

Essex County Council

Corporate Emissions Strategy

2012 – 2014

April 2012



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1. Foreword from Councillor

Essex County Council acknowledges that its activities are bound to have some negative impact upon the environment in a number of ways and this must be reduced and mitigated. The impact includes the greenhouse gas emissions we generate through the delivery of our services.

Cutting our carbon emissions should be a key priority for the Council since, as a large organisation, we have a responsibility to contribute to the Government's National Carbon Reduction targets. These require the Council to improve our own housekeeping and lead by example. The Strategy which follows sets out the Council's key aims in this regard and how we intend that they will be achieved

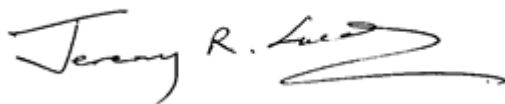
To achieve ambitious levels of emissions reductions we need individuals in all service areas, including schools, to act together. It cannot be done alone or by working in isolated silos. Schools, directorates and partners all need to take action and share a vision of a low carbon sector. There needs to be strong leadership and clear ownership of actions to reduce emissions.

Schools have a special role to play; by reducing their emissions they set an example to today's young people as well as reducing their own carbon footprint. I am therefore very pleased that schools in Essex have recently announced their commitment to work both collaboratively and individually to achieve these targets. Effecting a cultural and behavioural change will be crucial if, as a society, we are to reduce our emissions and environmental impact further.



County Councillor Jeremy Lucas

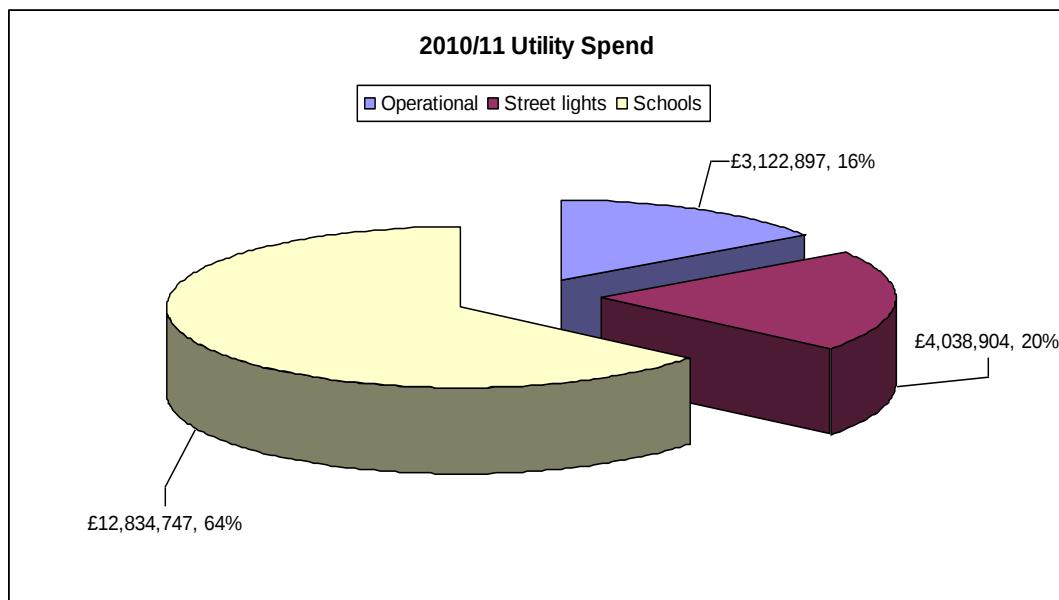
Cabinet Member for Environment and Culture



24/4/2012

2. Introduction: What is a Corporate Emissions Strategy and Why do we need one?

Any business or organisation in order to function efficiently needs to understand and have control of its direct and indirect expenditure. The council has an estimated spend on direct energy of approximately £20 million. The break down is highlighted below:



A Corporate Emissions Strategy will form the framework from which all actions and energy management plans follow. An energy management plan alone would not address the wider issue of greenhouse gas emissions. The council also contributes to emissions through transport, staff behavior and Procurement/Commissioning activities. All of which the council is liable for through the Carbon Reduction Commitment (CRC)

Given our levels of expenditure and rising fuel costs, from a purely financial point of view it is imperative to implement a robust mechanism to monitor energy use at an individual building level and have well thought out and costed actions in place to reduce energy consumption.

