen to hear stakeholders' views on the choice of auction. Whichever auction

\textsuperscript{53} \url{http://www.nao.org.uk/publications/nao_reports/03-04/0304517.pdf}
Question:

25. Which auction mechanism would you prefer?
   - Option A - sealed bid auction
   - Option B - dynamic ascending clock auction

16.1.3. Timing of the auction, payment and distribution of allowances

One aspect of the auction to consider – and the fixed price sale during the proposed three year introductory phase – will be its timing relative to the ‘emissions year’\(^{54}\), and the dates that payment is due and allowances are distributed.

For simplicity Government proposes that the auction / sale should take place at the beginning of each emissions year - i.e. in January. This approach allows Government to create a gap of 6 months between the auction transaction and the revenue recycling transaction. This balances the concern that stakeholders have indicated over an 18 month gap with the analysis, highlighted in the Energy White Paper, which indicates that it is important to retain at least a 6 month gap between auction and revenue recycling in order to maintain the signalling effect of the auction. Analysis by ERM / MDI highlights that requiring participants to pay in full for their allowances is likely to drive a greater level of management attention than if Government simply ‘netted off’\(^{55}\) auction and recycling payments against each other. Any ‘netted off’ transaction could be very small indeed (see section 2.3.3 of the ERM / MDI report).

In the previous consultation stakeholders raised cash flow as a key factor in determining the timing of the auction. Stakeholders were concerned that paying for allowances at the auction would tie up resources that could be used to fund energy efficiency measures. One possible way to address this is for Government to defer the due date for allowance payments.

Government proposes two payment options for stakeholders to consider. For the sake of simplicity whichever option is finally implemented will be applied to all participants; there will be no possibility of participants choosing a different option once the scheme had started. In either case Government will not distribute allowances until participants have paid for them, to avoid the risk of non-payment.

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\(^{54}\) The period in which energy use and emissions are monitored, and for which allowances must be surrendered.

\(^{55}\) i.e. deducting the auction payment from the recycling payment due so that Government only pays the balance where the revenue recycling payment is greater, or that a participant only pays the balance where the auction payment is greater.
**Option 1:** Payment at Auction – A payment date would be set each year shortly after the January allowance auction, allowances would be distributed soon after the payment date.\(^{56}\)

**Option 2:** Deferred Payment – Government would defer the due date for payment until twelve months after the auction (i.e. until the following January) and would distribute allowances soon after this date.

As stakeholders mentioned during the previous consultation, Option 1 will impact some participants’ cash flow, potentially affecting the resources they have to implement energy efficiency measures during the first year of the scheme. Option 2 clearly benefits participants in terms of cash flow, by reducing the time between allowance payment and revenue recycling from 18 months down to six months. However, the delayed distribution of allowances means participants may only spot trade\(^{57}\) allowances in the three months immediately before reconciliation (January – March). To some extent, the liquidity of the market would be reduced, with broader ‘in year’ trading in the early years of the scheme largely confined to the forward market – a situation that may favour more sophisticated participants. An additional advantage of Option 1, the option of an 18 month gap between auction and revenue recycling, is that it gives recognition to those organisations who have taken early action on energy efficiency – since they will need to pay out less for allowances in the auction, compared to an organisation which has not taken early action, the impact on cash flow of a longer period between payment and recycling may be reduced.

Each of the options has its advantages and disadvantages – although, as noted previously, the major disadvantage of option 1 only applies to the first year of the scheme. Government is interested in how this trade-off is viewed by stakeholders. It should also be noted if the final policy choice is that payment for allowances will be deferred, all participants will be required to honour their agreement to purchase the allowances they bid for in the auction, irrespective of how many allowances they have procured on the secondary market or through the safety valve. A penalty will apply if payment is not made as agreed (see paragraph 33.3.1). In addition, the Scheme Administrator would only issue allowances once payment is received.

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\(^{56}\) Choosing that this option would mean that in the first year of the scheme, participants would make two payments before they receive any recycled revenue. While this has implications for cash flow, it is important to note that this would not be the case in subsequent years of the scheme, as auction costs would be incurred in the same year as the previous year’s revenue recycling payment was received.

\(^{57}\) Spot trading is selling allowances to a third party for immediate payment and with immediate delivery – participants yet to receive their allowances could still trade on the forward market i.e. make arrangements to trade allowances but agree a delivery date in the future.
Questions:

26. Do you agree with the auction should take place each January, at the beginning of the emissions year?
   Yes / No / Not Sure / Comments

27. Which payment option do you prefer?
   Payment at time of auction or Payment deferred by 12 months?

16.1.4. Auction restrictions
Government is mindful of the need to make the auction as liquid and competitive as possible whilst ensuring that CRC participants are given equal opportunity to buy allowances. Consequently, Government proposes placing two restrictions on the CRC auction:

- limiting participation in the auction to scheme participants or their agents; and
- placing a maximum limit on the percentage of allowances that can be bought in the auction by any one party.

Limiting the auction to only CRC participants holding a CRC registry account will ensure that organisations with a mandatory obligation to comply with the scheme are given the first opportunity to secure allowances for their compliance needs. The auction would be open to agents acting on behalf of one, or a number of different participants. This allows organisations, if they chose to, to benefit from the experience of intermediaries in developing bidding strategies and taking part in auctions.

Government proposes to place a maximum limit on the percentage of allowances available to any one bidder (for example 10% of all allowances issued to the market) in order to prevent abuse of market power by some organisations. Government proposes to set the limit once it has a more detailed understanding of the number and size of the participants to be covered by the scheme.

These limits will only apply to the auction. Any organisation will be able to open a registry account and hold and trade allowances on the secondary market. Government does not propose to introduce absolute limits on the number of allowances that any one organisation can hold.
Questions:

28. Do you agree that Government should limit the auction to only scheme participants and their agents?
   Yes / No / Not Sure / Comments

29. Do agree that there should be a limit placed on the percentage of allowances available to any one participant to buy in the auction?
   Yes / No / Not Sure / Comments

17. The secondary market for allowances

Once allowances have been purchased in the initial sale / auction, participants will be able to trade on the secondary market, should they wish to buy or sell surplus allowances. This is an important feature of emissions trading and allows organisations flexibility should they find (in context of the carbon savings that they are able to make) that they have under / over-bought at the sale / auction.

In cap and trade schemes, active use of the secondary market helps to ensure that abatement is achieved cost effectively. If an organisation can reduce its emissions by a tonne of carbon dioxide at a lower cost than the market price of an allowance, then it is likely that it will sell its surplus allowance(s) to organisations facing a higher cost of abatement. Consequently emissions reductions will tend to take place cost-effectively across the scheme participants as a whole.

With a large number of participants, and a light touch scheme, it is expected that the CRC secondary market could develop relatively quickly. However, the liquidity can be further improved if it is opened-up to specialist brokers and traders who are able to facilitate trading between participants. Accordingly, Government has decided that non-CRC participant organisations / individuals will be allowed to trade in the secondary market.

18. Banking and borrowing of allowances

At the end of the reconciliation period organisations holding more allowances than they need for compliance may wish to bank them for use or sale in future years and phases of the scheme. Banking helps to smooth abatement costs between phases, since organisations are able to realise the value of early abatement at a later date. Importantly, this means banking adds an incentive for organisations to undertake early abatement action. These advantages of banking were noted in responses to the previous consultation, so Government proposes to allow unrestricted banking of allowances between scheme years.
or phases. One exception is that banking will not be allowed between the fixed price phase and the subsequent, capped phase of the scheme.

Organisations will not be allowed to ‘borrow’ allowances from future years by using allowances bought from the auction at the start of the following emissions year. For example, during year 1 Company X emitted 100 tCO$_2$, but only holds 80 allowances. Company X will have to buy an extra 20 allowances on the secondary market or through the safety valve to cover its deficit. Company X will not be permitted to use year 2 allowances even though the year 2 auction will take place before it has to surrender allowances for year 1 compliance.

Government has taken this decision because the CRC is intended to encourage organisations to decide how many allowances to buy in context of their organisation’s emissions reduction / climate change targets – rather than to encourage organisations to simply buy the necessary allowances to cover their previous year’s emissions. In addition, not allowing borrowing will help manage demand at auctions (i.e. it will help prevent excess emissions from the previous year driving up the auction price) – and will also reduce the factors organisations need to consider when developing bidding strategies.

19. The safety valve

The CRC will include a market ‘safety-valve’ to prevent allowance prices (both in the auction and in the secondary market) rising undesirably high, and placing too great a financial burden on participants. This proposal has received considerable support from stakeholders in the previous consultation.

Government has decided that the safety valve will take the form of a ‘buy-only’ link to the EU ETS modified by a minimum floor price. The safety valve price, at any given point, would either be the prevailing EU ETS price, or a pre-defined floor price, whichever were the higher. Designing the safety valve like this maintains the environmental integrity of the scheme (by linking to an established cap and trade scheme); and signals Government’s aim that emissions reductions should take place primarily within the target sector. In the event of a crash in the price of EU ETS allowances, the minimum floor price would prevent cheap EU ETS allowances from flooding the CRC market.

The Scheme Administrator will administer this safety valve. As recommended by NERA / Enviros Analysis$^{58}$, the Scheme Administrator would act as an intermediary with the EU ETS market, to enforce the floor price, to avoid having to monitor EU ETS price fluctuations, and to avoid the Registry having to be connected to the Community Independent Transaction Log (CITL). Participants wishing to buy safety valve allowances would have to conduct the

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transaction through the Scheme Administrator. When requested to do so by a participant, the administrator would purchase the required number of EU ETS allowances at the prevailing price. The administrator would then invoice the participant for the cost of the allowances – at the higher of the prevailing EU ETS price or the minimum floor price, plus a fee to cover its transaction costs (this would include exchange costs in converting from euros to pounds sterling). Once payment had been received, the administrator would cancel the EU ETS allowances. The administrator would then ‘create’ new CRC allowances, and credit the participant’s CRC registry account. The participant would then be free to trade and surrender these allowances as normal.

It should be noted that if the prevailing EU ETS price was below the minimum CRC floor price, a limited amount of revenue would be generated from organisations accessing the safety valve. This revenue would be paid into the scheme’s recycling pot.

**Figure 6 – the safety valve process**

**Question:**

30. Does the proposed mechanism for operating the safety valve seem reasonable?  
Yes / No / Not Sure / Comments

- If not what changes would you suggest?
20. Revenue recycling

Government committed, in the Energy White Paper to making the CRC broadly revenue neutral to Government (i.e. it is not designed to be a revenue raising instrument). Government therefore proposed to recycle revenue raised by the sale or auction of CRC allowances back to participants. Responses to the previous consultation strongly supported making the scheme revenue neutral to the Exchequer. Government can confirm that the CRC will recycle auction income.

Recycling revenue to participants means that costs should be (on average) reduced to just the administrative costs of complying with the scheme and the costs of implementing emissions abatement measures. Analysis has shown that, by designing the scheme to limit these costs, the scheme will have an estimated positive net present value of £755m to participants.

The revenue raised by Government via the fixed price sales or auctions will be recycled back to scheme participants. The payment will be made in July, around six months after the end of the emissions year to allow for reporting of emissions and reconciliation, and to retain a sufficient gap between the auction and revenue recycling to maintain the signalling effect of the auction.

Payments will be made via a simple BACS transfer and will be proportional to participants' average annual emissions since the start of the scheme, with a percentage bonus or penalty based on their position within the performance league table (see below). The final amount will be ‘proportional’ to annual average emissions since the start of the scheme because the payments across all participants will need to be multiplied by a ‘proportionality constant’. This is required in order to ensure that total revenue recycling payments are equal to the recycling ‘pot’ available.

