



CONSULTANCY



Carbon Reduction Commitment Energy Efficiency Scheme (CRC)

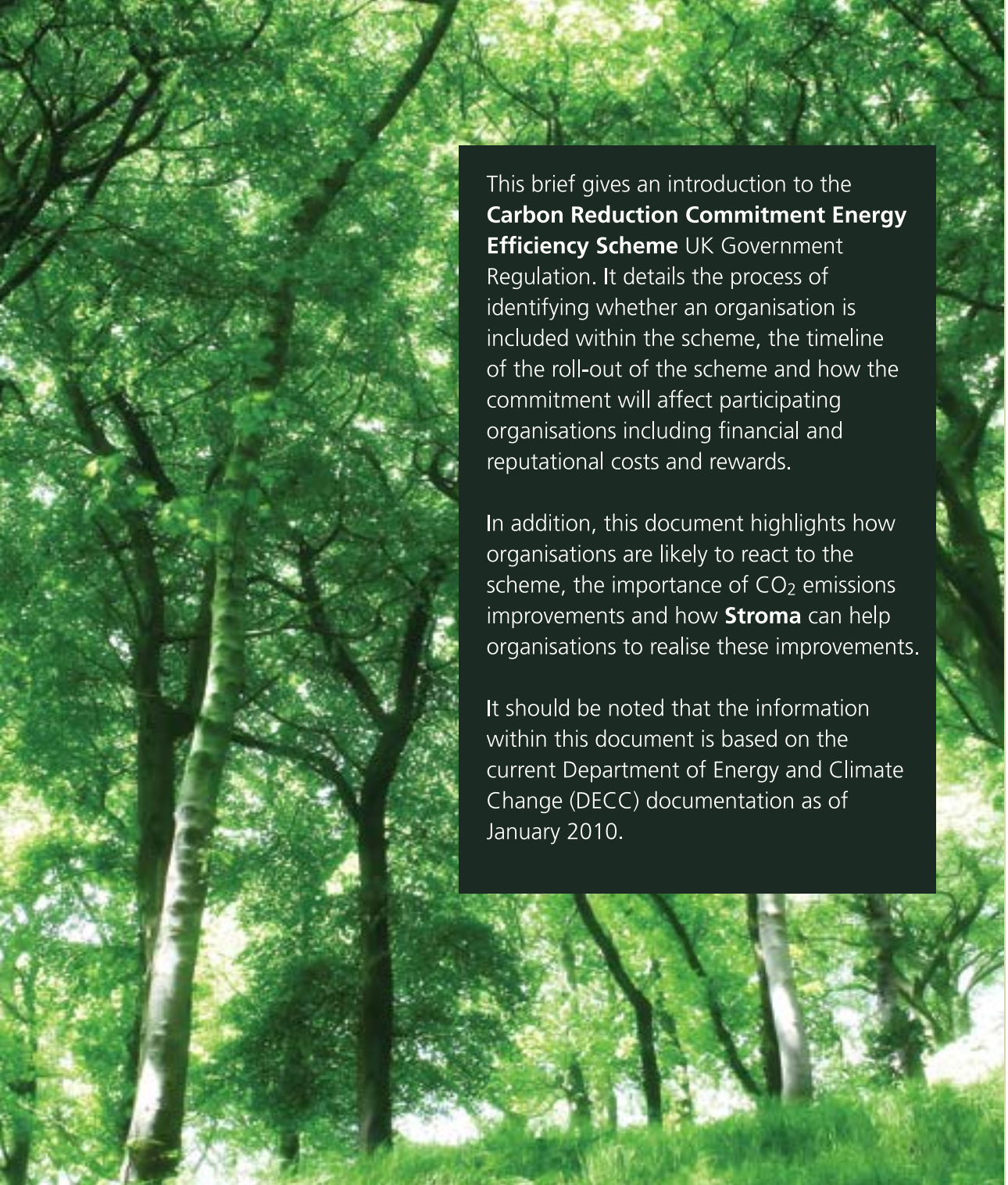


CONTENTS

Carbon Reduction Commitment Energy Efficiency Scheme (CRC) overview	03
Introduction	04
Qualification criteria	05
Registering for full participation	06
What emissions are included in CRC?	07
Measuring performance	08
Implementation and roll-out of the scheme	09
Impacts of CRC on organisations	10
Financial costs	10
Cost of potential improvement measures	11
Penalties	11
Financial rewards	12
How organisations may react to CRC	13
How Stroma can help you meet your CRC	14
Statement of capability	16
Corporate responsibility policy statement	20



With a wealth of expertise in the energy assessment and management sector, Stroma can assist you in formulating a strategy for compliance with Climate Reduction Commitment legislation.