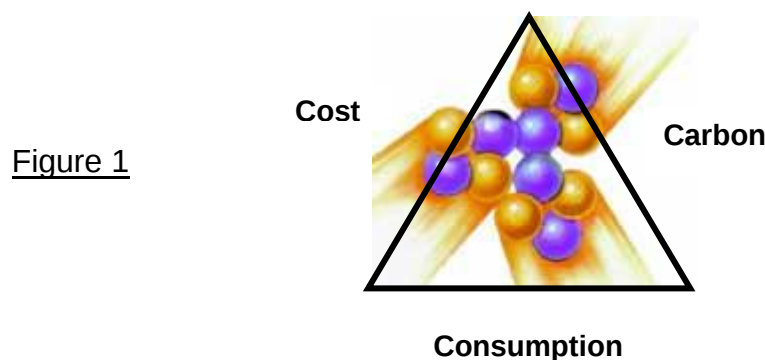


Figure 1 reiterates the fact that the interdependencies of cost/expenditure on fuel and levels of consumption have a direct influence on the amount of carbon for which we are liable. This strategy focuses upon reducing consumption of energy. This is a

tangible way in which the authority can reduce its impact on the environment and reduce costs and as such will be easier to communicate throughout the council.

This document is Essex County Council's overarching Emissions Strategy; setting out the policy expectations in relation to managing our greenhouse gas (GHG) emissions (which include CO₂) across the organisation. A number of gases contribute to climate change; these major GHG's are the subject of the Kyoto Protocol, which came into force in 2005; these are shown in the table 1 below:

Greenhouse Gas (GHG) emissions	% by total of emissions	Source	Potency
Carbon Dioxide CO ₂	85%	use of gas & electricity	-
Methane CH ₄	8%	from landfill sites	21 times more potent than CO ₂
Nitrous oxide N ₂ O	6%	from industrial processes and vehicles	310 times more potent than CO ₂
Perfluorocarbons PFC	<1%	n/a	1,000 times more potent than CO ₂ (but is produced in small quantities)
Sulphur Hexafluoride SF ₆	<1%	n/a	
Hydrofluorocarbons HFC	<1%	Refrigeration and cooling	

Table 1: GHG emissions by total and potency

This document brings together some general high level guidelines relating to our emissions and energy management across the council and with our partners. It also captures the good work we are already doing around emissions and energy management, provides a framework for sharing best practice and outlines how we have committed to work in taking matters forward.

The aim of this document is to set out the council's ambition to reduce energy usage and greenhouse gas emissions from its own operations and to show how it intends to achieve this.

It has been decided to produce a two year strategy which outlines a phased approach to implementing action plans in addition to a monitoring framework. This will make it possible to update the strategy over time to include our changes to a commissioning based approach for services and respond to the Department of Energy and Climate Change (DECC) confirmation of the financial mechanisms around the CRC.

Key Drivers (Cost, Carbon, Consumption)

There are a number of key drivers to this agenda they are outlined in brief here, and expanded upon in Annex A; The Carbon Agenda.

Drivers *Increasing cost of energy*

Current rises in energy costs due in part to the global insecurity of supply, which in turn raise the price of Brent Crude (\$ barrel)¹ are obviously beyond the council's

¹ Explanation can be found under Reference – 'What is Brent Crude?'

control. Although future trends in energy prices are uncertain the general consensus is that the UK faces a period of high energy prices for the next few years at least. In order to provide robustness and security to its energy requirement the council should have a full understanding of how much energy is consumed and how these volumes can be reduced.

National Policies Applying to the Council

Carbon Reduction Commitment (CRC): Energy Efficiency Scheme

This is a mandatory UK carbon emissions reporting and pricing scheme that includes all organisations using more than 6,000MWh per year of electricity (equivalent to an annual electricity bill of about £500,000). The council has to comply fully with the scheme.

