



Guide to the CRC Energy Efficiency Scheme



Starting in April 2010 the **CRC Energy Efficiency Scheme** (formerly known as the Carbon Reduction Commitment scheme) is a **mandatory initiative** from the UK Government.



The aim of the CRC Energy Efficiency Scheme is to lower national carbon emissions by encouraging organisations in the public and private sector to become more energy efficient through energy saving projects. The target is to reduce the level of carbon emissions by larger 'lower energy intensive' organisations by 1.2 million tonnes of CO₂ by 2020. As a Climate Change Bill commitment the scheme is vital to achieving the overall targets of a reduction in CO₂ emissions of at least 80% by 2050.

Those businesses which cut energy costs through low energy lighting, insulation, free cooling chillers and other energy efficient technologies will not only benefit from lower energy bills but will lessen the financial impact of being forced to buy carbon credits under the scheme, gain great PR from climbing the CRC Energy Efficiency Scheme league tables, and actually turn their carbon credits into profit at the end of each financial year!

For **expert advice** call us on **01509 261100** or visit **www.on365.co.uk**



Is my organisation affected?

The CRC Energy Efficiency Scheme is a mandatory commitment for all UK public and private sector organisations using more than **6,000 MWh through half-hourly meters annually (this equates to around £500,000 in yearly energy bills)**, starting in April 2010.



It is expected around 20,000 organisations will be required to participate in some way. The majority will simply be required to make an information disclosure that tells the administrator about their electricity usage however around **5,000 organisations will be required to participate fully** where it will cost around **£60,000 per year at the entry level**.

These projected expenses include the cost of staff and their appropriate training for the CRC Energy Efficiency Scheme reporting procedure. Participants will have to purchase carbon allowances based on their anticipated level of CO₂ emissions. The cost of these allowances will be refunded at the end of each year, plus or minus a bonus or penalty payment, depending on how the organisation performs in a CRC League Table of CO₂ reductions.

If your business has a half-hourly meter but consumes less than 6,000MWh per year, your business will not be compelled to be involved in the CRC Energy Efficiency Scheme but you will need to disclose some information to the CRC Energy Efficiency Scheme administrator: a list of the half-hourly meters that your business uses and your annual energy usage from them should it exceed 3,000MWh per year.

If your business is a subsidiary of a larger organisation but qualifies for the CRC Energy Efficiency Scheme in its own right, for the purposes of the CRC Energy Efficiency Scheme your business can disaggregate itself from your parent group/organisational body and participate independently.

Instructions for how to access qualification packs were sent to the billing addresses of all half-hourly meters settled on the half-hourly market in November 2009. A further detail on information disclosures was given in those packs. The CRC Energy Efficiency Scheme Qualification Packs and supporting guidance are themselves available online, as part of a government effort to reduce paper waste and cut costs.

at a glance

Mandatory commitment if:

- At least one half-hourly electricity meter settled on the half-hourly market in 2008.
- A 'HH' electricity consumption of more than 6000 MWh in 2008.

Can my business avoid the CRC Energy Efficiency Scheme?

Unfortunately not. The CRC Energy Efficiency Scheme is a mandatory scheme and it places legal obligations on organisations to disclose information and (for larger energy users) report on emissions and purchase allowances from the Government. **Any organisation that does not comply with its legal obligations under CRC will be subject to financial penalties.**

The qualification period for the introductory phase of the CRC Energy Efficiency Scheme was January to December 2008. It is the energy bills from that year which will be used to decide participation. However, actions taken now to reduce your business's energy usage will strongly count towards your position in the first three years' league tables, which will be published as a way of judging the relative performance of participating companies.

League table positioning has important financial implications for businesses involved with CRC Energy Efficiency Scheme. Reimbursement of CRC Energy Efficiency Scheme credits is modified by league table positioning, so that companies at the top of the table can actually profit from their involvement with the scheme!

The qualification period for the first seven-year CRC Energy Efficiency Scheme cycle is likely to be the 2011 calendar year. Companies below the current qualification threshold but who anticipate growth in their business's energy usage, especially due to company growth and expansion, should look for ways of saving energy now - in order to avoid inclusion in the next cycle.