This brief gives an introduction to the **Carbon Reduction Commitment Energy Efficiency Scheme** UK Government Regulation. It details the process of identifying whether an organisation is included within the scheme, the timeline of the roll-out of the scheme and how the commitment will affect participating organisations including financial and reputational costs and rewards.

In addition, this document highlights how organisations are likely to react to the scheme, the importance of CO₂ emissions improvements and how **Stroma** can help organisations to realise these improvements.

It should be noted that the information within this document is based on the current Department of Energy and Climate Change (DECC) documentation as of January 2010.

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INTRODUCTION

The Carbon Reduction Commitment Energy Efficiency Scheme (CRC) is a new mandatory emission trading scheme that aims to improve energy efficiency and reduce the amount of carbon dioxide (CO₂) produced in the UK. This is vital to achieve the UK Government's overall targets of reducing greenhouse gas emissions by at least 80% by 2050 compared to the 1990 baseline.

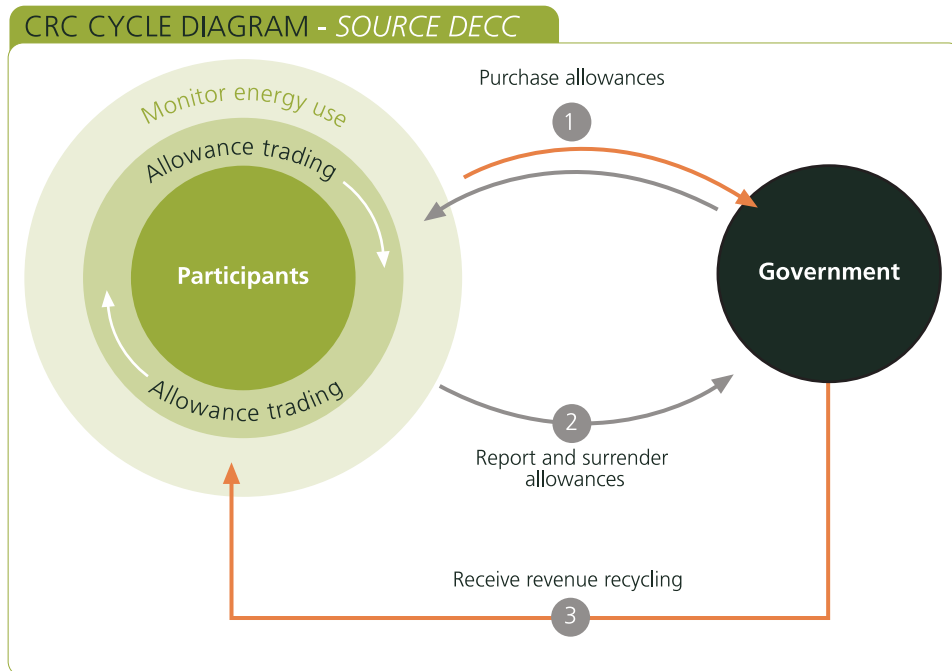
The CRC will affect approximately 5,000 large organisations in both the public and private sector. Organisations that meet the qualification criteria, which are based on how much electricity they consumed in 2008, will be obliged to participate in CRC.

Participant organisations will have to monitor their emissions and purchase allowances, sold by Government, for each tonne of CO₂ they emit.

As well as reducing your carbon emissions, by increasing energy efficiency the scheme will help organisations save money by reducing their energy bills. These savings should be well in excess of the costs of participating in the scheme.