The CRC came into force in April 2010 and aims to reduce significantly UK carbon emissions not covered by other pieces of legislation. The primary focus is to reduce emissions in non-energy intensive sectors in the UK. The price of allowances was set at £12 per tonne of carbon dioxide in the 2011 Budget. Additional information and the risks and challenges associated with this scheme are detailed at Annex B to this document. Using the submitted 2010/11 data the council will be liable to approximately £1.34 million of allowances or Tax.

Greenhouse Gas (GHG) Emissions Reporting

Local Authorities have been requested by DECC to publish their GHG emissions annually in line with guidance from DECC and Defra entitled, "Guidance on how to measure and report your greenhouse gas emissions".

The guidance states that as a minimum the GHG reporting should include gross totals of GHG emissions using an intensity ratio² covering:

- Scope 1; direct emissions released, such as burning of fuels or landfill vented methane.
- Scope 2; emissions from indirect sources, such as electricity use.
- Scope 3; emissions (other indirect which could include business mileage, sold services, contractors) – this is discretionary.
- Comparative emissions from previous year's performance and base year data;
- Supporting explanations on the methodology used.

Climate Change Act (2008)

The UK Government has placed an emphasis on Local Authorities setting a leading example as local community leaders in relation to Climate Change initiatives. Action by Local Authorities will be critical to the achievement of the Government's climate change objectives, such as the long term goal to reduce CO₂ emissions by 80% by 2050 as laid out in the Climate Change Act 2008.

² Intensity ratios compare emissions data with an appropriate business metric or financial indicator (i.e. CO₂e per full time equivalent employee, per £ turnover)

Sustainable Development

The UK Government in 2005 published a strategy of its shared framework for sustainable development 'Securing the Future'. The UK has five main principles, recognising the needs of the economy, society and the natural environment, alongside the use of good governance and sound science. LA's are best placed to encourage better decisions on the issues that affect people's wellbeing and the environment. For example, poor planning of communities reduces the quality of life for the people who live in them (relying on energy from global market, rather than generating energy from renewable sources could, contribute towards the risk of energy shortages within UK).

3. Aims of the Strategy: What are the Council's emissions Objectives?

Our 3 Objectives are:

- One** To reduce the greenhouse gas emissions and energy consumption from the council's operations through effective energy and emissions management, ensuring the council complies with the Emissions Strategy, as we move towards a commissioning based operating model for service delivery.
- Two** To produce cost savings from the reduction of our energy consumption and corporate emissions, through exploring options, implementing actions and investigating renewable energy investment opportunities.
- Three** To be recognised by our community, our staff, our partners and other interested parties as a leading carbon conscious council through "becoming a low carbon council".

These objectives will be achieved by implementation of the strategic themes set out in Chapter 6.

4. Scope of the Strategy

The scope of the Strategy includes all greenhouse gas emissions³ which are often classified as either direct or indirect emissions. Direct emissions are those emanating from sources owned or controlled by the council. Indirect emissions occur as a consequence of the activities of the council but are emitted from sources owned or controlled by others.

In proactively controlling and becoming more 'intelligent' as to the overall amount of energy/fuel used and emissions produced we will also be better able to reduce costs

³ GHG emissions refer to the Kyoto gases covered in the Kyoto protocol to the United Nations Framework Convention on Climate Change, these included Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCS) and sulphur hexafluoride (SF₆).

and as a direct consequence reduce carbon emissions. The key emission areas captured within the scope of the council and this strategy are:

- **Buildings' Energy Use** (including Schools' energy management) – This accounts for the largest proportion of council energy use and therefore carbon emissions. Schools in particular are a significant source of emissions. Improving the energy efficiency of the buildings stock will improve the performance of the council.
- **Street lighting** - Street lighting is a significant contributor to the council's energy bill and carbon footprint and offers opportunities for efficiency and carbon reduction, which has been realised through the forthcoming implementation of the Central Management System⁴.
- **Transport** - The council is responsible for emissions in a number of transport emissions categories and these include vehicle fleet emissions, business mileage and outsourced transport (e.g. local bus services, school buses).
- **Waste Management** – Produced by disposal operations and the management of landfill sites.
- **Procurement** – The council is a major commissioner and purchaser of goods and services within the local economy and there is a carbon cost associated with this provision. These are known as Scope 3 emissions (it is advised that these emissions are reported in the greenhouse gas report if known). The council may not necessarily be aware of the carbon cost but we will be directly affected through additional costs incurred through fuel/energy and CRC charges levied against our suppliers. Therefore energy usage and emissions arising from any commissioned service or goods will need to be considered when drafting a business case, or at the scoping stage, as this will have a direct effect on the costs to the council.
- **Highways** – Through the Highways Strategic Transformation programme, the company Ringway Jacobs Limited has been selected to maintain and improve the transport network on behalf of the council. Within the contract there are clear reduction targets; energy, emissions and material. These will be reported upon every 6 months following agreement of a baseline figure.

