



Carbon Reduction Commitment (CRC)

Understanding Complexity, Mitigating
Risk, and Capturing Opportunity

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Implications of the Carbon Reduction Commitment (CRC) are quite far-reaching and will apply both within the public and private sectors across the United Kingdom. About 20,000 organisations will likely be affected, based on how much electricity they consumed in the baseline year of 2008. Disclosures will be required for submission to the Environment Agency by the summer of 2010 at which time eligibility will have been calculated and compliance proven.

The Carbon Reduction Commitment

The UK government has taken the initiative to combat the adverse effects of climate change caused by Greenhouse Gas (GHG) emissions. On March 12, 2009 the Department for Energy and Climate Change, in the United Kingdom, released a draft user guide to explain the legislation contained within the Climate Change Act of 2008.

The guide details the Carbon Reduction Commitment (CRC), which is a mandatory emissions trading scheme, designed with the primary intent of improving energy efficiency and reducing emissions of carbon dioxide across the country.

Implications of the CRC Reporting Regulation

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Governments around the world are in general agreement that the levels of greenhouse gas emissions must be aggressively reduced or significant adverse effects are likely. Harmful levels of carbon dioxide are present within the atmosphere and it is estimated that these levels have increased by more than 40% since the dawn of the industrial age.

To ensure that catastrophic damage does not befall our environment the UK government is one of many to adopt a target to reduce greenhouse gas emissions by at least 80% by the year 2050, as compared to a 1990 baseline.

Summary of Organisational Participation

The Carbon Reduction Commitment requires that participatory organisations must purchase allowances from the government, which are based on each ton of carbon dioxide that they emit. These allowances will then be “traded” back to the government according to an enterprise's actual usage.

Companies may trade allowances on the secondary market and in particular may sell any unused allowances to those who find that they need more.

Those organisations that are able to achieve increased energy efficiency will thus also benefit by not having to purchase as many allowances in future. The government also maintains an annual performance league table which will detail a further benefit – the CRC is intended to be revenue neutral to the government and the revenues amassed from the scheme will be passed back to organisations that excel.

Description of CRC Reporting Requirements

As of the early summer 2009 the CRC is still in draft mode, but it is intended that the program will start in April 2010. The introductory phase lasts for three years, and is followed by subsequent phases lasting for seven years each. Each phase contains a preparatory stage which lasts for two years and overlaps with the previous phase.

To further analyse each phase, organisations must work out whether they qualify or not by participating in a qualification analysis period. This results in an information disclosure at the least, and possibly full participation in the remainder of the phase.

In general, companies must monitor their electricity consumption by reference to their half hourly meters during the qualification period. For the introductory phase of the CRC, calendar year 2008 must be observed.

Following the qualification period, a registration period enables participatory organisations to register with the administrator online. For the first phase, it is anticipated that this period will last from April 2010 until the end of September of the same year.

During what is being called the “footprint year,” participants must actively monitor their energy use. A report must be submitted and a footprint year is

usually run prior to the start of each phase, but in the case of the first phase will run concurrently, i.e. the financial year 2010/2011.

Following the footprint financial year, a series of compliance years will then take place, during which participating companies must buy their allowances, based on their expected use and must monitor results.

Verisae can help organisations to determine whether they must participate in CRC and if so, can further help to determine emission sources, capture & compare energy consumption results, and provide a series of reports for both internal management and external auditors.

The company has considerable experience in the field of enterprise carbon accounting and emissions management systems and experience within the real world environment.

According to the UK government, around 20,000 public and private sector enterprises will be required to engage in the CRC. Of these, the government further estimates that about 25%, or 5,000 organisations must participate fully.

Determining Qualification for CRC Reporting

To determine qualification, an organisation must have at least one half hourly meter (HHM), settled on the half hourly market. These meters are installed when a site's average peak electricity demand exceeded 100 kW during three of the preceding 12 months. The consumption through all half hourly meters must be at least 6000 Mwh pa.

You should note that to calculate your annual electricity consumption, all types of half hourly meters should be monitored including remotely read automatic meter reading meters, known as AMR.

Special Note: Only main meters measuring electricity or gas supplies need to be monitored, and not sub meters or clip on devices.

To help you determine qualification, the administrator will send out information detailing 2008 consumption data for potentially affected meters, enabling the organisation to calculate its liability for 2008. These information packets have most likely already arrived at select locations across your organisation.

It is important to note that electricity consumption counts as your responsibility if you hold the contract with the supplier of electricity or whether you purchase the electricity through a third-party agent for your usage.

However, in a landlord and tenant situation, if the landlord organisation pays the bills, then it is responsible for electricity use and cannot be considered as an agent for the tenant in this situation.

Whilst the final details are still being drawn up, during September of 2009 it is expected that the scheme administrator will dispatch a qualification package to organisations listed as using half hourly meters settled on the half hourly market. This will include details from 2008 and will help an organisation work out its eligibility and obligations.

Importance of Understanding Energy Consumption

It must be stressed that the qualification for CRC is based solely on electricity consumption, not electricity used for the generation, transmission, supply or distribution of electricity. Electricity consumption will be measured as a core source, together with gas consumption measured through daily metered gas meters, AMR meters and any non-daily metered gas consumption of more than 73,200 kWh per annum.