Box 8 - Revenue recycling base payment calculation (ignoring bonus / penalty from the performance league table)

Organisation X has annual emissions over the first three years of the CRC Scheme of 1,000 tCO₂, 900 tCO₂ and 800 tCO₂. In year 3 of the Scheme Organisation X’s average annual emissions since the start of the scheme would be:

\[
\frac{(1,000 + 900 + 800)}{3} = 900 \text{ tCO}_2
\]

Therefore, in year 3 Organisation X’s share of the total revenue raised over the course of emissions year 3 (before the bonus or penalty based on its position in the performance league table) would be proportional to 900 tCO₂
If the total annual average emissions from all participants since the start of the scheme equalled 9,000 tCO$_2$, Organisation X would, in year 3, receive a 10% share of the money recycled:

\[
\frac{900 \times 100}{9,000} = 10\%
\]

In year 3, if 10,000 allowances are sold at auction, organisation X contributes 8% to the total recycling pot (in buying 800 allowances at auction). In this particular case, organisation will receive more money than it paid in the auction – i.e. it will receive 10% of the total pot. Thus it can be seen that under this recycling formula those organisations that reduce their emissions most quickly will benefit relative to those that reduce their emissions more slowly (or increase their emissions).

Analysis undertaken by ERM / MDI suggests that recycling revenues to CRC participants based on this approach, is consistent with the aim of incentivising emissions reductions within the sector.

21. The performance league table

At the end of the annual reconciliation and reporting period following the end of each emissions year, Government will publish a performance league table that ranks participants based on their respective ‘performance’ within the scheme. In the last consultation document, Government proposed to award a bonus or penalty of between +10% and -10% of an organisation’s recycling payment based on its position within the league table.

Analysis by ERM / MDI and by NERA / Enviros has highlighted a risk that a +/- 10% bonus / penalty will be insufficiently strong to drive the necessary uptake of energy efficiency opportunities within the target sector. If the incentives are too weak, CRC organisations may simply purchase EU ETS / international carbon market allowances through the safety valve rather than drive energy efficiency within their organisations.

Government estimates that the maximum net financial incentives from the auction and revenue recycling with a bonus /penalty set at +/-10%, would be equivalent to around a +/-2% impact on the energy bill, depending on an organisation’s position in the league table (i.e. Government estimates that an organisation at the bottom of the league table could see a 2% increase in its energy bill). This is in a context where the total energy bill for large non-energy intensive organisations is typically 1-3% of total operating costs.\textsuperscript{59}

\textsuperscript{59} As previously noted, the estimate of around a +/-2% on the energy bill assumes an auction price of £8 / tCO$_2$ (around the current level of the CCL), that the CCL accounts for around 10% of the energy bill.
Government, therefore, invites views on whether this level of bonus / penalty is appropriate for the scheme. In addition, Government is interested in stakeholder views as to whether the level of bonus or penalty should increase over time, and if so whether they should increase steadily (e.g. 5% increments per year: +/-10%, +/-15%, +/-20% and so on) or whether possible adjustments to the bonus / penalty should be left to the normal Government decision making processes - with CRC organisations by definition then having less advance warning (e.g. such a decision could be announced alongside a decision on the level of a phase cap).

Questions:

31. Do you think that a bonus or penalty of +/- 10% as described above is appropriate?
   Yes / No / Not Sure / Comments

   • If not, do you think the bonus or penalty should be higher or lower (please state a percentage)?

32. Should the rate of bonus or penalty increase steadily and gradually over time?
   Yes / No / Not Sure / Comments

   • If yes, please state by how much and how regularly you think these increments should be applied (e.g. 5% increments per year: +/-10% for year 1, +/-15% for year 2, +/-20% for year 3 and so on)?

21.1 Design of the performance league table

21.1.1. Role of the league table
The performance league table is an important element of the CRC scheme and is designed to leverage organisations’ reputational drivers, as well as impact on the revenue recycling. The league table will not distinguish between sectors by using sector-level benchmarks. Rather, it is designed to provide an easy to understand guide to the performance of CRC participants. In this light, Government recognises the need to ensure the calculation of the performance league table remains simple to administer for both participants and the scheme regulator and that it supports the underlying environmental objectives of the scheme. Accordingly, any measure of performance (metric) that could contribute to a participant’s performance and position in the league table must allow the overall performance league table to meet five design principles:

   • Reinforce the scheme objective – the overall league table must be in line with the scheme’s overriding absolute carbon abatement objective.
   • Scheme wide – the CRC will cover a wide range of different activity sectors from manufacturing to local authorities. As such the metrics must be applicable to all participants.
• **Administrative simplicity** – the information needed by the metrics must be simple for participants to collect and calculate.
• **Auditable** – the metrics must be easy to audit by the scheme regulator to ensure the scheme remains fair to all participants.
• **Transparency** – the metrics must be clear and understandable to both participants and those interested in the published results.

Although using sector specific energy efficiency benchmarks was suggested by some responses to the previous consultation, it is clear that doing so would not satisfy these principles. Sector specific metrics would neither be scheme-wide, nor administratively simple to construct, given the diversity of organisations and sectors within the scope of the CRC. This is a view supported by the analysis carried out by ERM / MDI. Furthermore, a number of sectors have indicated that the variation in activities both across their sector and within their own organisations make it almost impossible to construct a meaningful sector specific benchmark for use in the performance league table.

### 21.1.2. Construction of the league table

Government proposes to rank participants according to at least one metric based on absolute emissions. Additional metrics could be included to increase ‘fairness’ within the league table, to recognise different factors affecting participants performance, such as business growth, and action taken before the start of the scheme. However, an important point to note is that each additional metric will necessarily reduce the simplicity of the scheme (including the ability of participants to accurately forecast their likely recycling payment). At the same time, Government recognises that stakeholders have expressed concern about early action and growth. In this context, Government proposes to include up to three metrics in the calculation of participants’ performance league table position:

• **The core absolute carbon reduction metric** – percentage carbon reduction (relative to annual average emissions since the start of the scheme);
• **A possible early action metric** – for example, extent of roll out of automatic metering above and beyond the legal minimum (as a proxy to recognise those more pro-active organisations who have taken early action before the start of the scheme);
• **A possible relative carbon efficiency metric (‘growth metric’)** – for example, percentage reduction in carbon emissions per unit turnover since the start of the scheme (suggested for discussion in light of concern over organisational growth). Note that would not simply rank organisations in terms of energy intensity since the focus is on improvement over time.

The league table will include the absolute emissions reduction metric as a minimum and Government seeks views on whether the additional early action and growth metrics should be included. Paragraph 21.2 provides a description of how the performance league table would be calculated in practice.
21.1.3. Absolute metric

As outlined in the previous consultation, Government proposes, as a minimum, that the performance league table should be based on the metric of:

- The percentage of absolute emissions reductions relative to the organisation’s average annual emissions since the start of the scheme.

The absolute emissions reductions metric is the base metric on which the league table will be formulated and reinforces the message that absolute emissions reductions are the primary focus of the scheme.

**Box 9 - League Table Metric 1: Annual emissions relative to average annual emissions since the start of the scheme**

In the example used above, Organisation X has **average annual emissions** of 900 tCO₂ in year 3 of the scheme. Its annual emissions in year 3 are 800 tCO₂. Therefore its score for the performance league table metric 1 would be:

\[
\frac{(900 - 800) \times 100}{900} = 11\%
\]

<table>
<thead>
<tr>
<th>Organisation X</th>
<th>Yr1</th>
<th>Yr2</th>
<th>Yr3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual emissions (tCO₂)</td>
<td>1000</td>
<td>900</td>
<td>800</td>
</tr>
<tr>
<td>Average annual emissions (tCO₂)</td>
<td>1000</td>
<td>950</td>
<td>900</td>
</tr>
<tr>
<td>Change in annual emissions relative to average</td>
<td>0</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td><strong>League Table Metric = % reduction in annual emissions relative to average annual emissions</strong></td>
<td>N/A</td>
<td>5%</td>
<td>11%</td>
</tr>
</tbody>
</table>

In line with the polluter pays principle, organisations with reducing emissions will score more highly against this metric, whilst those with increasing emissions will score poorly.
21.1.4. Early action metric

Government recognises stakeholder concern around giving credit to those more pro-active organisations, who have been undertaking good energy management practices for some time.

The previous consultation document suggested an early action metric based on:

- The extent that organisations had installed automatic metering above and beyond the legal minimum, including in respect of any automatic metering installed before the start of the scheme.

This proxy metric would be a simple way to recognise, via the league table, those more pro-active organisations who already have good energy management practices. Those organisations who have chosen voluntarily to roll out advanced metering are generally the more pro-active organisations seeking to improve their energy management. There is evidence from both stakeholder feedback and Carbon Trust analysis into the roll out of advanced metering, indicating that organisations have seen significant energy efficiency benefits from such roll out\(^60\).

Government seeks views on whether to include an early action metric in the league table, such as the proposed automatic metering metric. Government also invites views on the weighting that this metric should be given, if it is included.

\(^{60}\) [http://www.carbontrust.co.uk/technology/technologyaccelerator/advanced_metering.htm](http://www.carbontrust.co.uk/technology/technologyaccelerator/advanced_metering.htm)
Box 10 - Proposed early action league table Metric: Extent of voluntary installation of automatic metering (AMR)

The AMR metric would be calculated on the basis of the extent that an organisation had installed non-mandatory automatic metering (i.e. including before the start of the scheme).

**Figure 7: Calculating the proportion of Automatic Meter coverage for the Performance League Table**

As per the diagram above prior to the start of the scheme Organisation X had already installed automatic metering that covered 79% of its emissions generated through non-mandatory half hourly meters (i.e. of its total energy use, 30% is covered by mandatory half hour meters, 55% by voluntary AMR, and 15% by non AMR). As such, it would score 79% in the early action metric in the first year of the scheme as shown in the second chart above. During the first three years of the scheme the organisation continues to install, voluntarily, automated meters, which raises the proportion of its non mandatory half hourly metered emissions covered by AMR to 90%. The score that would be used in league table in the third year would be 90%, as in the table below:
Government recognises stakeholder concerns that the AMR metric would only be a proxy, rather than a precise measurement of overall action taken before the start of the scheme. At the same time, Government is also keen to honour the stakeholder emphasis on simplicity – and hence (as highlighted during the last consultation) will not be undertaking historical baselining, not least given the overall poor quality of data across the target sector.

21.1.5. Additional Information

Some stakeholders asked whether the league table could further recognise early action by way of some simple yes / no ‘tick box’ questions – even if this were only to add context to the league table rather than to impact on the revenue recycling. Analysis conducted during the Energy Review by Deloitte as well as the more recent ERM / MDI analysis both suggested that incorporating a few simple ‘tick box’ disclosure questions is an option worth exploring, not least as it links with the Corporate Social Responsibility (CSR) drivers that the scheme is seeking to leverage.

To minimise administrative burden (and to ensure that the questions are easily auditable as part of the self-certification backed up by risk-based audit regime), such questions would be limited in number (perhaps only three) and would be based simply on disclosure – i.e. whether an organisation had reported on an issue in its corporate annual report (or annual environment / sustainability / CSR report). Three possible questions, that would be additional to the AMR metric, could be:

- Does your organisation disclose carbon emissions targets in its annual reporting? Yes / No
- Does your organisation disclose performance against carbon emissions targets in its annual reporting? Yes / No
- Does your organisation name a Director with responsibility for overseeing carbon performance in its annual reporting? Yes / No

Organisations would have the opportunity to tick, as appropriate, each of the three boxes in their annual CRC self-certification. The proposed independent risk-based audit of around 20% of organisations per year could readily check whether organisations had self-certified accurately.