5. Progress so far

In order to understand how the council can achieve the aims of the emissions strategy, it is essential to establish how the council is currently performing: this section identifies work done to address this agenda so far.

⁴ CMS is also known as tele-management. Using a CMS, the Authority can choose exactly when to switch each individual street light on or off and/or by how much to reduce the lamp power. This allows any number of switching events and/or dimming levels. Currently, only a single dimming level can be accommodated without a CMS. There are also other benefits such as lamp monitoring etc

5.1 **Essex Property & Facilities:** ECC has already implemented a number of measures since 2007, which have directly or indirectly contributed to a reduction of the council's energy use and emissions. Measures have included:

- smart metering installed at seven ECC sites;
- low energy lighting, light and movements sensors and fan and pump speed controllers at County Hall;
- lighting control system replacement at Essex Record Office;
- Greener Futures for Schools, which included biomass and solar energy generation & water harvesting;
- wind turbine and solar and ground source heat pump at Sandon Park and Ride;
- automatic computer switch off outside office hours at County Hall.

5.2 **Joint Municipal Waste Management Strategy for Essex:** Even with increased recycling rates and expected reductions in the amount of waste produced in Essex there is still a large amount of household waste that cannot be recycled. Currently, this waste (approximately 60%) is disposed of, untreated, in landfill sites. The untreated waste buried in landfill releases harmful gases into the air which contribute towards global warming and is an element of our overall reported emissions.

The Waste Strategy Project will make an important contribution to tackling global warming through the diversion of an additional 185,000 tonnes of biodegradable municipal waste per year from landfill by 2020.

The project is based on the use of new treatment facilities using Mechanical Biological Treatment (MBT) technology for waste that cannot be reduced or recycled. Our partner in delivering the strategy is Urbaser - Balfour Beatty and the new facility is scheduled to be operational by late 2014.

5.3 **Electrical Charging Points and Vehicles:** Through EEDA and European Funding (ERDF) the council has installed electric charge points (double headed) at both Chelmer Valley and Sandon Park and Ride sites as part of the Evalu8 project, which will directly contribute to the EU's 2020 energy strategy. In addition the council through its ChargeAhead project part of the INTERREG 1VC SUM Project, will be seeking two partner Essex towns to be electric vehicle friendly by 2013 as well as developing a strategy and policy for electric and hybrid vehicles in Essex. ChargeAhead scheme has formed strong working links with eTap (an Essex company) and secured funding for future infrastructure projects from central government through the Evalu8 programme.

6. Objectives of the Strategy: Overview of the proposed Structure of the Emissions Strategy

The preceding sections illustrate the proposed structure and scope of the strategy and its key objectives. Specific actions need to be devised to implement these and

explain how they will be delivered. In taking this forward, the following 'Themes' clearly evidence what is necessary in terms of a broad structure and approach – whilst separate *Action Plans* will set out the individual actions in more detail.

In order to embed energy and emission management within the culture of the council, we need to consider:

- what progress the council has currently made;
- where the council wants to be by the end of the programme across seven key 'Themes', namely: corporate strategy, programme management, responsibility, data management, communications and training, finance and investment, and policy alignment.

Each of these 'Themes' is discussed in turn below.