In determining who is eligible to participate an organisation must look at its composition. If it is a single entity organisation, determination is straightforward, but organisations that are part of a larger group must come together to report as one.

There are specific rules applying to various organisational structures:

- subsidiaries,
- central government departments,
- joint ventures,
- franchise arrangements,
- schools,
- universities, and
- local authorities

There are some quite complex rules covering organisational boundaries and Verisae Inc. has integrated methods for defining such boundaries. Verisae excels

at aggregating energy data and assisting multinational organisations understand how their UK operation or facility must comply and report.

It should be noted that if an organisation uses a large majority of their electricity for transport purposes they may in certain circumstances be exempt. If, after subtracting the amount of electricity used for transport from total electricity consumption measured through HHM's the reading is less than 1000 Mwh, then a business will qualify as exempt.

Participation in the Carbon Reduction Commitment Initiative

Once an organisation has determined that it must participate, either by disclosure or through participation, a specific course of action is required.

For those enterprises that must file a disclosure only this may be done via an online CRC registry, to be established. Within the disclosure you must include a list of all your half hourly meters settled on the half hourly market and calculate the electricity consumed.

Whilst full participation is not required unless you exceed the 6000 Mwh threshold, if you do consume more than 3000 Mwh you must fully disclose the total annual consumption. For organisations that consume less than 3000 Mwh you must simply check the appropriate box.

If an organisation must participate in the full reporting scheme, the first step is to prepare a comprehensive record of carbon dioxide emissions during the footprint year – 2010/2011 during the inaugural phase.

Special Note: Emissions relating to energy used for onward supply or for transportation purposes are irrelevant and should be excluded.

This report must be submitted to the administrator and will be the basis upon which the company buys allowances for their projected use. The report will be referred to at the end of each compliance year and comparison made against actual CO2 allowances emitted.

An Organisation-Wide Carbon Baseline is the Starting Point

An organisation's total footprint emissions include all energy use across the organisation from electricity, gas and any other fuel types, such as coal, diesel or LPG. Energy use may be calculated by referring to meter readings, original copies of utility bills or fuel delivery invoices.

To determine actual carbon dioxide information, an organisation must translate its actual energy usage using a number of different emissions factors that are stipulated within the CRC regulations. Once these calculations have been determined, total CO2 emissions will be established.

Climate Change Agreements (CCA) and CRC Participation

If, as a single entity, an organisation already has a Climate Change Agreement (CAA) which is a regulatory agreement between the UK government and “energy-intensive” industries, and at least 25% of emissions are covered by this, then it is exempt from the CRC. Slightly more complex arrangements govern entities that are a part of an organisational group.

At this stage, total footprint emissions - in terms of corporate requirements and those of the CRC - are defined as relevant emissions (less transport and onward supply) minus emissions from exempted parts of the organisation.

Finally, the emissions that will actually be included in the CRC (for the purchase of allowances) must be calculated.

Core source emissions, including electricity and gas as previously described, must be included unless they are covered by the European Union's Emissions Trading System (EU ETF) or by Climate Change Agreements (CAA).

At least 90% of total footprint emissions must be regulated and the remaining 10% may be omitted as, according to the administrator, “the administrative burden of accounting for some very small sources of energy every year would be disproportionately large.”

If you find that you have not reached the point where 90% of your total footprint emissions are regulated then you must include some of your residual sources until you reach the 90% threshold. The government defines residual sources as energy use other than core sources, but has yet to identify and codify this theory.

Once you have arrived at your final eligibility, you must list the sources of emissions. The footprint report must include the total footprint emissions, the CRC emissions and details of any exemptions. The deadline for submitting the report is the last working day of July, so in the first phase, July 29, 2011.

Trading of CRC Emission Allowances

When CRC gets underway, participants will need to purchase allowances from the government based on each tonne of CO₂ that they anticipate emitting during the compliance year. The government will sell these allowances at the start of each year.

During the inaugural phase, government will sell allowances at the rate of £12 per tonne and during the rollout, organisations will need to purchase allowances retrospectively to cover recorded emissions for 2010/11 and to cover projected CRC emissions for 2011/12. In future phases, sale of allowances will be conducted via a closed auction.

If an organisation finds that it needs extra allowances, it may trade with other CRC participants on the secondary market or via a safety valve. The safety valve has been established by the government administrator to safeguard companies should the price on the secondary market become too high.

Safety valve prices will be related to the EU ETF carbon price. Conversely, if an organisation has purchased allowances in excess of its needs for that year, it may sell to the secondary market or bank for future use.

It is very important for an organisation to take steps to mitigate the potentially adverse effects on its budget during the start of this phase. It is necessary to try and work out how many allowances you will need to buy based on current CRC emissions and to remember that in April 2011 you will need to buy allowances for two years, i.e. for past emissions and for future emissions.

Reporting Your Emissions to CRC Administrative Authorities

Organisations will be required to submit an annual report to the CRC registry. Make a special note that during the introductory phase the first annual report and footprint report must be submitted together at the end of July 2011.