In addition, the better an organisation performs in terms of reducing its emissions, the higher it will appear in the annual performance league table Government will publish, showing the comparative performance of all participants. This in turn provides a further benefit - all the revenue raised from selling allowances is 'recycled' back to participants and the league table position affects how much of the revenue each organisation receives.

The CRC follows an annual cycle; every year, each participating organisation will have to buy carbon allowances to cover the following year's predicted carbon emissions. If the allowances purchased at the beginning of the year do not cover the actual emissions recorded at the end of the year, then an organisation will have to buy additional allowance from other participants on an open carbon trading market. At the end of each year, the Government will publish a league table, ranking all organisations according to their performance over the past 12 months. The first 'footprint' year will be April 2010 - March 2011.



QUALIFICATION CRITERIA

Qualification for CRC is based on half hourly electricity consumption during the qualification period. For the introductory phase, this is the 2008 calendar year. An organisation qualifies as a full participant in CRC if, during the qualification period:

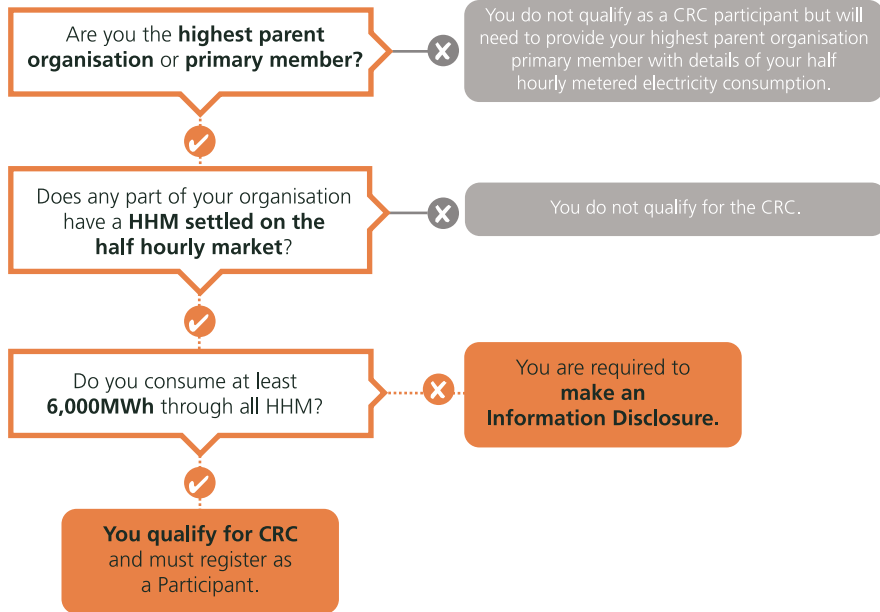
- It had at least one half hourly meter (HHM) settled on the half hourly market and
- Its annual electricity consumption through all HHMs was at least 6,000 MWh.
- This figure also includes all remotely read automatic meter reading meters (AMR)

There are four types of metering which can be settled on the half hourly market. These are:

- Mandatory HHMs (required where a site's average peak electricity demand exceeded 100kW in three out of the previous 12 months)
- Voluntary HHMs
- Half-hourly light meters
- Pseudo HHMs

The basic rule under CRC is that any electricity consumption counts as your responsibility if your organisation holds the contract with the electricity supplier for that electricity supply. Generally this will be the organisation responsible for paying the bill.

CRC QUALIFICATION PROCESS - SOURCE DECC



REGISTERING FOR FULL PARTICIPATION

If your organisation's total half hourly electricity consumption was at least 6,000 MWh during the qualification year then you qualify as a participant in the CRC.

You must register for CRC using the online registry during the registration period. For the introductory phase, this is from 1 April 2010 until 30 September 2010.

When you register you will have to provide information including:

- Information on the organisation and its principal subsidiaries
- Identification information for the person(s) responsible for the organisation's participation in CRC
- A list of all your organisation's HHM settled on the half hourly market and
- Total half hourly electricity used

If your organisation is eligible for CRC, but has failed to register by the end of the registration period, you will have to pay a fixed fine of £5,000. Then for each subsequent working day you fail to register, you will be fined an additional £500.