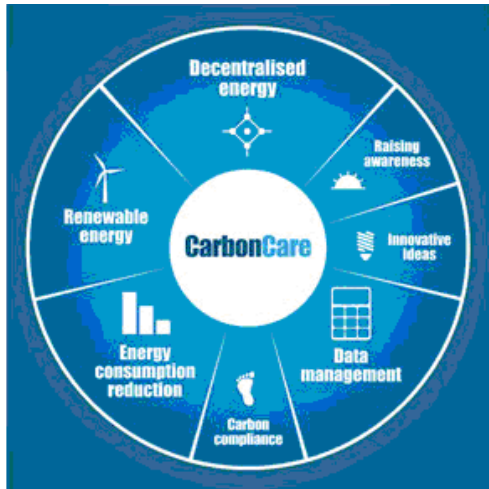
6.1 Theme 1: Corporate Strategy - In order to progress the energy and emissions agenda across the council we need to:

- Ensure that we adopt effective policies and procedures that underpin this strategy.
- Mobilise the whole organisation by gaining member and senior manager buy-in.
- Build a strong relationship with key suppliers and contractors, ensuring our contractors comply with our policies through our commissioning and procurement process.
- Obtain an active contribution from all service users, building users, and budget holders etc., to ensure that the best decision is arrived at for all interest groups, since local decisions on energy management cannot be made in isolation from the overall corporate approach.
- Identify and quantify carbon reduction options by concentrating on main sources of emissions such as County Hall, street lighting, green IT and Highways operations.
- Work with the Facilities Management provider for the council - MITIE should be given clear parameters as to the capture and reporting of energy data and clearly understand that they will lead in proposing energy efficiency schemes within the buildings for which they have responsibility.
- Ensure that schools report their energy usage fully and accurately to the council enabling us to compile CRC reports. There is a clear requirement for a greatly strengthened liaison role between the council and schools.

6.2 Theme 2: Programme Management – or bringing it all together effectively. Effective programme management and clear structural governance is necessary for successful implementation of the strategy. Figure 2 shows the responsibilities and governance procedures to be implemented. The programme will require:

- Senior level buy-in with a strong commitment to meet any agreed energy efficiency proposal or carbon reduction target.
- A co-ordinated programme, with representatives from across the council.

- Integration of MITIEs' Programme Manager and Energy Officer as well as their 'CarbonCare' programme.