An important part of the CRC is the performance league table; to be published by the government after all reports have been received and reviewed. Three different metrics will be reported. Relative changes in an organisation's emission levels will be reflected in an absolute metric.

Verisae can act as a central auditing system for an organisation, regardless of its complexity. Organisations might want to incorporate

these data collection and management methods to help them comply with the requirements and ensure optimal scoring capabilities under the government's league table system.

If an organisation has made reductions in its energy use prior to the scheme introduction, this will be reported as an early action metric. Should an entity increase its absolute emissions, these will be measured according to the change in emissions intensity, designed to allow organisations that are expanding in an energy-efficient way to gain credit. This is known as the growth metric.

Organisations should note that they are only required to provide information for the absolute metric, but it may well be in their interests to provide further information to enable them to score appropriately on the league points table.

Audit of CRC Reportable Carbon Emissions

As could be expected, the government will instigate a process of audit and regulation. They have determined that they will use an assessment of an organisation's “risk,” although it is anticipated that all organisations taking part in the scheme will be subject. Site visits will be made where necessary, either at random or due to assessments made.

Future Phases of the CRC Regulation

Once the introductory phase of the CRC has been completed, capped phases will be rolled out. Broadly speaking, this means that limits will be introduced governing the total number of allowances available and the annual sale of these allowances will be made by auction.

Special Note: *This process starts in April 2013.*

By capping the total number of allowances made available by the government, an overall national reduction in the amount of CO₂ emissions is expected. Furthermore, there will be a maximum limit on the percentage of allowances that can be bought by any one party to make it fair for all involved.

Penalties for Non-Compliance with CRC Requirements

Whilst a process of audit and regulation could be expected, so could significant penalties for noncompliance, falsification and obstruction.

An entity that fails to register will receive an immediate fine of £5,000 with £500 per day for each subsequent working day of delay until the next reporting deadline. Furthermore, the organisation's noncompliance will be made publicly known.

Verisae is ready to hit the ground running with carbon management solutions that have been tried and tested. The company specialises in the definition of the problem, can help to establish organisational boundaries and obligations, track emission sources down to the asset level, install real-time monitoring and reporting devices, and provide a central auditing system to cover the collection of data, its management and the relevant reporting requirements.

If a company must participate and fails to make the relevant disclosure, it will receive a fine of £1,000.

If a footprint report is not provided by the reporting deadline, a £5,000 fine will be levied, together with a fine of five pence per tonne of CO2 per day for each day of delay up to the maximum of 40 days. Following the 40 day threshold, the fine is doubled.

Recommendations for Carbon Management and Planning

With immediate effect, organisations that are affected by the CRC should conduct an analysis of their organisational structure, determine usage of the pivotal half hourly meter settled on the half hourly market, determine electricity used this way and assess whether consumption exceeded the threshold.

This should be determined for calendar year 2008 and should enable the entity to be ready to receive information and qualification packs issued by the administrator.

Introductory information should be studied by a nominated person within an organisation, who should make sure that he or she is fully familiar with all the requirements of the scheme.

Verisae Inc., will be delighted to discuss how the company can help an organisation determine its position, its auditing requirements, and assist your organisation mitigate the CRC Reporting challenges.

Sustainability Resource Planning (SRP)

Verisae, Inc. empowers organisations to engage in “On Demand Sustainability” initiatives in a localised facility or across a global enterprise. Our core offerings allow distributed organisations across the globe to effectively track and manage assets from the usage, cost to run, energy consumption, and carbon consequence perspectives.

***Sustainability Resource Planning (SRP)** - Covers the core functions of sustainability needs by combining multiple business processes and systems into one database to use across the enterprise.*

They are uniquely positioned to help organisations prove return on investment (ROI) on Greenhouse Gas management and reporting. Their solutions are delivered via a common web browser so that organisations with thousands of locations and 10's of thousands of assets can be implemented in a manner of months.

Given the heightened priority of corporate sustainability, Verisae is positioned right now to enable organisations to establish a carbon footprint baseline, outline energy management options, and provide a comprehensive corporate sustainability action plans in a manner of months. All of which can be implemented with metrics in place to highlight bottom-line cost savings and return on investment timelines.

- [Enterprise Asset Management \(EAM\)](#) is a full function Computerised Maintenance Management System (CMMS) with incredible flexibility.
- [Enterprise Emissions Tracking \(EET\)](#) provides a company with real time carbon footprint reporting.
- [Enterprise Refrigerant Management \(ERM\)](#) is a web-based solution to control refrigerant use. Refrigerant tracking at locations containing refrigerants is critical to the environment and to an organisation's bottom line.
- [Enterprise Energy Management \(EEM\)](#) allows multi-site clients can have a comprehensive view of their entire energy portfolio across their entire enterprise.

Ultimately, Verisae provides the services and the knowledge that drives decisions from a dollars and sense perspective. Verisae has clients throughout the United States of America, the United Kingdom, Poland, the Czech Republic, the Slovak Republic, China and Thailand. Verisae, Inc. is headquartered in Minneapolis with a branch office in the United Kingdom.

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