WHAT EMISSIONS ARE INCLUDED IN CRC?

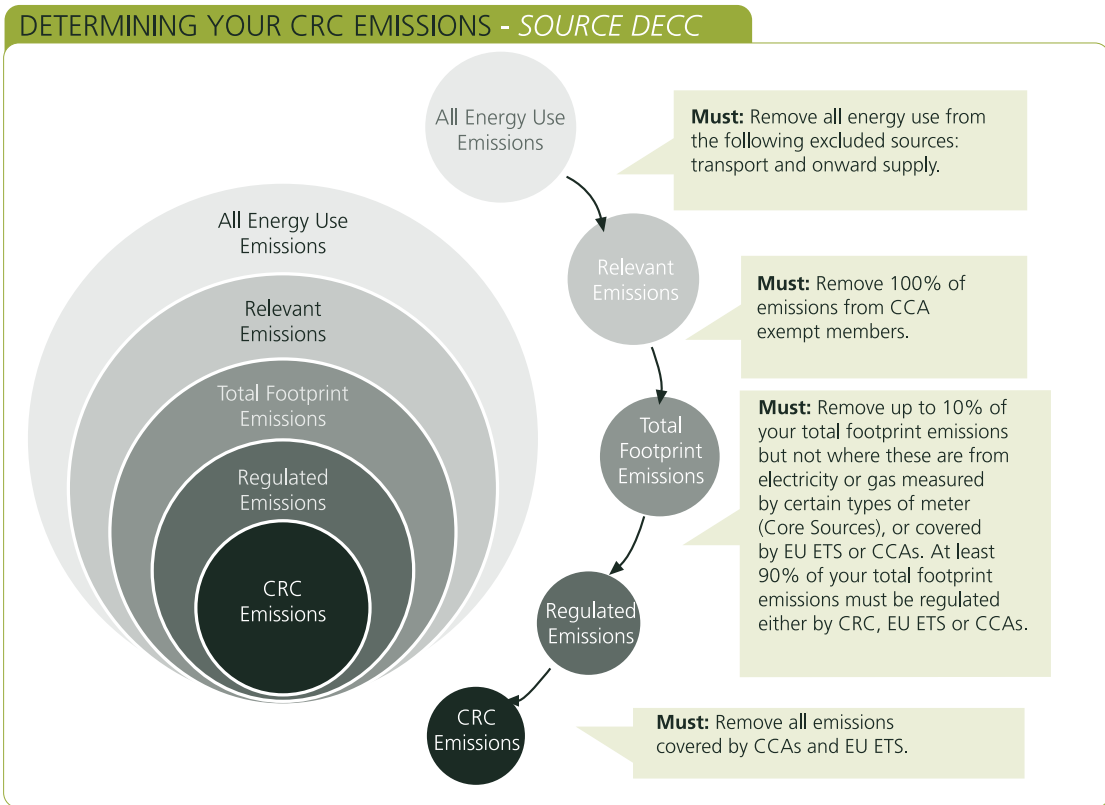
There are two rules that determine CRC emissions:

1. All your emissions from core sources of energy must be included in your CRC emissions, unless they are covered by EU Emissions Trading System (EU ETS) or CCAs.
2. At least 90% of your total footprint emissions must be regulated either by CRC or by EU ETS or CCAs.

The remaining 10% of your emissions may be omitted, primarily because the administrative burden of accounting for some very small sources of energy every year would be disproportionately large.

Core sources are all emissions from the following sources:

- All electricity consumed through HHMs (including pseudo HHM)
- All electricity consumed through AMR meters
- All electricity consumed through profile class 5-8 meters
- All daily-read gas meters
- All gas consumed through AMR meters
- All non-daily metered gas consumption of more than 73,200 kWh per annum



MEASURING PERFORMANCE

Each year data on each participant will be collected and used to rank the organisations according to their performance. Performance is measured using three different metrics:

- 'Absolute' metric
- 'Early Action' metric
- 'Growth' metric

These metrics are weighted in order to place greater importance on actual emissions reduction. However, in year 1 (2010-11) only the 'Early Action' metric will be used, meaning that these two options account for 100% of the organisation's score.