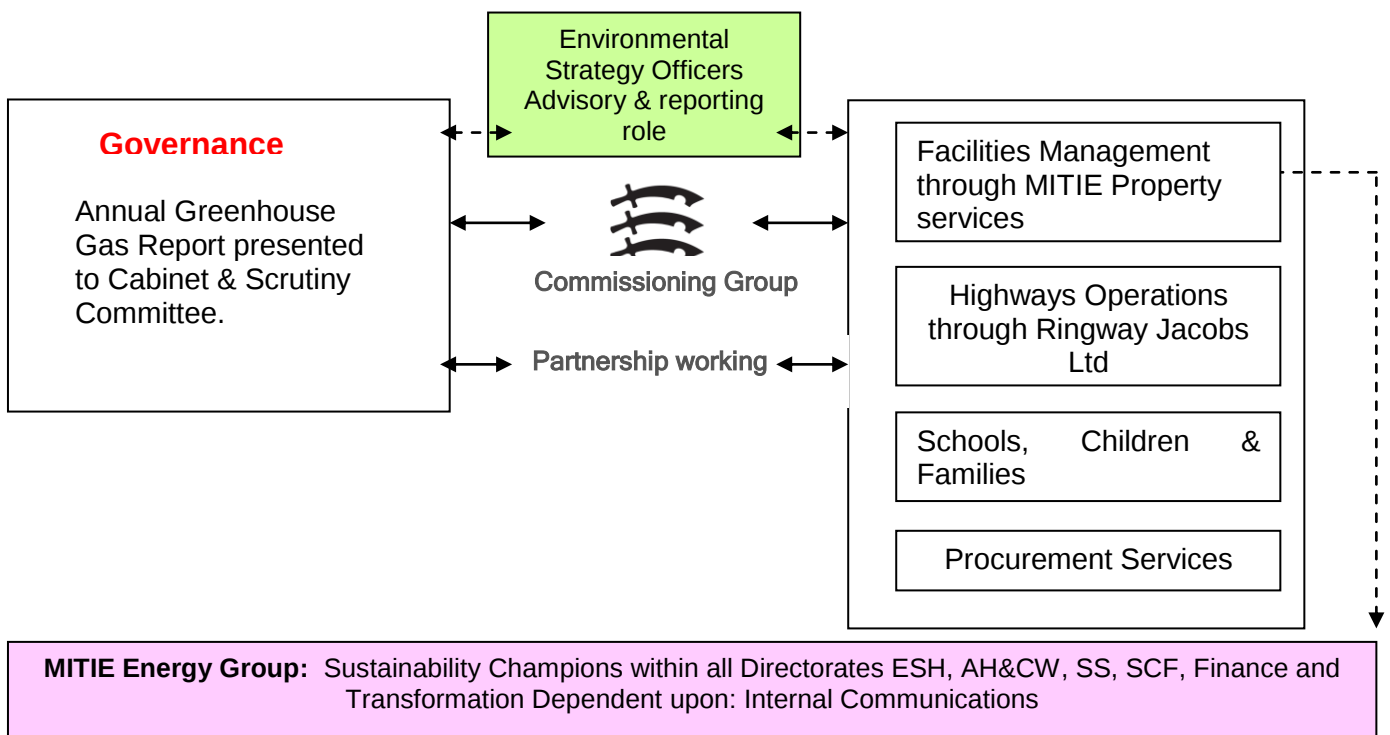


CarbonCare is a full range of integrated services that can help manage down an organisation's energy use and carbon footprint. This includes providing the right equipment, and using it efficiently, to complying with an increasingly complex legislative environment.

MITIE's expertise can help us measure our carbon exposure and develop a comprehensive energy strategy tailored to our requirements, helping us eliminate waste, reduce costs, and identify effective clean energy alternatives.

- The Commissioning Group is to lead on the co-ordination of MITIE's proposed schemes and outcomes, which cover the operational aspect of the council's property portfolio.

Figure 2: Responsibilities and governance procedures



6.3 Theme 3: Responsibilities - Reducing energy usage and emissions is everyone's responsibility and this needs to be communicated clearly. Therefore, the successful delivery of the energy and emissions programme will require commitment from everyone within the council. It should be clear where the

responsibilities lie and which elements of the council are in a position to implement and report upon actions. Table 2 has been included to provide a summary of governance, reporting and clarification of who responsibility for action resides with.

6.3.1 Operational & office buildings: These are the responsibility of the EPF Commissioning Group through their FM management partner, MITIE. The Commissioning Group have responsibility for selecting suitable programmes which have been fully costed and signed off through the EPF governance process. Programmes will include both behavioural and mechanical interventions. To facilitate this programme the following support is required:

- Directorates in conjunction with the Commissioning Group through the FM user stakeholder groups and Communications are to nominate “sustainability champions”. This is to support MITIE/Commissioning Group in implementing behavioural change throughout the organisation. This should be a role which attracts appropriate recognition and can be evidenced within an individual’s ‘My Performance’ contract.
- Under the corporate landlord mandate, EPF will implement initiatives relating to buildings. Engagement with stakeholders will be through regular dialogue.

6.3.2 Highways: Ringway-Jacobs Limited has been selected to maintain and improve the transport network on behalf of the council. Within the contract there are clear energy, emissions and material reduction targets which upon agreement of a baseline figure will be reported upon every 6 months. Areas to be reported upon include:

- Reduction in waste sent to landfill
- Sustainable use of materials within construction
- Reduction in overall vehicle emissions.

6.3.3 Waste Management: The Waste Strategy Project will make an important contribution to reducing emissions through the diversion of an additional 185,000 tonnes of biodegradable municipal waste from landfill per year by 2020. Instead, this waste will be treated by new treatment facilities using Mechanical Biological Treatment (MBT) technology for waste that cannot be reduced or recycled.

6.3.4 Procurement: Procurement covers both goods purchased and services provided. As the council moves towards Commissioned Services it is important that the process to measure and reduce emissions for these services is imbedded within the contracts themselves to allow for reporting. Given the high volume of goods purchased by the council it would be hard to focus on all spend. It should however be possible to focus upon the top 20 to 50 items by value of spend.