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61 i.e. collating historic emissions to calculate the extent of savings organisations made before the start of the scheme.
Bearing in mind the additional complexity that it would involve, and that Government is also inviting views on a possible third metric based on growth discussed below, we would be interested in views as to whether incorporating such questions into the league table would be a helpful way of recognising early action and leveraging CSR drivers to improve energy management. Government would also be interested in hearing whether these are the right three questions to be asking.

Finally Government would be interested in whether there would be value in awarding points for each ‘yes’ answer to enable the answers to be used for revenue recycling, or whether these questions are best kept separate from the revenue recycling formula, particularly if it is felt that most CRC organisations would already be able to tick all three boxes.

Questions:

33. Should the league table include a metric to recognise those organisations who have been undertaking good energy management practices for some time?
   Yes / No / Not Sure / Comments

   - If so, do you agree with the proposed AMR metric as a proxy for early action?
     Yes / No / Not Sure / Comments

   - If not, please state a better alternative metric that meets the stated league table design criteria.

34. Would the benefits of the league table including a few simple yes / no disclosure based questions outweigh the additional complexity involved?
   Yes / No / Not Sure / Comments

   - If so, are the questions outlined above appropriate?
     Yes / No / Not Sure / Comments

   - And, should positive answers be awarded points to enable incorporation into revenue recycling calculations?
     Yes / No / Not Sure / Comments

21.1.6. Growth metric

Recognising the concerns raised during the previous consultation and analysis undertaken by ERM / MDI, Government has concluded that there may be some benefit in including a further metric in the league table to account for organisational growth / decline. As with the AMR metric, any measure of growth would be additional to the primary absolute metric irrespective of any decision taken in respect of the early action metric. The
rationale for discussing the growth metric is as a means of giving some credit to those organisations that can grow efficiently within an absolute capped scheme. For example, an organisation’s emissions may have gone up by 5% over 5 years but its turnover may have increased by 50% over the same 5 years, and incorporating a relative metric would highlight this growth context.

Initial analysis and stakeholder engagement has suggested turnover as a possible measure that could be used to meet these criteria, with revenue expenditure to be used as its equivalent for public sector CRC organisations. Government has considered alternatives of tracking improvement in energy use / m² or improvement in energy use / employee – but does not propose adopt them in light of stakeholder concern over administrative burden and lack of applicability of such metrics across the overall target sector, given the diversity of CRC organisations.

By contrast, turnover and revenue expenditure would have the following important advantages:

- They are reported by all organisations, and so would provide broadly acceptable, common measure – thereby maintaining scheme simplicity;
- They are already closely audited as part of the accounting process; and
- As externally published figures, reporting and verifying them would not place any significant additional administrative burden on participants or Scheme Administrators / Government.

It is therefore proposed that the league table could include this additional metric that measures the change in emissions per unit turnover / revenue expenditure relative to the annual average since the start of the scheme. Formulated in this way, the metric would not disadvantage relatively energy intensive organisations within the CRC, as it would not be measuring absolute levels of energy intensity, but would, instead give credit for improvement in energy efficiency.

Government is consulting on whether to include the Growth metric in the calculation of the performance league table and, if included, the weighting that it should be given.

Box 11 - League Table Metric 3: Growth metric

The proposed growth metric would measure the organisation’s emissions per unit turnover relative to its average annual emissions per unit turnover.

In the boxed examples below, Organisation X’s annual carbon emissions have declined by 11% relative to the average emissions by year 3 of the scheme. During the same period Organisation X underwent a period of growth during which its turnover grew from £10,000 / year in year 1 to £12,000 / year in year 3. Consequently it had a corresponding reduction in its emissions per unit turnover relative to its ongoing average emissions per average turnover and would score well in the league table.
<table>
<thead>
<tr>
<th>Organisation X</th>
<th>Yr1</th>
<th>Yr2</th>
<th>Yr3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual emissions (tCO2)</td>
<td>1000</td>
<td>900</td>
<td>800</td>
</tr>
<tr>
<td>Average annual emissions (tCO2)</td>
<td>1000</td>
<td>950</td>
<td>900</td>
</tr>
<tr>
<td>Turnover (£)</td>
<td>£10,000</td>
<td>£11,000</td>
<td>£12,000</td>
</tr>
<tr>
<td>Average annual turnover (£)</td>
<td>£10,000</td>
<td>£10,500</td>
<td>£11,000</td>
</tr>
<tr>
<td>Annual emissions per unit turnover (CO2 / £)</td>
<td>0.10</td>
<td>0.08</td>
<td>0.07</td>
</tr>
<tr>
<td>Average emissions per unit turnover (CO2 / £)</td>
<td>0.10</td>
<td>0.09</td>
<td>0.08</td>
</tr>
<tr>
<td>Reduction in emissions per unit turnover relative to average</td>
<td>0.00</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>League table metric = % reduction in emissions per unit turnover relative to average emissions per unit turnover</td>
<td>0%</td>
<td>10%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Experience from CCAs indicates that declining organisations would find it more difficult to perform in a relative metric than growing organisations, since such organisations may have less resources available to invest in energy efficiency and, since there will be certain emissions that will be emitted even with low levels of output (just as there are economies of scale).

Questions:

35. Do you think that the CRC league table should include a relative metric to take account of organisational growth / decline?
   Yes / No / Not Sure / Comments

- If yes, do you agree with the proposed growth metric described above?
- If not, please state a better alternative that meets the stated league table design criteria

21.1.7. Accounting period of the growth metric

Government proposes that participants should submit an audited and published turnover / revenue expenditure figure for the most recent financial year that corresponds most closely with the emissions reporting year. For organisations that do not report financial information on a calendar year basis (e.g. those that report April to March) this may result in a relatively small
overlap of time between the two sets of data - since information would have to be recorded as part of the reconciliation process by the 31 March.

Furthermore, for organisations that report on a calendar year, but do not publish data within three months, there may be no overlap at all. Nevertheless, this lack of overlap between the emissions year and an organisation’s financial year is not considered to be a significant issue, since the impacts of changes in organisational size on emissions may not in many cases precisely correlate within years. This metric would primarily be seeking to provide recognition for overall trends in an organisation’s growth / decline.

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**Box 12 - Reporting Financial Data against the ‘Growth’ metric**

For the Growth metric Government proposes that organisations should report their most recent audited turnover / revenue expenditure data, as published in their accounts or annual report, by the CRC reporting deadline for each emissions year.

Since different companies report against different financial years and take different amounts of time to publish audited data after a financial year, the particular period on which organisations report for CRC will vary.

The examples show the years for 2010 to 2013 for two different organisations which each operate on different financial cycles. The solid line shows the financial year each would report in respect of the 2012 emissions year - assuming each organisation publishes audited accounts within 3 months of the end of its financial year.

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Organisation A has a financial year of Apr to Mar. At the reporting deadline for emissions year 2012, Org A would submit data for the period Apr 2011 to Mar 2012. This has a 3 month overlap with the emissions year.

Organisation B reports finances on a calendar year basis, and publishes its accounts within 3 months. Organisation B would therefore submit data for the same period as the emissions year.

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If, for example, the CRC year ran on a calendar year basis, many organisations’ turnover/revenue expenditure data would overlap exactly with their emissions data. However, organisations whose financial years ran from April to March would have to submit the previous year’s financial data (which would only overlap by three months with the relevant emissions year), since their current year figure (which would overlap by nine months) would not be available in time.

Initial research suggests that large, publicly listed companies do tend to audit report their financial data within three months of the year end, even though the legal requirement is to report to Companies House within seven months. The requirement for private companies is 10 months.
Government recognises that allowing organisations to submit financial data some time after emissions data has been submitted could mitigate this problem, to some extent. However, including two separate reporting deadlines would increase the administrative complexity of the scheme, and set against the aim of recognising trends in growth / decline, it is considered that the loss of overlap is preferable compared to the loss of simplicity. Overall, the important point remains that using this reporting timeframe would ensure that the data would be simple for organisations to submit, accurate, and easy to verify.

Question:

36. Do you agree that if turnover / revenue expenditure is used to formulate the growth metric, that organisations should report the published figure for the financial year that most closely corresponds with the ‘emissions year’?
   Yes / No / Not Sure / Comments

21.2 Synthesis: Formulating the CRC performance league table

Once CRC participants have submitted their emissions data, and have surrendered allowances to cover their emissions (see paragraph 14 – the Scheme year), the data will be used to construct and publish the performance league table. This league table is an essential part of the CRC. Importantly, the advance knowledge that there will be a league table published each year that will impact on revenue recycling will help to harness reputational drivers, and incentivise abatement. Once published, it will indicate participants’ performance within the scheme, and as outlined above, this will then be used to award a percentage bonus or penalty to the level of recycled revenue they receive. If Government decides to take forward more than one metric (e.g. a combination of the “absolute metric”, “early action metric”, and “growth metric”), then the performance for each of the separate metrics would also be published alongside the overall consolidated league table.

The recycling payment would be proportional to the average annual emissions since the start of the scheme, with up to a + / - 10% bonus / penalty, depending on league table position. However, ERM / MDI have recommended that rather than dividing the league table into five bands to decide the level of percentage bonus or penalty (as suggested in the previous consultation document), that instead banding should be continuous. This would effectively create as many bands as there are participants and would thus avoid unintended discontinuities – i.e. a situation where the last participant in the top quintile would receive a significantly different rate of recycling payment compared to the first participant in the second quintile. Unlike discrete banding, continuous banding would also ensure that each additional place that participants rose in the league table would bring with it additional rewards (see section 3.4.3 of the ERM / MDI report).
In order to formulate the overall league table, the first step will be to create a league table that relates to each metric. In each of these, participants will be ranked from 1 to 5,000 (assuming for example that there are 5,000 participants), with each being assigned points (5,000 points for first position, one point for 5,000th position). Participants would then receive their final ranking according to the weighted average of these scores.

21.2.1. Weighting the metrics
If early action and growth metrics are included in the league table, a key question is how they should be weighted relative to the primary absolute emissions reductions metric. In light of initial stakeholder feedback, and to retain the primary emphasis on the scheme driving absolute carbon savings in context of Government’s absolute 2050 goal, Government proposes to weight the metrics 60% : 20% : 20% (absolute: early action: growth). Government invites views as to whether this proposed weighting is appropriate or whether some alternative weighting is preferable.
Questions:

37. If early action and growth metrics are included in the league table, do you agree with the proposed weighting of 60% : 20% : 20% (absolute: early action: growth)?
   Yes / No / Not Sure / Comments

   • If not, please suggest an alternative weighting that you prefer?

21.2.2. Constructing the final league table

Considering a scenario with a weighting of 60:20:20 (absolute metric: early action metric : growth metric) and 5,000 participants in the scheme in which Participant A’s position in each of the individual tables was 1st, 300th and 1,000th respectively, then its final score would be:

\[(0.6 \times 5,000) + (0.2 \times 4,700) + (0.2 \times 4,000) = 4,675\] points.

First position in the overall league table would go to the organisation with the most ‘points’ as calculated above.