As companies involved in the scheme reduce their energy usage, and as the Government continues to set more stringent emission targets in order to meet their overall targets of an 80% emission reduction in greenhouse gas emissions by 2050, expect the qualification threshold to be lowered for the next phase.

How does the CRC Energy Efficiency Scheme work?

The CRC Energy Efficiency Scheme will eventually operate over seven-year cycles, but the initial introductory cycle will run for three years from April 2010 and consists of four key phases:

1. Qualification Period (2008)

The period for which organisations must assess whether or not they qualify to make an information disclosure or participate fully in the CRC Energy Efficiency Scheme.

2. Registration Period (April - Sept. 2010)

The period for which organisations that are required to take action under the scheme must either submit their information disclosure or register as a participant with the administrator.

3. Footprint Year (April 2010 – March 2011)

Participants must monitor their total emissions from energy supplies and determine what emissions must be included in the CRC Energy Efficiency Scheme. This is the first compliance year of each phase. This data must be reported to the administrator in a footprint report.

4. Compliance Years (2010 - 2013)

Run from April to March like financial years during which participants must take some action to comply with the CRC Energy Efficiency Scheme. There are 3 compliance years in this first introductory cycle then 7 compliance years in all subsequent cycles.

The introductory cycle's qualification period has already expired. In order to get the scheme up and running, the other three phases of the CRC Energy Efficiency Scheme will run concurrently. The Registration period requires all firms mandatorily affected to register with the scheme, outlining their total energy usage across the company (not just the electricity usage through half-hourly meters, but emissions dealt with under the Climate Change Agreements and the EU Emissions Trading Scheme are exempt).

The Footprint year requires monitoring of emissions which will be used as a baseline for following years, whilst Compliance years require the purchase of carbon allowances to cover emissions sufficiently. They are bought on a yearly basis in advance based on projected emissions, and then unused CRC Energy Efficiency Scheme credits can be traded on the secondary market.

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Key Dates

Jan - Dec '08: Period used to identify which organisations have consumed more than 6000MWh of half hourly metered electricity.

Jul '09: The Environment Agency issued letters to the billing address of all half-hourly metered properties to make them aware of CRC.

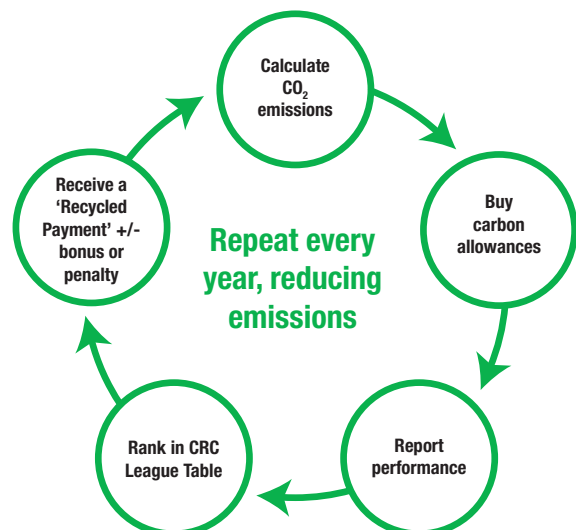
Apr '10: CRC Scheme officially begins. This date will be used as both the start of the 1st compliance year and the start of the 'Footprint Year'.

Apr - Sept '10: Official Registration Period.

Apr '11: First sale of allowances to cover following year's forecasted emissions.

Apr '11: Footprint Reports must be submitted and allowances surrendered.

Oct '11: 1st Recycling Payment will be made with companies receiving allowances plus/minus bonus/penalty depending on their League Table position.



When does my business need to buy Carbon Credits?

Purchasing credits for the first year is deferred. The first round of CRC Energy Efficiency Scheme purchasing is in April 2011, with the carbon credits on sale at a fixed price of £12/tCO₂. This round of allowance purchases will cover only the second year of the scheme. A previous incarnation of the scheme had intended to demand retrospective purchases for 2010, but this has now been dropped. Businesses will be forced to buy credits for those emissions that they estimate they will use in 2011.

