

Greening your business: the journey to a low carbon economy

.....

Many businesses in Cornwall and the wider South West have already taken steps to reduce their carbon emissions and as a result are feeling the financial benefits. Managing your company's energy and resource efficiency not only helps to mitigate climate change, but can lead to cost savings, attract more business, open new markets and improve reputation and trust.

.....

The following low carbon fact sheet is designed to act as a signposting tool to guide businesses to where they can go to find information, guidance and support in relation to the business challenges and opportunities presented by a low carbon economy.

Greenhouse Gases

Man-made **climate change**, or **global warming**, is caused by the release of certain types of gas into the atmosphere. Most **greenhouse gases** have both natural and human-caused sources. **Carbon dioxide** (CO₂) is the most important greenhouse gas emitted from human sources and is emitted whenever we burn fossil fuels to produce electricity as well as in homes, factories or power stations. But other greenhouse gases are also important. **Methane** (CH₄), for example, which is emitted mainly by agriculture and landfill sites, results in approximately 25 times more warming per kilogram than CO₂. Causing more warming but emitted in smaller quantities are **nitrous oxide** (N₂O), which causes about 300 times more warming than CO₂ and released mainly from industrial processes and farming, and refrigerant gases, which typically cause several thousand times more warming than CO₂.

Cornwall's Greenhouse Gas Emissions

The first greenhouse gas inventory for Cornwall was developed on behalf of Cornwall Development Company in 2009. It reveals a detailed picture of the greenhouse gas emissions (**CO₂e**) emitted by the six key sectors in Cornwall. The report shows that for the year 2007, emissions associated with Cornwall were in the order of 4,548,121 tonnes of CO₂e. This was broken down to show the contribution from each of the key sectors groups;



Key Legislation

EU

The EU Climate and Energy Package

- In March 2007 the EU's leaders endorsed an integrated approach to climate and energy policy that aims to combat climate change and increase the EU's energy security while strengthening its competitiveness. They committed Europe to transforming itself into a highly energy-efficient, low carbon economy. To kick-start this process, the EU Heads of State and Government set a series of demanding climate and energy targets to be met by 2020, known as the "20-20-20" targets. **These are:**

- A reduction in EU greenhouse gas emissions of at least 20% below 1990 levels
- 20% of EU energy consumption to come from renewable resources
- 20% reduction in primary energy use compared with projected levels, to be achieved by improving energy efficiency.

UK

Climate Change Act

- established in 2008, this legislation provides a long-term framework to tackle climate change in the UK. The Act aims to encourage the transition to a low-carbon economy in the UK through unilateral legally binding emissions reduction targets. This means a reduction of at least 34 percent in greenhouse gas emissions by 2020 and at least 80 percent by 2050 against a 1990 baseline.

• Carbon budgets

- a cap on the total quantity of greenhouse gas emissions emitted in the UK over a specified time. Each carbon budget covers a five-year period, with three budgets currently in force and due to run from 2008-12, 2013-17 and 2018-22. In addition, the Committee on Climate Change, an independent body established under the Climate Change Act, has set out advice to Government for the fourth carbon budget (2023 to 2027). By setting the trajectory to our 2020 and 2050 targets through carbon budgets, the carbon budgeting system provides a clear, credible, long-term framework for the move to a low-carbon UK economy, giving businesses and individuals the direction and certainty they need to play their part.

• The Carbon Reduction Commitment (CRC)

Energy Efficiency Scheme came into force in April 2010 and is designed as a mandatory scheme to improve energy efficiency in large, non energy intensive organisations. This scheme predominantly affects businesses using more than 6,000MWh per year of electricity (equivalent to an annual electricity bill of about £500,000).

The legislative targets outlined above are essential in moving towards a low carbon economy and with them come many benefits for those that choose to engage early on. These include:

- **Bottom line cost-savings** – savings from efficiency measures (inc. energy, water, fuel & transportation)
- **Revenue generating activities** – new products & services, opportunity to secure new contracts and customers
- **Improved reputation and trust** – customers and shareholders look for environmental responsibility
- **Employee morale** – employees prefer to work for companies that are environmentally responsible.

And, in the longer term, they include;

- **Compliance / risk mitigation** – Forthcoming mandatory carbon accounting and reporting in 2012 (to be introduced under the Companies Act 2006) and Carbon Reduction Commitment
- **Shareholder return** – businesses in the Corporate Responsibility Index outperformed the **FTSE**
- **New markets** – developing low carbon technologies and services
- Talent retention through promotion of sustainable organisational values
- Low carbon skills investment and development

In a consumer market increasingly driven by sustainability and reducing emissions, your organisation may find itself under increasing pressure from supply chain customers and consumers to become more environmentally sustainable. Businesses who wait to act may find themselves in a situation where they are penalised for high energy emissions through national legislation or demands made by their supply chain. To provide support to local businesses, Cornwall Development Company's Low Carbon Team has developed a series of low carbon business case studies to demonstrate the real benefits being realised by local businesses that have made steps to reduce their carbon emissions. These can be accessed on the Clear about Carbon website.

www.clearaboutcarbon.com

Your business can play a vital part in addressing our biggest threat.