Figure 8: Basic formulation of the CRC performance league table

<table>
<thead>
<tr>
<th>Overall Rank</th>
<th>Organisation</th>
<th>Absolute</th>
<th>Early action</th>
<th>Growth</th>
<th>Weighted average score 60:20:20</th>
<th>Improvement in league table position from previous year</th>
<th>Bonus / penalty (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>% Reduction</td>
<td>Score</td>
<td>Absolute extent</td>
<td>% Reduction</td>
<td>Score</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Organisation A</td>
<td>10%</td>
<td>5000</td>
<td>80%</td>
<td>4500</td>
<td>15%</td>
<td>4900</td>
</tr>
<tr>
<td>2</td>
<td>Organisation B</td>
<td>9%</td>
<td>4950</td>
<td>75%</td>
<td>4400</td>
<td>10%</td>
<td>3000</td>
</tr>
<tr>
<td>3</td>
<td>Organisation C</td>
<td>9%</td>
<td>4955</td>
<td>60%</td>
<td>3200</td>
<td>5%</td>
<td>2500</td>
</tr>
<tr>
<td></td>
<td>Organisation ABC</td>
<td>0%</td>
<td>2500</td>
<td>22%</td>
<td>1200</td>
<td>5%</td>
<td>2450</td>
</tr>
<tr>
<td></td>
<td>Organisation XYZ</td>
<td>-10%</td>
<td>1</td>
<td>15%</td>
<td>500</td>
<td>-15%</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes:
1. Final ranking / bonus / penalty factor would depend on the relative weighting of the three performance metrics.
2. An additional column containing one, two or three ticks could be added if Government decided to proceed with 3 basic questions on annual carbon reporting. There is also the question as to whether points should be awarded for each tick.
3. The bonus/ penalty would be assigned to each participant prior to the calculation of the ‘proportionality constant’ that would be necessary to ensure that the total sum of recycling payments was equal to the total pot of revenue available.
4. It is likely that the component league tables would be published in an annex to the overall table.
22. Maintaining a functioning market

22.1 Adjusting market parameters between phases

Whilst the CRC cap guarantees the environmental outcome, analysis by ERM / MDI has emphasised the importance within the CRC design of Government being able to adjust key parameters on a phase by phase basis (for example, the level of the bonus / penalty, the level of the safety valve floor price) as necessary to keep the scheme on track and to ensure the target sector is making an equitable contribution to overall UK carbon savings.

For example, Government recognises that it would be necessary to adjust the scheme phase parameters in the event that emissions reductions were not being made sufficiently within the sector (i.e. there was excessive use of the safety valve); if CRC allowances prices completely collapsed (as occurred during the voluntary UK ETS and Phase I of the EU ETS); or if Government considered that the target sector was not making an equitable contribution to overall UK carbon savings (i.e. that the relative abatement effort was still largely focused on the energy intensive sector). Accordingly, Government could, on a phase-by-phase basis and taking into account any advice provided by the proposed Committee on Climate Change:

- Adjust the value of the percentage bonus or penalty payment linked to the performance league table (including the possible option of embedding a steady and gradual annual increment to the percentage);
- Adjust the safety valve floor price;
- Adjust the timing of the auction / sale, of the physical payment for auctioned allowances, and of the revenue recycling payment;
- Adjust the metrics used in the performance league table and the weighting between metrics;
- Strengthen the overall market cap. Importantly, the cap would not be weakened over time, for the reasons set out in section B; and
- Adjust the 6,000 MWh threshold.

22.2 Adjusting market parameters within phases

Analysis by ERM / MDI also recommended that Government should, under exceptional circumstances, be able to change parameters within a phase. The cap would only be strengthened within a phase (by reducing the number of allowances made available for the next annual auction) in extreme circumstances – such as a complete collapse of the CRC allowance price. In such a situation, Government may view that the target sector could be making a greater cost-effective contribution to overall UK carbon savings in relation to, for example, the energy intensive sector of the economy. Even in these circumstances, other scheme parameters (e.g. extent of bonus / penalty, extent of weighting given to the absolute carbon saving league table metric) should be adjusted first. More broadly, Government would only make adjustments to these key parameters within phases if absolutely necessary,
as an option of last resort, given that changing parameters would introduce uncertainty into the market.

Any changes to the parameters within a phase would be announced as far in advance as possible, and would not affect the emissions year at the time of the announcement. Government, therefore, seeks views as to whether it should retain this flexibility as an option of last resort. It is likely that, were this power retained, participants would want very clear guarantees and controls over the conditions under which it could be used, for example only with Parliamentary approval. These conditions would be clearly set out in consultation with stakeholders.

Government therefore seeks views as to whether it should retain this flexibility as an option of last resort. It is likely that, were this power retained, participants would want very clear guarantees and controls over the conditions under which it could be used, for example only with Parliamentary approval. These conditions would be clearly set out in consultation with stakeholders.

It is important to note that the ERM / MDI analysis recommended that whilst the cap may (under certain extreme circumstances) be tightened within phase, it should not be weakened - on the basis that the CRC features a safety valve, and it is preferable to make use of this rather than weaken the cap. The proposed safety valve - a moderated buy-only link to the EU ETS - means that allowances can be bought through this link if this is more cost-effective than securing 100% of the carbon abatement from within the sector. This positioning of the proposed safety valve - as the mechanism that ensures the CRC cap will not be weakened - also underlines the UK’s commitment to the international carbon markets, which need demand as well as supply to function effectively. There are further reasons why Government would not weaken the cap - namely, that this would undermine the certainty the market needs to invest in carbon saving technologies, and that signalling uncertainty would undermine the guarantee of environmental outcome which is fundamental to the CRC.

Question:

38. Do you agree that the Government should be able to adjust key parameters within phases if absolutely necessary as an option of last resort?
   Yes / No / Not Sure / Comments

- If yes, what limits should be placed on the use of this power (e.g. requirement to engage in public consultation as to whether circumstances are sufficient to justify use of the power, and with Parliamentary approval)?
23. Tying a proportion of recycling payments directly to energy efficiency activities

During the previous consultation a significant number of stakeholders suggested that some revenue from the auction should be used to create programmes specifically aimed at providing advice and support to organisations wishing to implement emissions abatement measures. Government invites views on two possible methods for this, which ties 10% of CRC auction revenue to energy efficiency. Government proposes earmarking part of the auction revenue for energy efficiency programmes rather than mandating that participants spend 10% of their recycling payments on energy efficiency to avoid the administrative burdens of the latter. This, for example, might include Government verifying that the recycling payments had resulted in additional expenditure on energy efficiency to that already planned by an organisation. The options are as follows:

- **Option A** - To top-slice 10% of the CRC auction revenue, and to use this money to increase funding to the Carbon Trust / Salix65. This additional funding would be ring-fenced for programmes targeting CRC organisations.

- **Option B** - For 10% of CRC organisations’ direct recycling payment to be paid in the form of tokens or ‘credits’. These credits could then be used by participants to buy energy efficiency services from the Carbon Trust and Salix. Government would pay Carbon Trust and Salix for any credits redeemed.

In both cases, the CRC revenue recycling would still follow the direct payment formula (proportional to annual average emissions since the start of the scheme, with a bonus / penalty depending on position in the CRC league table). In both cases, for accountability, the top-slicing would be reviewed on a phase by phase basis, in light of experience. Potentially, the top-slicing could be terminated after the introductory phase, or it could be extended to a greater percentage of the CRC auction revenue.

The distributional / equity impact is a consideration with either option. It will need to be confirmed that under EU State Aids rules, organisations will be able to use all the credits they get, if they have already had access to Carbon Trust support.

If the ‘credits’ option was implemented, Government does not consider that it would be possible to allow such ‘credits’ to be used directly with third party organisations (i.e. consultancies) offering energy efficiency advice and support. Such consultancies provided through Carbon Trust are sourced through an open accreditation scheme. A separate accreditation scheme would be required if organisations were to be allowed to employ consultancies

65 Salix is a publicly funded organisation that provides interest free matched funding to the public sector to invest in energy efficiency measures and technologies that will reduce carbon emissions. See [http://www.salixfinance.co.uk](http://www.salixfinance.co.uk)
directly using the credits. The advantages of using the Carbon Trust’s existing accreditation system would also include utilising their expertise in targeting the advice, quality control over the services provided and measurement of carbon savings achieved.

Recycling some of the revenue in this way would have the important benefit of ensuring that a minimum proportion of the revenue generated through the CRC will be invested in energy efficiency. This may significantly improve the ability of participants to achieve the desired investments in energy efficiency and carbon savings and thus reinforce the behaviour CRC is designed to stimulate. On the other hand, a possible disadvantage of recycling a proportion of auction revenue through bodies such as Salix and Carbon Trust is that it would not necessarily be clear to what extent energy efficiency measures stimulated through either option would in fact be additional to measures CRC organisations would have undertaken anyway if the full revenue recycling was paid direct to the participant. Government would need to consider competition and EU internal market impacts of any option and, as with direct CRC revenue recycling, it would be subject to EU state aid approval.

Recognising these pros and cons, Government is seeking views as to whether stakeholders would like a percentage of the revenue recycling payments to be ‘ring-fenced’ for energy efficiency in this way. Views are also sought on whether, if such a proposal were to be taken forward, 10% would be an appropriate proportion of revenues to allocate in this way.

Questions:

39. Should a percentage of CRC auction revenues be top-sliced and either given to Carbon Trust / Salix or handed out to participants as credits/ tokens?
   Yes / No/ Not sure/ Comments

   • If so, do you prefer Option A, paying 10% of auction revenue directly to Carbon Trust / Salix, or Option B paying 10% of each participant’s revenue recycling payment as ‘credits’?
     Option A / Option B / Not Sure / Comments

   • What percentage of CRC auction revenue should be top-sliced and either given to Carbon Trust / Salix or handed out to participants as credits/ tokens?
     5% / 10% / >10% / Comments
Section E - Monitoring, Reporting and Audit

24. Overview

Participants should monitor their fuel and energy use throughout the year and then report their emissions at the end of the year. The monitoring and reporting aspects of the scheme will be ‘light-touch’ and there will be no need for independent third party verification as in EU ETS. Participants should instead collate and retain an ‘evidence pack’ to demonstrate their reported energy use across the CRC organisation. A number of organisations will be selected for audit by the scheme Regulators – the Environment Agency for organisations with head offices in England or Wales, the Scottish Environment Protection Agency for those with head offices in Scotland and the Department of Environment Northern Ireland for those with head offices in Northern Ireland 66.

25. Monitoring Energy Use

Organisations that are already managing their energy use will already be collating information on usage. This helps participants to identify opportunities for improving energy efficiency and realise energy savings.

Government proposes that each participant would collate an evidence pack similar to that used in CCAs to support their reported emissions. Three basic areas of information should be included:

- Structural records to define the scope of the organisation, the types of energy used (identifying the extent of estimated energy use for each fuel type) and, if the AMR metric is included in the league table, the numbers of mandatory half hourly meters, discretionary half hourly meters and meter with profile classes 5 – 8.
- Data records to show the annual consumption of energy and convert this to CO$_2$. This would include records to support any exemption or the application of a de minimis threshold. If the growth metric is included in the league table, a record of the organisation’s annual turnover / revenue expenditure would also need to be retained.
- Special event records to accompany the audit trail of energy bills – i.e. to give acceptable explanations where the trail of energy bills begins and ends, organisations would log any change of energy supplier, any meter breakdown, and any sale / purchase of sites / subsidiaries.

Annex A sets out more detail for illustration.

For the reasons set out in the coverage section, some organisations will need to include certain specific information in their annual evidence pack:

66 Environment and Heritage Service (EHS) will carry out the regulator role. EHS is an Executive Agency of DOE NI.
- Organisations covered by CCAs or EU ETS – Such organisations will need to include a list of any CCA and EU ETS installations, with emissions covered by each installation
- Local Authorities – any Local Authority should include the list of schools within its CRC portfolio (i.e. where the Authority is paying for school energy use), and the emissions per school derived from the energy bills paid by the authority

Where organisations choose to transfer sites from CRC landlord to CRC tenant (which could only happen at the start of a phase, and only if both landlord and tenant agree), the emissions from such sites would need to be recorded in the evidence pack for the year before they transfer across (if the CRC landlord and CRC tenant wanted their baselines updated).