Some companies have already begun to factor the cost of CRC Energy Efficiency Scheme credits into their budget plans. The extra burden of a year's worth of carbon penalties at once also gives your company a clear choice: do you save money in order to be allowed to spend money on energy bills, or spend money to save money on energy bills. Energy efficiency projects are often sidelined due to cash flow considerations: the CRC Energy Efficiency Scheme will force your business to budget extra funds. How you choose to use them will have a critical effect on your company's long-term profitability, with energy-efficiency investments guaranteeing increased profits year-on-year.

Who profits from the CRC Energy Efficiency Scheme?

The money collected by the UK Government from the scheme is recycled directly back to the participants at the end of each Compliance year: the entire scheme from the Government's perspective is revenue-neutral. The revenue is repaid to the companies involved in proportion to their relative emissions in the first year of the scheme - for example, if a company was responsible for 2% of all emissions in the scheme in the first year, that company would receive 2% of the funds raised each year of the CRC Energy Efficiency Scheme cycle. Fixed-rate allocation purchases are exempt from VAT, as are safety valve purchases over the introductory phase. Trading in CRC Energy Efficiency Scheme allowances on the carbon market, however, will be taxed by the government.

This baseline figure is then modified by a bonus or penalty depending on where in the CRC Energy Efficiency Scheme league tables the company resides. The bonus/penalty rate for the top- and bottom-placed participants has been set for the first five years to be:

Phase	Year	Bonus/Penalty Rate
Introductory Phase	1	+/- 10%
Introductory Phase	2	+/- 20%
First Capped Phase	3	+/- 30%
First Capped Phase	4	+/- 40%
First Capped Phase	5	+/- 50%

This refund modification scheme means that the best-performing companies in the league table will actually earn money from their involvement in the scheme, whilst poor performers will be hit by higher costs. Therefore the system creates a double-incentive for businesses to cut save energy: the Government will pay you money to save money!

How are the league tables set?

Annual league tables will detail companies' performances over the year, which are expected to be made public in order to further incentivise energy efficiency. The league table will include an absolute metric (carbon emissions), a growth metric (carbon intensity) and an early action metric.

The absolute metric is the base metric on which the league table will be constructed and will be the percentage change of annual emissions relative to the organisation's previous five year rolling average.

The growth metric will measure the organisation's percentage change in emissions per unit of turnover relative to its average emissions per unit of turnover. For the public sector it will be per unit of revenue expenditure rather than unit of turnover.

The early action metric will only feature in the Introductory CRC Energy Efficiency Scheme phase, and will be calculated from measures put in place before the CRC Energy Efficiency Scheme - equal weighting between the percentage of emissions covered by automatic metering and the percentage of emissions covered by the Carbon Trust Standard certificate or an equivalent scheme.

Members of schemes of equivalent nature to the Carbon Trust Standard may qualify for the early action metric by measuring and demonstrating an absolute carbon emissions reduction over the past three years without using offsets; using a transparent, evidence-based, high-quality carbon management system which is available to all CRC Energy Efficiency Scheme participants; verified by independent and accredited third parties.

The weightings for the three metrics in deciding league table placements will be:

Metric Weighting	Absolute	Early Action	Growth
Intro Phase Year 1	0%	100%	0%
Intro Phase Year 2	45%	40%	15%
Intro Phase Year 3	60%	20%	20%
Future Phases	75%	0%	25%

This means that for the first year of the scheme, league table rankings will be decided purely on the early action metric, meaning that attaining the Carbon Trust Standard will massively impact your company's CRC Energy Efficiency Scheme refund. The CRC Energy Efficiency Scheme will be a high-profile environmental initiative which will attract a huge amount of public and media attention, especially regarding the positioning of well-known brands in the league table. **Can your business afford to be seen at the bottom? What price for your brand's reputation?**

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Keep up-to-date with the latest information

This is new legislation so the rules and regulations governing the CRC Energy Efficiency Scheme are liable to change. It is the responsibility of all participants to ensure that they are fulfilling their legal requirements. To find out the very latest information go to www.on365.co.uk/TheGreenRoom

How can we climb the league table?