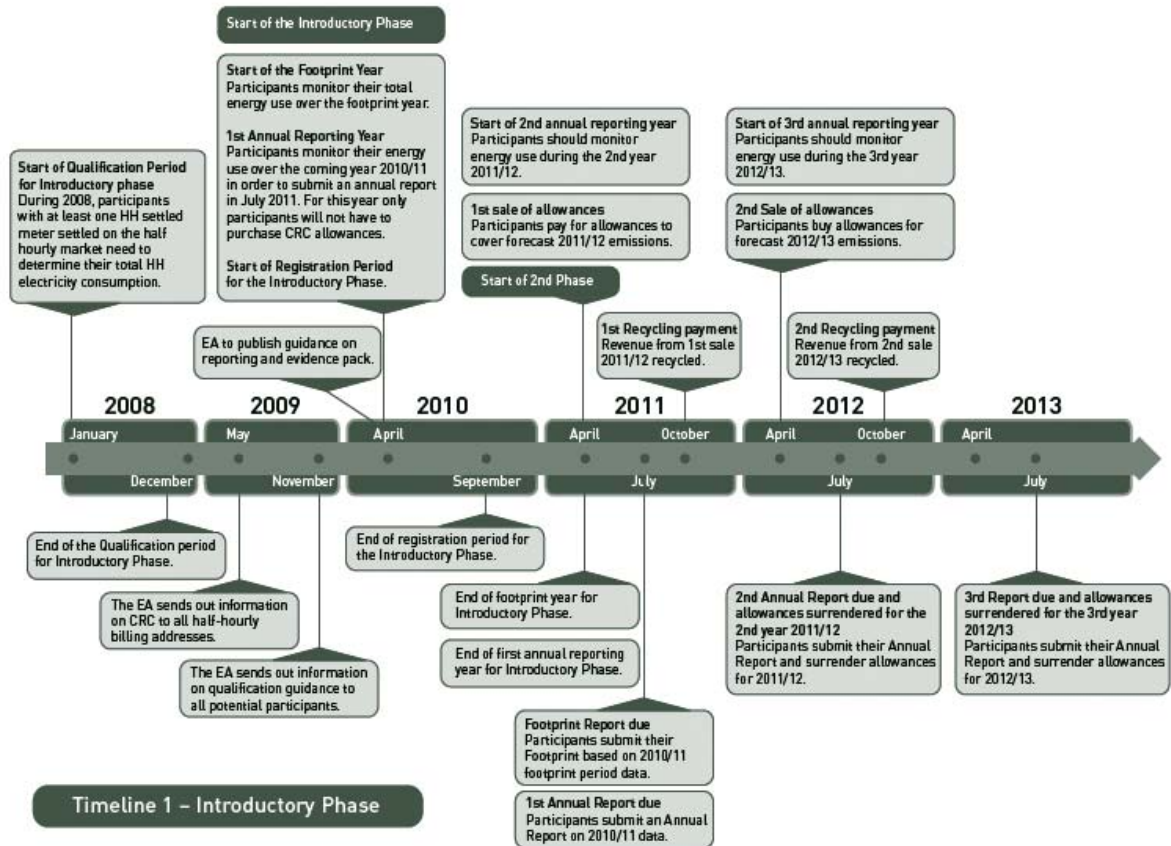
Note: Organisations are only legally required to provide information for the 'Absolute' metric. However, this will ensure poor performance in both years one and two and result in a lower league table position.