Question:

40. Do you agree with the Government’s proposal on what would be required within an ‘evidence pack’? If not, why not?
Yes / No / Don’t Know / Comments

26. Reporting Energy Use

Organisations would be required to report their annual emissions by 31st March of the following year. This gives organisations a three month reconciliation period in which to collate their data and evidence packs and buy any allowances if necessary.

Depending on the outcome of this consultation exercise on the make up of the league table, annual reporting could include:

- Organisation details (i.e. company names, contact details)
- Annual organisation wide CO₂ emissions data
- Annual organisation wide AMR metric information
- Annual organisation wide growth metric data

Organisations will also be invited to choose from a broad classification of organisation type. This organisation type could then be flagged next to each organisation name within the overall league table. Potentially, this approach could also allow for the compilation of sector league tables, although this would only be for presentational purposes (i.e. to maintain scheme simplicity, all revenue recycling would be based on the overall league table).

Government proposes that reporting will be web-based, through an online Registry. (Further details of this are below Section D.30.) Participants would be required to enter details of their fuel use and the Registry would then carry
out the calculation to convert each fuel into tonnes of carbon dioxide (tCO₂), with one allowance equating to one tCO₂.

Standard emissions conversion factors would be used, to convert energy use into CO₂ emissions. For example, under the voluntary UK ETS, the following emissions factors were used.

**Figure 9:**

<table>
<thead>
<tr>
<th>Energy / Fuel</th>
<th>Emission Factor (kgCO₂ / kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>0.43</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>0.19</td>
</tr>
<tr>
<td>Gas / Diesel Oil</td>
<td>0.25</td>
</tr>
<tr>
<td>Petrol</td>
<td>0.24</td>
</tr>
<tr>
<td>Heavy Fuel Oil</td>
<td>0.26</td>
</tr>
<tr>
<td>Coal</td>
<td>0.30</td>
</tr>
<tr>
<td>Coking Coal</td>
<td>0.30</td>
</tr>
<tr>
<td>Coke</td>
<td>0.37</td>
</tr>
<tr>
<td>LPG</td>
<td>0.21</td>
</tr>
<tr>
<td>Jet Kerosene</td>
<td>0.24</td>
</tr>
<tr>
<td>Ethane</td>
<td>0.20</td>
</tr>
<tr>
<td>Naphtha</td>
<td>0.26</td>
</tr>
<tr>
<td>Waste Lubricants</td>
<td>0.25</td>
</tr>
<tr>
<td>Petroleum Coke</td>
<td>0.34</td>
</tr>
<tr>
<td>Refinery Gas</td>
<td>0.20</td>
</tr>
<tr>
<td>Other Oil Products</td>
<td>0.24</td>
</tr>
<tr>
<td>Renewables</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Taken from ‘Guidelines for the monitoring and reporting of emissions by Direct Participants in the UK ETS’[^67].

**Box 13**

Based on the emissions factors above:

For example if an organisation used 6,000 MWh of grid electricity per year and 1,050 MWh of natural gas per year, (and no other fuel use) their emissions would be calculated as follows:

\[
\text{Grid electricity} = (6,000,000 \text{ kWh} \times 0.43) / 1,000 = 2,580 \text{ tCO₂} \\
\text{Natural Gas} = (1,050,000 \text{ kWh} \times 0.19) / 1,000 = 199.5 \text{ tCO₂} \\
\text{Total} = 2,779.5 \text{ tCO₂}
\]

It is anticipated that the CRC would use similar emissions factors to calculate emissions to those used in UK ETS. As in UK ETS, a single electricity emissions factor will be used for grid-sourced electricity - it does not matter how the electricity is generated (i.e. nuclear, coal, gas or renewable.

generation). As recommended by the NERA / Enviros analysis, this approach maintains the scheme’s focus on additional actions by the end user.

However, Government recognises that these factors change over time, particularly for grid electricity. Accordingly, Government proposes that the factors will be updated at the start of each phase, to better reflect the actual emissions from the fuels at the start of the scheme.

### 26.1 Reporting Treatment of Green Electricity and Renewables

As highlighted in the previous consultation document, the use of electricity generated by onsite renewables that is not used to generate ROCs will be ‘zero-rated’ (as table above) and would not give rise to any obligation to surrender allowances. This is to give the appropriate incentives for the use of on-site renewables. However, green tariff electricity supplied by the national grid will **not** be treated differently from standard tariffs. This is consistent with the approach taken under UK ETS and CCAs.

Government has taken this position for the following reasons. Green electricity generation is already subject to upstream incentives. Licensed electricity suppliers are obligated under the Renewables Obligation, to source a specific and annually increasing percentage of the electricity they supply from renewable sources (currently 6.7% for 2006/07 rising to 15% for 2015/16). For each MWh of renewable energy generated, the supplier receives credit in the form of a tradable certificate called a Renewable Obligation Certificate (ROC). Suppliers can meet their Obligation by acquiring ROCs, paying a buy-out price or a combination of ROCs and paying a buy-out price. As such suppliers are already under a requirement to supply green electricity. Given this context, special treatment under the CRC for grid-imported ‘green’ electricity would undermine the scheme’s focus on action by end users of energy and would potentially fail to deliver any additional renewables supply.

Renewable energy is also exempt or zero-rated in the EU ETS, which means that a tonne of CO\(_2\) saving through fuel switching in power stations is accounted for upstream. Zero-rating green electricity from the CRC would imply that end users of green electricity had generated an additional tonne of CO\(_2\) saving. This is not the case and it would be incorrect to credit end users with this additional saving.

In addition, end users already benefit from the use of green electricity to the extent that Climate Change Levy Exemption Certificates from renewable generation are passed on to them by electricity suppliers. Given this context, the CRC will not create additional incentives to purchase green grid electricity, but neither will it penalise or create disincentives for its purchase.
26.2 Reporting Treatment of Combined Heat and Power (CHP)

Good Quality Combined Heat and Power (CHP) is a carbon-efficient process that puts to use the waste heat that is a by-product of the generation of electricity. Good Quality CHP is more fuel-efficient and lower in carbon intensity than the alternative separate production of grid-produced electricity and boiler-produced heat due to the efficiencies of effectively producing both heat and power in a single process from a single fuel. The direct emissions associated with Good Quality CHP technologies are, therefore, lower than the emissions associated with grid-purchased electricity and boiler emissions. These technologies will benefit from the scheme as fewer CRC allowances will need to be purchased.

‘Good Quality’ denotes the outputs of schemes that meet the efficiency criteria set down in the UK’s CHP Quality Assurance Programme (CHPQA), in line with the requirements for high-efficiency CHP laid down in the EU Cogeneration Directive (8/2004). The Directive dictates that high-efficiency CHP must demonstrate 10% primary energy savings compared with the reference values for the separate production of heat and electricity. Where an amount of the CHP output does not meet the quality criteria, that percentage of electricity is treated as ‘brown’ i.e. grid electricity. For CRC this could mean that this percentage of electricity failing to meet the quality criteria could receive the same conversion factor as grid electricity.

Emissions from CHP plants would be based on the fuel used to generate the resulting heat and electricity. Renewable energy sources would be zero rated provided they had not generated ROCs. Emissions factors for this would be similar to those in Figure 9 above.

Where these technologies are used to generate electricity and heat for both on-site consumption and grid export or export to a third party, the emissions associated with the exported energy will be deducted from the emissions of the CRC organisation, in a similar way to that used in CCAs. There will be further consultation on the methodology for calculating emissions from CHP and exported energy.

Question:

41. Do you agree with this approach to reporting emissions from CHP?
   Yes / No / Don’t Know / Comments

  • If not, why not?
27. Risk-Based Audit

Government originally proposed a 5% sample audit, based on findings in CCAs and Integrated Pollution Prevention and Control (IPPC) that the standard of reporting is generally high. However, in the previous consultation, a significant number of respondents urged a higher level, at least in the early stages of the scheme, to generate confidence in the scheme’s integrity. Government therefore proposes that initially around 20% of organisations should be audited annually. This remains substantially lighter touch than the UK ETS - which required 100% third party verification of all organisations – and the EU ETS, which requires 100% third party verification of all sites\(^{66}\). In addition, this level will be reviewed during the introductory phase of the scheme, and potentially reduced for the subsequent capped phase.

Government will work with the Regulators to develop a risk assessment framework for selecting organisations for audit. It is proposed that an audit would begin with a desk-based assessment of the evidence supporting the reported data, (the evidence pack) by the appropriate Regulator, i.e. where the head office is located. Operators will, therefore, be required to submit copies of the evidence pack for their reported data to the relevant regulator. Site visits will result if there are information discrepancies which cannot be resolved by dialogue with the organisation. The Regulators will work together to ensure cross-border co-operation in auditing organisations with sites across different parts of the UK. The audits will run on a rolling annual programme, so could occur at any point in the year, not necessarily immediately after the submission of annual data.

During the first year it is envisaged that the Regulators will issue guidance for participants in order for them to understand the compliance requirements of the scheme, and establish robust reporting strategies.

28. Improving Billing and Metering

As part of the 2006 Energy Review, Government put forward a number of proposals on billing and metering designed to give customers additional information to help them reduce their energy consumption. A recent consultation asked for views on the proposals and how they might best be taken forward, as well as discussing the implementation of the billing and metering aspects of the Energy Services Directive (ESD)\(^{69}\). The ESD identifies energy demand management as a “priority climate change measure”, as well as a means of improving the security of European energy supply in the short to medium term. The Directive also imposes certain metering and billing requirements.

\(^{66}\) Within CCAs, independent third party verification is required whenever an organisation wishes to convert any overachievement into allowances.


As a result of stakeholder feedback to the Energy Billing and Metering consultation\textsuperscript{70}, the Government will consult further this year on a proposal that energy suppliers should provide all but the smallest business users with advanced metering services within the next five years. This could save between 0.1 - 0.2 MtC per year by 2020. A recent Carbon Trust trial looking at advanced metering for SMEs, found that it would be cost-effective for firms with meters with a profile class of 5 and above or their equivalents in gas\textsuperscript{71} to install advanced metering. Government will explore with interested parties what further help should be given to businesses to maximise use of advanced metering and the savings that can flow from it.

28.1 Obligation on Suppliers

Government proposes to introduce an obligation on suppliers to produce an annual energy statement for the energy it supplies to a customer's CRC sites if requested by the customer. The obligation would require the supplier to provide data on total energy supplied by them to the sites requested, sufficient to satisfy CRC requirements (total energy use for the sites requested). This approach would allow suppliers to create competitive advantage around the format of this information. Many energy suppliers already provide a similar service to some customers as negotiated in their individual contracts. Feedback from the previous consultation illustrated that many customers feel strongly that improving the information from energy suppliers would assist them in meeting CRC reporting and compliance procedures and reduce the administrative burden of compliance.

28.2 Encouraging better energy recording and management

A recent study conducted for the Carbon Trust\textsuperscript{72} highlighted that lack of access to timely energy data and the provision of estimated bills are a barrier to energy efficiency management in the business sector. Government is interested to know stakeholders' views on the extent of estimates of energy use in this sector and whether there is an opportunity for CRC to encourage suppliers and operators to reduce the extent of reliance on estimated bills.

Government wishes to encourage better energy management through a variety of means including:

\textsuperscript{70} http://www.dti.gov.uk/consultations/page35260.html

\textsuperscript{71} Government propose to exclude business electricity customers with profile class 3 and 4 meters and those non-daily read gas customers whose consumption is less than 73,200 kWh per year. Below the mandatory half hourly electricity metering market (that is, those with maximum electricity demand below 100 kWh) suppliers allocate business customers to six profile classes -- 3 - 8, based on their electricity consumption. Business customers with classes 3 (with a standard “domestic” meter) and 4 (with an Economy 7-type meter) have an electricity consumption which closely resembles that of domestic customers.