As well as attaining Carbon Trust Standard certification and getting smart meters for your energy supplies in order to maximise your early action score, greater energy efficiency is the key to benefitting from inclusion in the CRC Energy Efficiency Scheme.

Although investing in on-site renewable energy generation would seem to be an obvious method of lowering carbon emissions, **some renewable energy generation will not be exempt** (if Renewable Obligation Certificates (ROCs) are issued), and will be included at the grid average emission factor. This is so that the Government does not double up on incentives for renewables which it has under other schemes. However, credit for investing in on-site renewable energy generation will be given alongside - but not as a part of - the CRC Energy Efficiency Scheme league tables.

Additionally, emissions from the transport of people and goods are exempt. Both these exemptions mean that the focus for improvements has been strongly narrowed towards energy efficiency projects.

An initial tier of efficiency measures can be based on changing workplace behaviour. Encouraging employees to switch off lights and power down computers when not in use can make some energy savings and, in these times of economic turmoil, staff can more easily appreciate the benefits of helping their company to cut energy costs rather than cut employment costs.

The strongest way to make improvements to energy efficiency is to make investments in low-energy technology upgrades, especially in areas such as heating, refrigeration, motor control and lighting. As well as great financial benefits, businesses installing energy-efficiency products also reap substantial environmental savings and operational rewards.

Further action could be taken by embarking on more capital-intensive projects such as systems integration, green data centres and on-site generation, which generally have smaller additional carbon savings and longer ROI periods. More fundamental changes can be made by redesigning products to have a smaller manufacturing footprint, lowering the intrinsic carbon footprint of their creation.

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Benefit from a higher league table position by achieving Carbon Trust Standard.

The Carbon Trust Standard (CTS) is awarded to organisations that measure, manage and reduce their impact on climate change. By achieving CTS or an equivalent recognised standard, your organisation can benefit from a higher league table position during the first 3 years of the CRC Energy Efficiency Scheme.

Should we wait until 2011 before doing anything?

Some companies might be tempted to only start cutting back on emissions once the CRC Energy Efficiency Scheme credit purchasing system is underway, as a way of maximising the potential returns from finishing towards the top of the league table. Aside from the unpredictability involved in such a tactic arising from other companies' actions during the course of the CRC Energy Efficiency Scheme cycle, delaying energy efficiency measures will simply cost your business more money than the potential rewards.

Due to the short ROI of some energy efficiency projects, a delay could mean that by the time your company installs an energy-saving product it could have already paid for itself! The financial savings that can be made through energy efficiency are so substantial that they outweigh the likely rewards from the CRC Energy Efficiency Scheme fund recycling scheme. Inaction only costs your business more money.

Companies which engage in the process fully and invest in low energy lighting, insulation, free cooling chillers and other energy efficient technologies and business practices will reap the financial and promotional rewards of their involvement with the CRC Energy Efficiency Scheme. Companies who simply aim to comply with the paperwork will incur additional costs and risk their reputations in an ever-increasingly eco-aware consumer environment. Which will your business be?

at a glance

Automatic Meter Reading (AMR)

Organisations within the CRC Energy Efficiency Scheme can significantly increase their league table ranking during the early years of the scheme by voluntarily installing Automatic Metering (AMR) on non-mandatorily half-hour metered electricity and gas emissions. All qualifying AMR needs to be installed by 30th March 2011.



How do we get to be top of the League Table?

No company wants to be portrayed as a dangerous polluter. Such connotations can lead to lower share pricing, lost sales and damaged credibility, and can be a public relations nightmare to smooth over. Conversely, giving your company a healthy green glow can lead to a strong boost in the affections of consumers, clients and policy-makers.

Each year, the **CRC Energy Efficiency scheme** will publish a giant league table on the carbon-cutting performance of participating companies. Media outlets will dissect the list into sector-specific league tables, leaving little shelter for your company to hide from the enquiring gaze of journalists, bloggers and the public.

It's not just PR that's at stake from the league table either: the amount of money recycled to your company will depend on your placement. If your company sits towards the top of the table then you'll receive a bonus percentage on top of your recycling repayment (eventually as much as +50%), whereas if your company performs poorly then you could regain as little as half of your carbon credit money back.