METRICS TABLE - SOURCE DECC

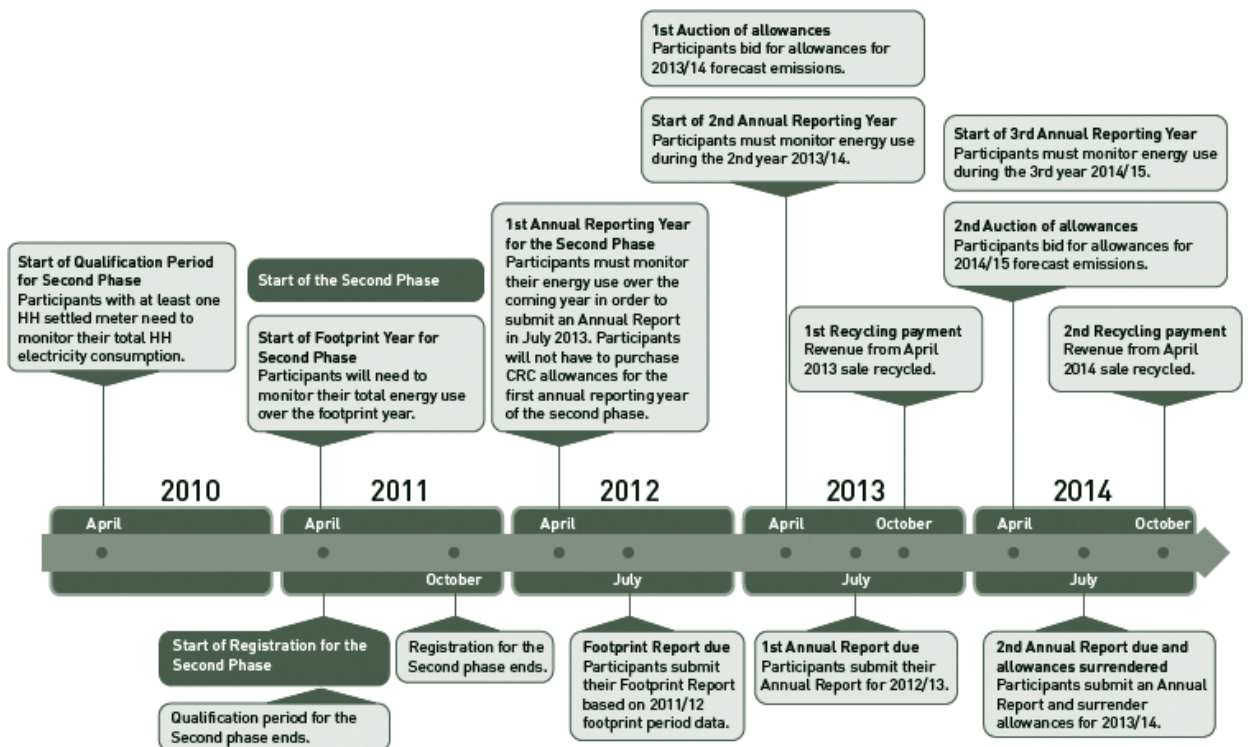
METRIC	DESCRIPTION	WEIGHTING YEAR 1	WEIGHTING YEARS 2 & 3	WEIGHTING FUTURE PHASES
Absolute Metric	Measurement of percentage emissions change against rolling 5 year average	0%	45%	60%
Early Action Metric	Recognises good energy management in early stages based around two factors: <ol style="list-style-type: none"> 1. Percentage of non-mandatory HH metered electricity and gas emissions covered by voluntary AMR by March 31 of each year 2. Percentage of organisation's emissions covered by Carbon Trust Standard certificate by March 31 of each year 	100%	40%	20%
Growth Metric	Gives recognition for organisations if they are growing or declining. Effectively percentage change in emissions per unit turnover, compared to a rolling 5 year average.	0%	15%	20%

IMPLEMENTATION AND ROLL-OUT OF SCHEME

Timeline 1: Introductory Phase



Timeline 2: Second Phase



IMPACTS OF CRC ON ORGANISATIONS

It is the intention of the UK Government that the cost of participation in the scheme is well outweighed by the potential savings through performance bonuses and reduced energy costs.

The CRC will pose a number of challenges including determining whether an Owner or Tenant is responsible for submission of emissions. This responsibility will lie with the organisation whose details appear on the energy bill. Thus, the organisation directly under contract with the energy supplier will be accountable for the associated emissions under CRC.

This said, there are obvious financial costs that must be considered by organisations when cash flow assessments are carried out.