\textsuperscript{72} Carbon Trust – advanced metering for SMEs: http://www.carbontrust.co.uk/publications/publicationdetail.htm?productid=ctc714
• the installation of automatic meter reading (AMR) meters
• regular supplier meter readings where AMRs are not installed
• local meter reading by the customer

To discourage the use of estimates in CRC reporting, one option is to apply a +10% adjustment factor to estimates of energy use. This would mean that for any energy source where there was not a bill based on AMR or a supplier reading or an auditable customer meter reading (e.g. auditable by interpolation between accurate bills relating to a different time period), the operator would add 10% to the estimate of energy use from that source when compiling the evidence pack. Given Government’s concern around the robustness of claimed emissions reductions based purely on changes in estimated energy bills, this proposal would increase robustness by encouraging a shift away from use of estimated bills. In addition, it would incentivise better energy recording and management through AMR, or operators reading their meters themselves, or seeking a better billing service from their suppliers.

Questions:

42. What in your experience is the extent of estimated billing for energy use on which CRC returns would be based?

43. Do you think that there should be an adjustment factor for any estimates of energy use from individual sources in an CRC organisation to encourage operators to read their own meters or press for accurate bills from their suppliers?
   Yes / No / Not Sure / Comments

• If yes, is 10% the right figure to apply?
   Yes / No / Not Sure / Comments

44. Are there any other suggestions for reducing reliance on estimated bills?

29. Scheme Administration and Regulation

The role of regulator will be carried out by the relevant regulator in each part of the UK (i.e. the Environment Agency for England and Wales, Scottish Environmental Protection Agency for Scotland, and the Department of the Environment for Northern Ireland). The regulator’s role will comprise:

• carrying out desk based audits for those organisations whose HQ lie within their jurisdiction
• carrying out any site visits within their jurisdiction on behalf of another regulator for any site located within their jurisdiction but whose organisational HQ is in the other regulator's jurisdiction
• taking enforcement action against any organisation whose HQ is in their jurisdiction, including action against companies failing to participate in the initial identification exercise or providing false or misleading information.

The UK Government and the Devolved Administrations propose that the CRC scheme should be administered by the Environment Agency for the whole of the UK.

The functions of the UK-wide Scheme Administrator would comprise:

• administering the process of identifying CRC participant organisations from company HQ returns
• operating the registry and distributing allowances
• running the auction
• recycling the revenue
• issuing guidance drawn up by all regulators
• operating the safety valve
• constructing and publishing the performance league table

29.1 Funding of Administration and Regulation

The costs of administration and regulation will be recovered as appropriate via a charging scheme set up by the administrator on behalf of themselves and other regulators. As such, the auction revenue will be fully recycled to participants – without any deduction for scheme administration.

30. The Registry

Each participant within the CRC scheme will have a CRC Registry account that operates in a similar way to an on-line bank account. This will be a simple, user-friendly and secure online system that allows participants to record and keep track of the allowances purchased in the auction phase of the scheme; purchased through the safety valve; or traded in the secondary market. The CRC registry will also serve as the reporting tool for the scheme, where participants will record their annual carbon emissions and surrender the corresponding number of allowances. The registry will be designed to be automated and as easy to use as possible, calculating annual carbon emissions from participants’ energy / fuel use data. It will also be used to report data on any additional metrics (i.e. the extent of AMR and the organisation’s turnover or revenue expenditure figures) that may be used in the calculation of participants’ performance league table position as outlined in the section on market design (paragraph 21.1.4)
The registry will hold different types of account for categories of user, such as those outlined below. Some registry functions will only be available to certain categories of users.

- Participant account – for direct CRC scheme participants.
- Trading account – such as for charities, traders and brokers who are not direct CRC participants but who may wish to trade allowances in the secondary market.
- Regulator / Administrator account – to open and close accounts and carry out administrative functions.

Government will be developing the registry in the years up to the start of the CRC scheme, and stakeholder feedback will form a significant part of the design and construction of the facility. Understanding stakeholders experience in other contexts will be vital.

**Questions:**

45. Does your organisation have previous experience of using other similar online registries?
   Yes / No

- If yes, which registry / registries does your organisation have experience of and what features worked well / badly (please specify)?

46. Do you have any further comments or suggestions in relation to the features and functions the CRC registry should have?

**31. Legal Basis**

The CRC will be subject to State Aid approval by the EU Commission because of the provisions for revenue recycling. Government will begin discussions with the Commission in the near future.

The draft Climate Change Bill provides enabling powers to set up emissions trading schemes within the UK. The Scottish Executive is also enacting a Climate Change Bill with similar powers for Scotland.

The draft Climate Change Bill does not contain powers to auction allowances. Such powers where necessary, as for the CRC, will be provided in the relevant Finance Act.

Subject to Parliamentary approval, the Climate Change Bills in the UK and Scotland will provide the broad legal framework for the CRC. Detailed operational provisions such as the operation of the auction, monitoring and reporting requirements and offences and penalties will be set out in
Regulations specifically designed for CRC, and will be supported by guidance. These will be subject to further consultation at the appropriate time.

The draft Climate Change Bill also provides for the setting of carbon budgets with a legal duty on Government to ensure the UK stays within these limits, subject to provisions on banking and borrowing. It aims to establish a Committee on Climate Change to advise Government on the level of carbon budgets and the respective contributions towards meeting them by those sectors of the economy covered by trading schemes. The Committee will therefore advise Government on the level of the CRC cap and related issues.

32. Enforcement, offences and penalties

To minimise administrative burdens, the reporting and auditing requirements have been designed to be as ‘light touch’ as possible – notably based on self-certification rather than 3rd party verification – without compromising the integrity of the scheme. As suggested in the previous consultation, and in response to stakeholders’ views, a light touch regime will therefore require strong penalties, to deter abuse and secure compliance. These penalties will be in line with the Macrory73 ‘Six Penalties Principles’ which include that sanctions should: aim to eliminate any financial gain or benefit from non-compliance; be proportionate to the nature of the offence and the harm caused; aim to deter future non-compliance; and be based on transparent enforcement of penalties.

Standard types of offences (e.g. failure to provide information to Government or to comply with an enforcement notice) will be treated in the standard way that the relevant regulator uses to enforce environmental regulations. Government has drawn on the approaches used in other schemes (e.g. the EU ETS and CCAs) to draw up the proposals for other offences set out below. Government proposes penalties that are, in general, analogous to those used under the EU ETS, which it considers will be a significant deterrent against mis-reporting.

There will in due course be further consultation on the detail of the nature and complete range of offences, together with levels of penalties (within the context of developing the scheme regulations). At this stage, therefore, Government is inviting stakeholder views on its overall approach to the key offences considered below. Participant offences pertinent to the CRC scheme are likely to fall into three overall categories: (1) Participation in the scheme, (2) Reporting and surrender, and (3) Sale / auction.

32.1 Participation

Government proposes that key offences within this category will include:

• Failing to register obligated organisations to participate in the scheme
• Providing false or misleading information to secure an exemption on CCA grounds
• Failing to open a registry account

32.1.1. Failing to register to participate in the scheme
The CRC will be a mandatory scheme for all organisations over the inclusion threshold. Organisations will need to make themselves known to the Scheme Administrator. Government is therefore minded that penalties will apply to:

• any organisation that is covered by the scheme and yet fails to register within the timescale set out in the registration pack
• any organisation that uses false or misleading information as evidence that they fall outside the scheme (i.e. that the organisation does not meet the 6,000 MWh threshold of mandatory half hourly metered electricity use).

In such circumstances, Government proposes a penalty or a fine, levied per tonne CO$_2$, alongside publication of the organisation’s non-compliance within the CRC league table. Government proposes that the scale of fine would be moderated if the problem is resolved quickly. In addition, drawing on the approach used with the EU ETS, if the problem persists to the extent that the organisation does not participate in the scheme when it should, then the organisation would also face a requirement to pay the Scheme Administrator to surrender sufficient allowances from the open market to cover its annual emissions for all years that it should have participated in the scheme.

32.1.2. Providing false or misleading information to secure an exemption on CCA grounds
Some CRC organisations (the highest UK parent organisations) will have subsidiary organisations covered by CCAs. These subsidiaries – those with more than 25% of their energy use emissions in CCAs – will be exempt from the CRC. If the remaining CRC organisation – i.e. with these subsidiaries removed – either has less than 6,000 MWh / year of mandatory half hourly metered electricity use or still has at least 25% of its energy use emissions covered by CCAs – then the entire CRC organisation will be exempt.

Government proposes that it will be up to those organisations to establish whether or not they qualify for an exemption and, if they do, to provide the necessary application and evidence to the Scheme Administrator. Given that it is in a CCA organisation’s interests to apply for an exemption (in order to avoid double regulation), Government does not consider it necessary to provide an incentive for organisations seeking an exemption to come forward.

Importantly, Government will require sufficient information within the timescales required to grant an exemption. Accordingly, the proposed
sanction here is that, if sufficient information is not provided to the timescales required, the organisation will not be exempted.

Question:

47. Do you agree that organisations that fail to provide the necessary evidence for exemption on CCA grounds within the required timescales should remain in the scheme?
Yes / No / Not Sure / Comments

32.1.3. Failure to open a registry account
All participant organisations will be required to open a registry account so that they can buy, trade and surrender allowances. In order to avoid delays to the start of the scheme, Government is keen to encourage organisations to cooperate with the Scheme Administrator (e.g. to provide all the information necessary to open the account within the necessary timescales). Accordingly, Government would only allow an account to be activated once all the essential information had been provided. Government proposes that, in order to participate in the auction / fixed price sale, an organisation would need to have a registry account. Government envisages that most organisations would therefore open an account at the beginning of the scheme.

At the same time, Government proposes that any CRC organisation that still does not have an account by the 31 January after the emissions year would be subject to an additional charge – levied by the Scheme Administrator – to activate a registry account at this late stage. This is to discourage organisations from registering their account in the busy period leading up to 31 March, when the requirement on organisations to report and surrender allowances will apply. Large numbers of participants attempting to register towards the end of the period could increase the risk of system to collapse, disadvantaging all participants in the scheme.

An organisation that fails to open a registry account by the end of the first compliance year (31 March) would be non-compliant, since it would not be able to buy, trade, or surrender allowances. Accordingly, Government proposes to treat such organisations in the same way as an organisation that fails to report its emissions data and surrender the requisite number of allowances (see the reporting and surrender section below).

32.2 Reporting and surrender

32.2.1. Failure to provide annual data report on time
Drawing on the experience of the UK ETS, Government proposes 31 March as the deadline for supplying self-certified data to the Scheme Administrator in respect of the previous emissions year. Importantly, no 3rd party verification is
proposed – and the requirements to supply data to the Scheme Administrator by this date would be kept to a minimum, since organisations would reserve the detail within their ‘evidence packs’ (to be made available to the scheme regulators only if the organisation is selected for audit).

Government proposes that the scale of penalties increase depending on the extent of delay. Government proposes to allow organisations a one month period after the compliance deadline during which a moderate per tonne CO₂ fine would apply, alongside publication of the organisation’s failure in the CRC league table (potentially, this fine could simply be deducted from the revenue recycling payment). If the organisation had still not provided data after this one month period, then they would also forfeit their revenue recycling payment for that year. If the organisation had still not provided data two months after the deadline, then – drawing on the approach in the EU ETS – organisations would be liable to pay a substantial fine of £25 / tCO₂ (rising to £70 / tCO₂ after the introductory phase), and be required to pay the Scheme Administrator to surrender the correct number of allowances from the open market to cover the organisation’s annual emissions, with this failure also published in the CRC league table.

Government considers that this approach should allow the Scheme Administrator to gather the necessary data so as to be able to issue the revenue recycling payments by the end of July.