How to get started. There are many sources of information for businesses looking to reduce their carbon emissions. **Please see below for just a selection of the support available:**

Government Guidance

- **The Department of Energy & Climate Change (DECC)**

- UK Government policy for energy and climate change mitigation, including information on the CRC, Low Carbon Transition Plan, UK carbon budgets, GHG reporting guidelines, carbon neutrality guidelines and carbon offset QAS scheme.

- **Department for Environment, Food and Rural Affairs (Defra)**

- Environmental policy and legislation, including on climate change adaptation, environmental reporting and sustainable consumption and production.
- **Guidance on how to measure and report your greenhouse gas emissions:** Guidance intended for all sizes of business explaining how to measure greenhouse gas emissions and set targets to reduce them.
- **Small Business User Guide:** Guidance for small businesses on how to measure and report greenhouse gas emissions

- **Institute of Environment Management and Assessment (IEMA)**

- the professional membership body for promoting best practice standards in environmental management, auditing and assessment for all industry sectors. Provide publications, events, training, guides and consultations.

- **IEMA Practitioner 1** – Managing Climate Change Emissions: a business guide
- **IEMA Practitioner 8** – Change Management for Sustainable Development – a workbook
- **IEMA Practitioner 14** – Mitigating Climate Change
 - a guide for organisations, including guidance notes, case studies and web links, to assist practitioners who are responsible for addressing climate change.

Public Sector Funded Business Support

- The **Carbon Trust** provides specialist support to business and the public sector to help cut carbon emissions, save energy and commercialise low carbon technologies. Support for businesses includes 0% business loans and carbon surveys.
- In Cornwall we are also lucky enough to benefit from European funding through the Convergence Programme. This funding is supporting a number of business support programmes including those being provided by **Business Link, Partner to Succeed (YTKO)** and **Grow Cornwall (Oxford Innovation)**.

Trading Schemes and Taxation Mechanisms

- **EU Emissions Trading Scheme**

- a Europe-wide cap and trade scheme that started in 2005 and covers electricity generation and the main energy-intensive industries

- **CRC Energy Efficiency Scheme**

- the UK's mandatory energy saving scheme which commenced in April 2010.

- **Climate Change Levy (CCL)**

- Introduced in April 2001, the CCL is part of a range of measures designed to help the UK meet its legally binding commitment to reduce greenhouse gas emissions. It is chargeable on the industrial and commercial supply of taxable commodities for lighting, heating and power by consumers in certain sectors of business, including industry, commerce, agriculture and public administration. All revenue raised through the levy is recycled back to business through a 0.3 per cent cut in employers' national insurance contributions and support for energy efficiency and low carbon technologies.

- **Climate Change Agreements (CCAs)** - allow eligible energy-intensive businesses to receive up to an 80 percent discount from the Climate Change Levy (CCL) in return for meeting energy efficiency or carbon-saving targets.

Low Carbon Incentives

- **Feed in Tariff (FIT)**

- incentivises small scale (less than 5MW), low carbon electricity generation through a guaranteed payment for both electricity generated and exported. The FITs scheme began in April 2010 and aims to encourage investment in low carbon electricity generation, particularly by organisations, businesses, communities and individuals who are not traditionally engaged in the electricity market.

- **Renewable Heat Incentive (RHI)**

- Due to be launched in June 2011 to provide long term support for, and incentivise, renewable heat technologies, from household solar thermal panels to industrial wood pellet boilers.

- **Enhanced Capital Allowance (ECA) scheme**

- allows businesses to claim 100% of first-year capital allowances on their spending on qualifying plant and machinery. The three schemes for ECAs include: energy-saving plant and machinery; low carbon dioxide emission cars and natural gas and hydrogen refueling infrastructure; water conservation plant and machinery.

- **Renewables Obligation Certificate (ROC)**

- the main support scheme for renewable electricity projects in the UK through which one ROC is issued for each megawatt hour (MWh) of eligible renewable output generated. However, it is worth noting that DECC plan to make certain changes to the Renewables Obligation by means of the next **Renewables Obligation Order** (ROO) which will come into effect on 1 April 2011.

Environmental Management System (EMS)

- **ISO 14001**

- specifies the actual requirements for an EMS, applying to the environmental aspects which an organisation controls and can influence.

Carbon Accounting

- **Greenhouse Gas Protocol**

- delivered through a partnership approach between the **World Resources Institute** and the **World Business Council for Sustainable Development**, this is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions.

- **ISO14064-1**

- an international standard that provides a framework for organisations to quantify and report on greenhouse gas emissions.

- **BS PAS 2050**

- a method for measuring the life cycle greenhouse gas (GHG) emissions for goods and services. There is also an emerging carbon footprint standard for products (**ISO 14067-1**).

About Us:

Cornwall Development Company's Low Carbon Team has been working closely with business representatives through the **Clear about Carbon** project and the Private Sector Low Carbon Leadership Group to identify the type of support

businesses in Cornwall need to respond to the challenges and opportunities presented by a low carbon economy. This factsheet has been produced as a result of an identified need to have a more comprehensive signposting facility.

To find out more about the team's work please call **01209 617010**.