(please refer to separate documentation available)

FINANCIAL COSTS

REGISTRATION AND ANNUAL ADMINISTRATION FEES

There is a registration fee for all participants.

There are also subsequent annual fees for administration of this account. These fees are paid to recover costs for administering CRC and have been developed by Government in consultation with the regulators. The fees are set out in the regulations, and a single set of charges applies throughout the UK.



ALLOWANCES

Organisations must pay for allowances to cover their emissions for 2011 and 2012. The cost of these allowances during phase 1 is fixed at £12 / tonneCO₂.

This means that an organisation with annual electricity use of 50,000 MWh and gas usage of 13,500 MWh they will spend £350,000 on allowances.

If additional allowances are required due to inaccurate emissions forecasts these can be purchased from the secondary market or alternatively from a 'safety valve' process. The price of allowances on the secondary market will be dictated by supply and demand, and allowances through the 'safety valve' will be set at the cost of allowances on the EU ETS scheme, with a lower floor value set at the initial fixed price auction cost.

INTERNAL ADMINISTRATIVE FEES

Allowance has to be made for the administrative costs of continued participation in the scheme. These costs relate to the time associated with recording and reporting energy use and other metrics to the scheme administrators, as well as reporting to stakeholders.

In order to improve performance league table standings, it will be necessary to implement improvements in energy use throughout the organisation. These costs may include external consultancy fees, as well as capital expenditure and installation costs.

Improvement measures will vary from inexpensive easily implemented improvements to more expensive introduction of Low or Zero Carbon (LZC) products.

The feasibility of more expensive options can now be assessed against not simply the energy cost savings, but also the known cost impact of reduced carbon emissions resulting in lower numbers of allowances required and the predicted improvement in league table standings leading to higher reward payments.

PENALTIES

Failure of an eligible organisation to register by the end of the registration period will result in a fixed fine of £5,000, with an additional fine of £500 for each subsequent working day until registration

Failure for registered organisations to submit a 'footprint report' will result in a fixed fine of £5,000, with an additional fine of £0.05/tCO₂ in the organisations emissions for each subsequent working day until submission.

Failure of an organisation to keep an evidence pack will result in a fine of £5/tCO₂ in the organisations emissions

Failure for registered organisations to submit an annual report will result in a fixed fine of £5,000, with an additional fine of £0.05/tCO₂ in the organisations emissions for each subsequent working day until submission.

Failure to comply with the performance commitment will result in a fine of £40/tCO₂ for each allowance that should have been obtained

Incorrect reporting of emissions will result in a fine of £40/tCO₂ of emissions incorrectly reported (where over a margin of error of 5%)

FINANCIAL REWARDS

REVENUE RECYCLING

As the scheme is revenue neutral for the exchequer, all payments made for allowances are recycled to all scheme members. The recycling payments are calculated in two elements;

1. Set payment based on organisation's proportion of total CRC emissions.

e.g. If an organisation has 250,000 tonnes of CO₂ emissions in 2010/11, and the total emissions from all participants is 10,000,000 tCO₂ then they shall receive 2.5% of the total revenue, which at £12/tCO₂ would equate to £3m.

2. This figure is adjusted by a bonus or penalty payment based on their position within the performance league table. This bonus penalty rate increases each year from an initial ±'b110% up to ±'b150%. This will be reviewed by Government after year 5.

e.g. If the same organisation was to be top of the league table, in year 1, they would be rewarded with an additional £300,000

It is important to note that when an organisation reduces its CO₂ emissions at a greater than average rate, that organisation will need to purchase fewer allowances at the same time as receiving a greater share of the recycling pot, meaning a double financial reward for energy use reduction.

REDUCED ENERGY COSTS

Separately from CRC costs, the improvement in carbon emissions through reduced energy usage will represent a monetary saving to the organisation as fewer units of energy will be required throughout the year. This reward can be viewed as a by-product of good performance in the CRC.

PHASE	YEAR	BONUS/PENALTY RATE
Introductory phase	year one	+/-10%
Introductory phase	year two	+/-20%
First capped phase	year three	+/-30%
First capped phase	year four	+/-40%
First capped phase	year five	+/-50%

REPUTATION MANAGEMENT

The most obvious non financial rewards or penalties relate to reputation management and may impact on Corporate Social Responsibility.