32.2.2. Provision of false annual emissions data

As noted above, organisations will self-certify their own emissions – with Government accepting use of estimated energy bills where meter read data is not available. At the same time, around 20% of organisations would be audited each year by the regulators. It is possible that during the course of an audit the auditor would uncover false or misleading information. For example, this would include an assessment of emissions that does not correspond to the audit trail of energy bills, an incomplete audit trail with missing energy bills / data, or a misstatement regarding the energy use covered by the EU ETS (which is exempted).

Government is of the view that robust penalties should be imposed to encourage organisations to maintain a comprehensive and accurate evidence pack – seeking early advice from the regulators if there is an area where they are in doubt. Drawing on the experience of the EU ETS, Government proposes a substantial fine of £25 per tCO₂ under-reported for the introductory phase, rising to at least £70 per tCO₂ under-reported for the subsequent capped phase. Failure to report accurately would also be published in the next edition of the CRC league table.

Given that revenue recycling payments will be proportional to annual average emissions since the start of the scheme, a moderate fine per tonne CO₂ over-reported is necessary to avoid an incentive to over-report, especially in the early years of the scheme. Government considers that this fine for over-reporting can be relatively moderate because – to an extent – the league table
and the need to surrender an allowance for each emission reported already provides an incentive not to over-report.

Accordingly, if an audit uncovers over-reporting – i.e. that reported emissions were higher than actual emissions – then Government proposes only a moderate fine per tonne CO\(_2\) over-reported, alongside disclosure of failure to report accurately within the next edition of the CRC league table. Potentially, this moderate fine could be deducted from the organisation’s next revenue recycling payment.

**Question:**

48. Do you agree that a more moderate fine can be applied to over-reporting of emissions than under-reporting?  
Yes / No / Not Sure / Comments

32.2.3. *Failure to surrender allowances corresponding to reported emissions*

As a participant in the scheme, an organisation will be required to surrender a number of allowances – corresponding to an organisation’s reported annual emissions – at the same time as the organisation submits a report of its annual emissions. Drawing on the experience of the EU ETS, Government proposes a substantial fine of £25 per tCO\(_2\) not surrendered for the introductory phase, rising to £70 per tCO\(_2\) not surrendered for the subsequent capped phase – plus a requirement to pay the Scheme Administrator to surrender the necessary quantity of allowances from the open market. An organisation’s failure to surrender sufficient allowances would also be published in the next edition of the CRC league table.

32.3 *Sale / auction*

32.3.1. *Failure to pay for allowances purchased at sale / auction*

Organisations will be required to pay the Scheme Administrator for the allowances they buy at the annual auction (fixed price sale during the introductory phase). Allowances will only be issued once payment has been received.

Government proposes that penalties will apply to organisations that commit to buying a quantity of allowances – but then fail to pay for these allowances within the necessary timescale. In the absence of penalties, an organisation could have an incentive to not honour its auction bid (if allowances could be obtained more cheaply on the secondary market), which would undermine the scheme – since this organisation, by not contributing revenue to the pot for overall recycling, would benefit at the expense of other organisations in the scheme. Government is minded to increase the severity of penalties with increased time beyond the deadline. Accordingly, Government proposes that:
• If payment for allowances is delayed by up to one month, the organisation would pay a moderate fine per tonne CO₂, and would have their non-compliance published in the league table. Potentially, this fine could be simply deducted from the next recycling payment.
• For a delay between one and two months, the organisation would also forfeit its revenue recycling payment, alongside paying the moderate fine and having its non-compliance published in the league table.
• For a delay over two months, the organisation would be required to pay a more substantial fine per tonne CO₂, alongside having its non-compliance published in the league table. For as long as debts are outstanding, the organisation would forfeit any revenue recycling payments and be barred from entering future auctions (meaning that the organisation would have to buy any allowances from the open market – since the requirement to surrender sufficient allowances to cover emissions would still apply).
• Scheme Administrator would begin / follow bad-debt recovery procedures.

Questions:

49. Do you agree with the overall approach towards penalties – of proportionality between the offence and the penalty?
   Yes / No / Not Sure / Comments

50. Do you agree with the proposed approach on penalties in respect of the offences listed?
   Yes / No / Not Sure / Comments

• If not, please state areas where you have substantial concerns.
Annex A – Evidence Packs

Context

CRC participants will submit annual data statements to the Scheme Administrator / Regulator on a self-certified basis. Participants will need to be able to produce for audit the detailed data on which the overall annual figures are based. The Scheme Administrator / Regulator will carry out random audits to check the accuracy of data being submitted to them. The detailed data should be collated into an Evidence Pack which will be key to the audit.

Submission of the information required in the annual data statement is mandatory. While the Scheme Administrator / Regulator will encourage participants to collate the information listed below in their Evidence Pack, the maintenance of this information in this form is not compulsory.

Audit trails are easiest to keep for metered supplies, primarily electricity and gas. It is estimated that over 80% of energy used by CRC organisations is in this form. The remaining energy will mainly be oil products or liquefied petroleum gas (LPG), which is supplied in batches and is sometimes bought from many different suppliers on a spot market basis (rather than longer term contracts as is the case for electricity and gas). Oil products and LPG are sometimes metered but this is less common than for electricity and gas.

The nature of the information to be kept in an Evidence Pack relates to the type of metering used to measure the energy consumption and the confidence that the Scheme Administrator / Regulator can have in that data. For example, data from mandatory half hourly metering (HHM) provides much more confidence than the records available for batch supplies of oil. The Evidence Pack requirements will provide participants with additional incentives to install advanced meter reading (AMR) wherever possible, if the AMR requirements are least onerous.

Data to be submitted in the annual data statement

Based on the current proposals, the annual data statement will include:

- organisation details (i.e. organisation name, contact details);
- annual organisation-wide CO2 emissions;
- annual organisation-wide AMR metric (if the metric is included); and
- annual organisation-wide growth metric (if this metric is included).
Information to be included in the evidence pack

The evidence pack can be split into three parts:

- **Structural records** are required to define the scope of the organisation, the type of site (important for non-metered supplies such as street lighting) and the types of energy used.
- **Data records** are required to show the annual consumption of energy and to convert this into CO₂ emissions. This would include records to support any exemption or the application of a de minimis threshold based on a proportion of energy use (i.e. for CCAs or the EU ETS). If the growth metric is included in the league table, a record of the organisation’s annual turnover should also be retained.
- **Special event** records should be maintained to keep an audit trail of unusual events e.g. the actions taken following a meter failure.

**Structural Records**

Amongst other things, these records will provide an indication of the extent of automatic meter reading within an organisation and so allow the auctioning revenue to be recycled on that basis (and, if adopted, an adjustment factor to be applied).

1. **For each organisation**, information about the company (including the organisation’s registered name, its structure (e.g. subsidiaries) and contact details), a detailed list of sites that are covered by the CRC, including address and postcode.
2. **For each site**, a description of the type of site, a list of the types of energy used e.g. electricity, gas, oil etc.
3. **For electricity and gas supplies from utility companies**, a list of all supply meters with a record of the meter type (e.g. manual, HHM etc) and the official meter identifier.
4. **For non-utility company meters** (e.g. when a sub-meter is required in a landlord-tenant relationship) a list of relevant meters and their “unofficial” identifiers. Note that in some cases a sub-meter may be used to subtract energy that is being “exported” (e.g. to facilitate the proposed treatment of CHP).
5. **For bulk supplies** (e.g. oil) a record of all suppliers used and of the on-site storage capacity. Also, the exact type of fuel being used (e.g. gas oil, medium fuel oil etc.) as this will affect the amount of CO₂ emitted.

**Data Records**

The approach to be taken will depend on the type of meter or fuel supply. Table 1 below describes the requirements summarised by fuel supply type.
### Table 1 - Evidence pack requirement by supply type

<table>
<thead>
<tr>
<th>Supply Type</th>
<th>Evidence Pack Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory HHM Electricity Meter</td>
<td>A statement of the total annual kWh consumption based on the records collected by the Utility Company. This can be for the exact 12 month period for the “CRC Data Collection Year”.</td>
</tr>
<tr>
<td>AMR Electricity Meter, with data collected and stored by Utility Company or their meter reading company.</td>
<td>As mandatory HHM</td>
</tr>
<tr>
<td>AMR Electricity Meter, with data collected through an in-house system.</td>
<td>As mandatory HHM plus extra information providing an audit trail for the data being collected on a regular basis.</td>
</tr>
<tr>
<td>Manual Electricity Meter</td>
<td>Evidence of the meter reading at the beginning and end of the CRC reconciliation year. Ideally this should be an in-house meter reading on the start and finish date, backed up by external evidence to support the reading i.e. meter reads on utility bills near the start and end dates. Where no in-house reads are done the data must be extracted from the utility bills, with a “calendarisation correction” made to estimate the amount used in the exact CRC reconciliation year. A record of the way this correction calculation is made should be kept in the Evidence Pack. Where the relevant Utility Bills are based on estimates this must be recorded in the Evidence Pack. Every effort should be made to avoid the use of estimated reads.</td>
</tr>
<tr>
<td>Gas Meters</td>
<td>The rules for electricity meters are generally applicable to gas meters of equivalent types (e.g. AMR, manual). For gas it should be noted that supply pressure and calorific value can vary and may need to be taken into account. Utility companies make much more use of estimated readings for gas than for electricity and there is very little AMR. This will generally make it harder to keep a good audit trail for gas data.</td>
</tr>
<tr>
<td>Bulk supplies e.g. oil, LPG, coal.</td>
<td>It will be necessary to keep a record of every delivery to site to calculate the total amount delivered in the CRC Data Collection Year. This must be backed up by records from suppliers e.g. delivery notes or statements. A record of stock level (e.g. tank level) at the beginning and end of the year should be kept and an adjustment made to the annual consumption figure if appropriate.</td>
</tr>
</tbody>
</table>
For each type of supply, an organisation would record whether that energy use was covered by either a CCA or the EU ETS in order to facilitate any exemptions or to support the inclusion of sites under a *de minimis* rule.

If the growth metric is used in relation to the league table, information used to construct the metric should also be recorded for audit. For private sector companies this should include the audited turnover figure and for public sector organisations revenue expenditure, with details of the document in which the figure was published.

**Special Event Records**

It is important to keep records of events that may influence the accuracy of the audit trail. Three common examples are:

1. A change of energy supplier. This will mean that data from 2 sets of energy bills may be required to establish the annual consumption. The date of the changeover, together with the identity of the old and new supplier should be kept in the Evidence Pack.
2. A meter breakdown. If a meter breakdown occurs it will be difficult to provide accurate data for the relevant year. The dates for the last acceptable reading before the breakdown and the first after it has been repaired should be recorded. A reasonable estimate of unmetered energy should be made with a written justification being kept in the Evidence Pack. If an estimate was agreed with the energy supplier for billing purposes this should be used.
3. A change in company structure. Each organisation should keep a record of any changes in the sites and energy uses covered during a data collection year. For instance, if an organisation divests or closes some of its sites, or acquires or opens new sites, details of the changes (e.g. date, sites, meters and energy uses affected) should be kept. Further comment on some specific circumstances is provided below.

**Responsibility for evidence pack following a change in ownership**

The organisation responsible for reporting data in the CRC is responsible for maintaining an evidence pack which contains information relating to all of its covered sites.

If a site changes hands during a data collection year the original owner is responsible for managing and submitting that site’s data up until the date that it surrendered control of the site. The new owner is responsible for the site’s information and compliance after that date. There will therefore be two evidence packs in this event, one for the first part of the year maintained by the original owner and a second for the second part of the year maintained by the new owner.