Three metrics will determine your placement in the CRC Energy Efficiency Scheme league table: early action, absolute emissions and growth. Whilst the first couple of years' league tables will be dominated by companies which secured a high early action bonus, it is the absolute emission metric - the percentage change in your company's carbon emissions versus a five-year rolling average - which will eventually make up 75% of the points for the league table.

Don't get sidetracked by playing the CRC Energy Efficiency Scheme league system and worry about making gains early: let the Law of Diminishing Returns work in your favour for once! As you reduce your corporate carbon footprint, the amount that you have to reduce by each year to obtain the same relative, reduces.

What's more, because the percentage is calculated against a five-year rolling average which doesn't exist before the start of the scheme, the early performance percentages are magnified by the greater weighting on the initial years whilst the rolling average grows.

Year **Reqd % cut to maintain 25% reduction target vs. original emissions**

	Early Action (np prior data)	Late Action (5-year uniform data)
1	25	25
2	9.38	3.75
3	5.47	4.31
4	3.76	4.96
5	2.82	5.7

For example, cutting your company's carbon footprint by 25% every year against an accumulating five-year rolling average allows you to cut your emissions by only 46% over the first five years, with the fifth year of cuts requiring only a 2.8% cut against your original carbon footprint. If reductions were calculated year-on-year, the same 25% cuts every year for five years would require an absolute reduction of 76%! Leaving it until the five-year average has accumulated makes it easier to achieve the same cuts for the second year, but then it becomes harder across the following three years.

That means that energy efficiency gains made right now will help your company climb the CRC Energy Efficiency Scheme league table not just now but far into the future too. Efficiency gains now will also help you achieve a better growth metric too through the same mechanism. Efficiency projects aimed at reducing your fixed energy costs are most effective towards this metric during a recession, whilst process/manufacturing-related projects will scale well with the growth metric as your company emerges from recession.





Get expert help and advice

As the UK's leading provider of critical power and cooling services for IT, on365 can provide the necessary knowledge and expertise to assist your organisation with its CRC Energy Efficiency Scheme commitments.

For 25 years **on365** has been driving down costs, improving power and cooling efficiencies and managing risk as a specialist in the planning, installation, management and optimisation of physical IT infrastructure and utility services. Whether it's a small Server Room or a complete Datacentre build we have the necessary expertise to meet the IT power and cooling challenge, delivering support at the very foundation of your IT technology.

For organisations that increasingly need to deliver on the promise of investment made in IT, **on365** has the highest levels of knowledge and competence, understanding both the technical and practical issues involved for your business, your people and your IT infrastructure requirements.

"We do one thing and we do one thing well - we enable organisations to get the best out of whatever they choose to put in their datacentre"

Colin Richardson, on365 CEO

on365 is totally focussed on enabling organisations to get the best out of their IT environment. With our own distinct knowledge base and expertise we offer a project-based approach that can identify the priorities, recommend ways to quickly leverage existing assets to improve performance, reduce cost and lower carbon emissions.

This goes beyond taking care of design, safety, principles of operation, future growth and after-sales services. Just as importantly, we look at value and business principles such as reducing organisational risk, delivering clear and sustainable ROI on IT investment, efficiency of operation and environmental considerations.

At **on365** we've been implementing efficient IT for years using datacentre best practices that are now being termed 'green'. We understand the real needs of IT Managers and can provide sound, practical advice to help them proactively and efficiently manage across the datacentre physical infrastructure right through to chosen IT hardware.

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NEW!

No Obligation Datacentre Operational Efficiency Assessment

on365 is offering a unique Datacentre Operational Efficiency Assessment. Initially this is a no obligation review to ascertain the efficiency of your datacentre. The only commitment on your part is two hours of your IT and Facility Management's time. You can then decide whether to take a full efficiency assessment which will form part of your plan to reduce your carbon footprint and your energy costs.

The service is non-intrusive to your operations and will make recommendations where change offers the greatest returns. This includes the physical infrastructure such as power and cooling together with computational strategies such as data storage optimisation and virtualisation. You will end up with a holistic view of your datacentre efficiency and recommendations including the potential cost savings.