Performance league tables are published each year and are available in the public domain. As such easy comparison can be made between organisations allowing positive reputation to be gained from out performance of organisations of a similar standing or business sector.

HOW ORGANISATIONS MAY REACT TO CRC

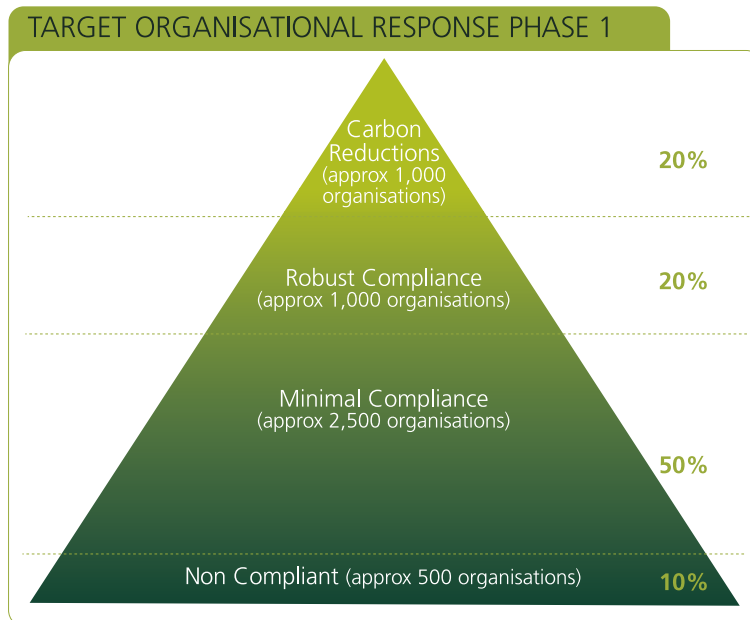
Analysis suggests that in the early years of the scheme organisations will respond in one of four ways.

- Failed compliance
- Minimal Compliance
- Robust Compliance
- Carbon Reductions

Those organisations which fall into the lower brackets of non or minimal compliance will receive the penalties and lowest rewards (up to 2%) on their recycling payments.

Those that seek to achieve robust compliance and Carbon Reductions will be looking at rewards from 2-10% in year one, growing obviously to 10-50% in year five of the scheme.

To implement either robust compliance, or especially Carbon Reductions, the advice of consultants will be required, not only in providing guidance on energy best practice and compliance advice, but more importantly to predict future carbon savings from proposed energy saving measures of low to zero carbon technology.



Stroma will guide your organisation through the mechanisms of compliance, as a minimum, but can offer

Carbon Reduction Consultancy

based around your existing building stock ranging from basic energy audits, energy and CO₂ benchmarking and thermal simulation as a part of feasibility studies and whole life cost analysis.

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HOW STROMA CAN HELP YOU MEET YOUR CRC OBLIGATIONS

EVALUATING WHETHER YOUR ORGANISATION WILL BE IMPACTED BY THE CRC LEGISLATION

- Analysis of 2008 mandatory Half Hourly electricity data

OFFERING “BEYOND COMPLIANCE” ADVICE

- Providing feasibility studies, whole life cycle costings and payback analysis of potential energy and CO₂ improvements
- Assessing funding opportunities

DEVELOPING A COMPLIANCE AND IMPROVEMENT STRATEGY

- Advising on Landlord and Tenant responsibilities
- Helping you achieve the initial early action measures
- Assessing your emissions that will be incorporated into the CRC scheme in order to:
- Calculate the allowances that you will need to purchase
- Predict impact on cash flow. Failure to purchase the correct allowances may result in higher charges, penalties and further impact cash flow.
- Build your energy saving plan in order to maximise league standings and reduce necessary allowance purchases through:
- Assessment and benchmarking of existing building stock Energy and CO₂ performance
- Highlighting areas of immediate possible improvement
- M&E design advice
- Use of basic energy audits and complex energy modelling techniques





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