An exception is where a legal entity that had been a CRC participant is wholly taken over by another CRC participant so that the original legal entity does not exist at the end of the data collection year. In this instance, the evidence
pack for the first part of the year should be transferred to the new owner which will be responsible for submitting data for the full year.

If a site is bought by an organisation that is not covered by the CRC then the original owner is responsible for reporting and maintaining its data up until the date when it surrendered control. Its emissions for the second part of the year will not fall under the CRC.

If a company changes its name, this should be recorded in the evidence pack together with the date of the change.
Summary of Questions

1. **Should the CRC apply on a UK-wide basis, or should the Devolved Administrations develop separate schemes?** .......................................................... 11
   
   Yes / No / Not Sure / Comments .................................................................. 11
   
   • If separate schemes, how can we guarantee a level playing field for operators and that the required carbon reductions estimated from the CRC would be realised? .......................................................... 11

2. **Is the ‘top-down’ approach of defining a CRC organisation a suitable way of identifying large, non-energy intensive organisations?** .......... 13
   
   Yes / No / Not Sure / Comments .................................................................. 13
   
   • If not, can you suggest a preferable alternative? ......................................... 13

3. **Do you have a view as to what would be the appropriate highest UK parent organisation for public sector participants?** ................................. 13

4. **Do you have a view as to whether Government should proceed with either option (A) or (B) above?** .......................................................... 14
   
   Option A / Option B / Neither – do not allow any split / Not Sure / Comments .......................................................................................... 14

5. **Could your organisation manage these procedures to correctly identify the CRC organisation?** ............................................................... 19
   
   Yes / No / Not Sure / Comments .................................................................. 19
   
   • If not, which particular aspects of the organisation identification procedure would cause a problem? ............................................................. 19

6. **Could the procedures be simplified and still allow Government to identify non-compliant organisations? If so, how?** .............................. 19

7. **Do you agree that 2008 should be used as the qualification year?** .... 20
   
   Yes / No / Not Sure / Comments .................................................................. 20
   
   • If not, which time period would you recommend? ................................... 20

   Other Calendar Year / Other 12 month period (please state) ...................... 20

8. **Do you agree that the proposed approach to establishing which CRC organisation is responsible for energy use in a tenanted property is workable?** ......................................................... 22
   
   Yes / No / Not Sure / Comments .................................................................. 22
   
   • If not, what prevents it from being workable? ......................................... 22

   • Can you suggest an alternative approach that is preferable and retains the emissions coverage of the current proposal? ............................ 22

9. **Which option should Government take forward to ensure wide emissions coverage of CRC?** ................................................................. 25
   
   Option 1 / Option 2 / Not Sure / Comments ................................................ 25
10. Do you agree that organisations should be able to include all their sites in the scheme? ......................................................................................................................... 26
    Yes / No / Not Sure / Comments ....................................................................... 26
    • If so do you agree that they should not be able to remove them at a later date? ............................................................................................................................... 26
    Yes / No / Not Sure / Comments ....................................................................... 26

11. Do you agree with the Government’s proposal to implement a site level fuels *de minimis*? .............................................................................................................. 27
    Yes / No / Not Sure / Comments ....................................................................... 27
    • Should this be set at 5% of site energy use emissions, 3% or some other percentage? .......................................................................................................................... 27
      <3% / 3% / 5% / >5% ............................................................................................ 27
      • If <3% or >5% please state a level and explain why. ........................................ 27
    • Do you think that this percentage should be based on site energy use emissions (as proposed) or total site energy spend? ................................................................. 27
      Energy use emissions / Energy expenditure / Comments ................................ 27

12. Do you agree that CCA organisations with more than 25% of their energy use emissions in CCAs should be excluded as described in the diagram above? ........................................................................................................... 29
    Yes / No / Not Sure / Comments ....................................................................... 29

13. Do you agree that unmetered supplies (UMS) should be included in the CRC, subject to a suitable *de minimis*? .............................................................. 31
    Yes / No / Not Sure / Comments ....................................................................... 31

14. Do you agree that pseudo half hourly metering should be incentivised by the CRC? ....................................................................................................................... 33
    Yes / No / Not Sure / Comments ....................................................................... 33
    • If yes, do you think: ......................................................................................... 33
      a) that pseudo half hourly metering should be treated in the same way as AMR for the purposes of the performance league table? ...................................................... 33
      Yes / No / Not Sure / Comments ....................................................................... 33
      b) that the standard UMS billing methodology should be treated as an ‘estimate’ for the purposes of the adjustment factor and that pseudo half hourly metering should not be? ........................................................................ 33
      Yes / No / Not Sure / Comments ....................................................................... 33

15. In terms of non-rail energy, would you highlight any key issues specific to the rail sector that Government should bear in mind in developing the CRC policy design? .................................................................................. 35

16. Given the UK commitment to consider the inclusion of surface transport within the EU ETS, do you agree that rail energy should currently be excluded from the CRC? ................................................................................. 35
17. Do you think there are significant cost-effective opportunities for energy efficiency within schools?

Yes / No / Not Sure / Comments

18. Do you agree with the Government’s decision not to mandate the inclusion of all school energy use within local authority portfolios for CRC?

Yes / No / Not Sure / Comments

19. Do you agree with the proposed approach – of including school energy use within CRC local authority portfolios where such authorities pay the energy bill?

Yes / No / Not Sure / Comments

20. Do you agree with the overall principle of not having to report changes of operation during each phase of the CRC?

Yes / No / Not Sure / Comments

21. Are each of the proposed exceptions to the overall approach reasonable?

Yes / No / Not Sure / Comments

22. Do you agree with the proposed overall approach on cap setting?

Yes / No / Not Sure / Comments

23. Which price option do you think would be most appropriate for the introductory phase fixed price sale?

Option A / Option B / Option C / None / Other (please specify)

24. Do you think CRC organisations would undertake significantly greater carbon abatement under the Option with the highest carbon price?

Yes / No / Not Sure / Comments

25. Which auction mechanism would you prefer?

Option A - sealed bid auction / Option B - dynamic ascending clock auction

26. Do you agree with the auction should take place each January, at the beginning of the emissions year?

Yes / No / Not Sure / Comments

27. Which payment option do you prefer?

Payment at time of auction or Payment deferred by 12 months?
28. Do you agree that Government should limit the auction to only scheme participants and their agents? ..............................................................55
   Yes / No / Not Sure / Comments ..............................................................55

29. Do agree that there should be a limit placed on the percentage of allowances available to any one participant to buy in the auction? ......55
   Yes / No / Not Sure / Comments ..............................................................55

30. Does the proposed mechanism for operating the safety valve seem reasonable? ..................................................................................57
   Yes / No / Not Sure / Comments ..............................................................57
   • If not what changes would you suggest? ............................................57

31. Do you think that a bonus or penalty of +/- 10% as described above is appropriate? ..............................................................................60
   Yes / No / Not Sure / Comments ..............................................................60
   • If not, do you think the bonus or penalty should be higher or lower (please state a percentage)? ..............................................................60

32. Should the rate of bonus or penalty increase steadily and gradually over time? ..................................................................................60
   Yes / No / Not Sure / Comments ..............................................................60
   • If yes, please state by how much and how regularly you think these increments should be applied (e.g. 5% increments per year: +/-10% for year 1, +/-15% for year 2, +/-20% for year 3 and so on)? ........................................60

33. Should the league table include a metric to recognise those organisations who have been undertaking good energy management practices for some time? ..............................................................66
   Yes / No / Not Sure / Comments ..............................................................66
   • If so, do you agree with the proposed AMR metric as a proxy for early action? ......................................................................................66
   Yes / No / Not Sure / Comments ..............................................................66
   • If not, please state a better alternative metric that meets the stated league table design criteria. ..............................................................66

34. Would the benefits of the league table including a few simple yes / no disclosure based questions outweigh the additional complexity involved? ..............................................................66
   Yes / No / Not Sure / Comments ..............................................................66
   • If so, are the questions outlined above appropriate? ..........................66
   Yes / No / Not Sure / Comments ..............................................................66
   • And, should they be incorporated for revenue recycling calculations? 66
   Yes / No / Not Sure / Comments ..............................................................66
35. Do you think that the CRC league table should include a relative metric to take account of organisational growth / decline? .....................68

   Yes / No / Not Sure / Comments .................................................................68
   
   • If yes, do you agree with the proposed growth metric described above? .................................................................68
   
   • If not, please state a better alternative that meets the stated league table design criteria ..............................................68

36. Do you agree that if turnover / revenue expenditure is used to formulate the growth metric, that organisations should report the published figure for the financial year that most closely corresponds with the ‘emissions year’? .................................................................70

   Yes / No / Not Sure / Comments .................................................................70

37. If early action and growth metrics are included in the league table, do you agree with the proposed weighting of 60% : 20% : 20% (absolute: early action: growth)? .................................................................................72

   Yes / No / Not Sure / Comments .................................................................72
   
   • If not, please suggest an alternative weighting that you prefer? ........72

38. Do you agree that the Government should be able to adjust key parameters within phases if absolutely necessary as an option of last resort? ...............................................................................................74

   Yes / No / Not Sure / Comments .................................................................74
   
   • If yes, what limits should be placed on the use of this power (e.g. requirement to engage in public consultation as to whether circumstances are sufficient to justify use of the power, and with Parliamentary approval)? ..........................74

39. Should a percentage of CRC auction revenues be top-sliced and either given to Carbon Trust / Salix or handed out to participants as credits/ tokens? .........................................................................................76

   Yes / No / Not sure / Comments .................................................................76
   
   • If so, do you prefer Option A, paying 10% of auction revenue directly to Carbon Trust / Salix, or Option B paying 10% of each participant’s revenue recycling payment as ‘credits’? .................................................................76

   Option A / Option B / Not Sure / Comments .............................................76
   
   • What percentage of CRC auction revenue should be top-sliced and either given to Carbon Trust / Salix or handed out to participants as credits/ tokens? .................................................................76

   5% / 10% / >10% / Comments .................................................................76

40. Do you agree with the Government’s proposal on what would be required within an ‘evidence pack’? If not, why not? .................................................................................78

   Yes / No / Don’t Know / Comments ............................................................78
41. Do you agree with this approach to reporting emissions from CHP? .................................................................81
   Yes / No / Don’t Know / Comments .........................................................81
   • If not, why not? ..................................................................................81
42. What in your experience is the extent of estimated billing for energy use on which CRC returns would be based? .........................84
43. Do you think that there should be an adjustment factor for any estimates of energy use from individual sources in an CRC organisation to encourage operators to read their own meters or press for accurate bills from their suppliers? ..............................................................84
   Yes / No / Not Sure / Comments ..............................................................84
   • If yes, is 10% the right figure to apply? ....................................................84
44. Are there any other suggestions for reducing reliance on estimated bills? ........................................................................84
45. Does your organisation have previous experience of using other similar online registries? ........................................................86
   Yes / No ..................................................................................................86
   • If yes, which registry / registries does your organisation have experience of and what features worked well / badly (please specify)? .....86
46. Do you have any further comments or suggestions in relation to the features and functions the CRC registry should have? ........86
47. Do you agree that organisations that fail to provide the necessary evidence for exemption on CCA grounds within the required timescales should remain in the scheme? .........................................................89
   Yes / No / Not Sure / Comments ..............................................................89
48. Do you agree that a more moderate fine can be applied to over-reporting of emissions than under-reporting? ..............................91
   Yes / No / Not Sure / Comments ..............................................................91
49. Do you agree with the overall approach towards penalties – of proportionality between the offence and the penalty? .........................92
   Yes / No / Not Sure / Comments ..............................................................92
50. Do you agree with the proposed approach on penalties in respect of the offences listed? .................................................................92
   Yes / No / Not Sure / Comments ..............................................................92
   • If not, please state areas where you have substantial concerns. ........92