To find out more call us on
01509 261100 or visit:
www.on365.co.uk

glossary

Administrator

The Environment Agency (EA), Scottish Environment Protection Agency (SEPA) and the Department of the Environment in Northern Ireland are appointed as the joint scheme Administrators (referred to as the Chief Inspector in Northern Ireland). Basic administrative functions will be carried out by the EA for the whole of the UK and certain functions must be performed by them, such as operating the registry and maintaining accounts. Scheme regulation will be carried out by the relevant body in each part of the UK and include such functions as carrying out audits on participants and taking enforcement action against any participant in their jurisdiction (in the case of organisational groups this will be determined by the location of the Primary Member).

Allowance

An allowance is purchased from Government and represents the right to emit one tCO₂ by a participant. These can also be bought and sold by traders.

Annual report

The report that each participant must provide via the online registry system by the last working day in July each year, detailing their emissions for the previous financial year.

Annual reporting year

In the first phase of the CRC Energy Efficiency Scheme, an annual reporting year applies to every year of the phase. For second and subsequent phases of the scheme, it applies to the second year and all subsequent years of a particular phase only.

Automatic Meter Reading (AMR) meter

Automatic Meter Reading (AMR) meters have been developed for gas and electricity that is not subject to HHMs so that consumers can access data on supplies. These meters provide consumers with access to their energy supply data. There is a wide range of AMR equipment available, however, CRC Energy Efficiency Scheme will only capture AMR meters which can be read remotely.

The CRC Energy Efficiency Scheme (CRC)

A mandatory emissions trading scheme for non energy-intensive organisations in the public and private sector.

Compliance account

Each participant will have a compliance account through which functions such as registration, reporting and allowance purchasing and trading will be carried out via the registry.

CRC Energy Efficiency Scheme emissions

These are the emissions of each participant for which it must purchase allowances each year.

Energy Efficiency Accreditation Scheme

An accreditation formerly offered by the Carbon Trust for organisations that make energy supply savings through improved management and energy efficiency measures. This scheme has now been replaced by the Carbon Trust Standard.

Footprint report

The footprint report will contain information about organisational energy supplies and the sources to be included in the scheme for that phase. It must be submitted via the CRC Energy Efficiency Scheme registry by the last working day of July, after the end of the footprint year.

Half hourly market

This is the half hourly electricity market used by suppliers and generators to calculate the balance or imbalance, in what is generated and supplied, using electricity supplies information that is recorded half hourly.

Information disclosure

Organisations that have a settled half hourly meter but do not meet the qualification threshold for participation in CRC Energy Efficiency Scheme will have to disclose information on the HHMs they have and their electricity supplies, to the administrator via the online registry.

Introductory phase

The introductory phase is the first phase of the CRC Energy Efficiency Scheme. It begins in April 2010 and lasts for three years.

League table

A published table detailing the relative performance of all participants in CRC Energy Efficiency Scheme against the three weighted metrics: absolute metric, early action metric and growth metric.

Mandatory Half Hourly Meter (HHM)

Mandatory Half Hourly Meters (HHM) supply electricity settled on the half hourly market and are required in situations where the average peak electricity demand over the three months of highest supplies received exceeds 100kW over the previous 12 months. Note; not all half hourly meters trading on the half hourly market are classed as mandatory.

Participant

An organisation that qualifies or is otherwise required to participate, and must register under CRC Energy Efficiency Scheme. A participant must comply with all requirements of the scheme such as reporting emissions, and purchasing and surrendering allowances.

Registry

CRC Energy Efficiency Scheme will be administered online via a purpose-built website known as the CRC Energy Efficiency Scheme registry. Participants will register, report, buy and sell allowances and communicate with the administrator via this online system.

Relevant emissions

Relevant emissions refers to all an organisation's energy supply emissions, minus those from energy used for excluded activities (transport, domestic accommodation and onward supply of fuel).

Revenue recycling

All revenue raised from the sale of allowances every April is returned to participants in the form of a recycling payment to each participant. The payment is in proportion to their 2010/11 emissions, adjusted by a bonus or penalty factor linked to performance in the league table. The revenue recycling occurs six months after the end of each sale, in October.



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