Currently the majority of goods and services are classified as ‘Scope 3’ and are therefore discretionary to report upon. (See Annex A for further clarification regarding classification of the 3 levels of ‘Scope’).

6.4 Theme 4: Data Management - The reporting criteria clearly sets out what and in which manner data has to be submitted to the Environment Agency in order to comply with the CRC. This means that there must now be reliable information on which to base targets and monitor trends. The Commissioning Group will insure the FM Provider manages council data, through the following process:

- Data requirements have been detailed in the specification and reporting elements of the MITIE contract.
- A robust system is in place to ensure MITIE carry out accuracy and validity checks on any data submitted. The identification of errors and tracking these savings will demonstrate the validity of checks.

6.5 Theme 5: Communication and Training – Ensuring everyone is aware of the need to take action. We need to communicate the reasons why and how we are managing energy and emissions capture to ensure everyone involved with the council is engaged with the programme. We need to accept that there are two separate audiences to engage: Schools and ECC office staff. Engagement will be through the following process:

- Communications; internal Communications are vital to implementing behavioural change, hence they are within the delivery chain.
- Awareness; raise awareness to our staff that energy is one cost to which everyone contributes (and empower staff to implement change).
- Success stories; areas of success and achievement should also be covered in staff communication.
- Engagement; MITIE leads a Hearts and Minds programme and develop 'league tables' where building users compete with each other to reduce their consumption.
- Inclusion; schools will be encouraged to take a more proactive role in energy management, through either MITIE lead programmes or the use of Schools Energy/Sustainability Officers.

6.6 Theme 6: Finance and Investment – The money to match the commitment. There is a requirement for a process to robustly evaluate the cost and payback period of any reduction or energy saving proposal. Reducing energy consumption throughout the property portfolio will require investment; any investment needs to balance the cost, consumption, carbon triangle (Figure 1). The following actions are required:

- Energy at the moment is purely a financial transaction with little priority addressing excessive usage.
- Many projects will need resources and therefore guidance on pay backs will need to be established.
- Schools finance and energy management is currently disconnected from our processes and so a Schools Emissions Strategy is required.
- There is a requirement for a Sustainable Building Standard, to provide consistency of sustainability standards incorporated in refurbishment and new build.

- Energy usage and emissions within any commissioned service or goods need to be considered at business case or the scoping stage as this will have a direct effect on the costs to the council.
- MITIE is to explore the feasibility and investment opportunities of exploiting the council's commercial property to generate energy from renewable technology in the future, providing financial benefits from the Government's 'Feed in Tariff' and 'Renewable Heat Incentive' schemes. Studies have already been carried out on the suitability of photovoltaic solar panels and combined heat and power.

6.7 Theme 7: Policy Alignment – Programmes to save energy and reduce emissions should be applied consistently across the whole of the council's operations. To facilitate this, the following points need to be considered:

- Ensure that all future policies, where relevant, reflect the best practice of energy management. An example of this would be the standards contained within the Essex Design Guide which New Build Schools follow.
- Information Services manage their current service delivery and future projects in a sustainable manner which is in alignment with this strategy.
- Buildings, which include school premises, as mentioned, account for the largest percentage of council energy use and contributes to the financial risks from CRC. MITIE with guidance from the Commissioning Group will provide a comprehensive and systematic approach to managing the council's premises energy needs.

7. Action plans

The responsibility for action plans to implement this Strategy is the remit of individual Directorates and Service Areas. This is because 'they' have the experience and knowledge of the areas in which they work and can identify potential savings and implement schemes to reduce energy and emissions.

7.1 Operational Buildings.

The Commissioning Group will instruct MITIE through their Carbon Care Scheme and stakeholder engagement to prepare, finalise and implement programmes, where every member of staff in every Directorate will be required to make small differences to the way they work in order for council objectives to be fulfilled. Every service area will be able to contribute to the achievement of the council's emission reduction objectives and these will be identified. The responsibility for the production and governance of any proposed action in regard to the management of the operational building portfolio lies with the Essex Property and Facilities Commissioning Group.

The operational characteristics of the buildings must be identified in conjunction with degree day activity⁵ – each building above an identified size (profile type) must have operating strategies which are shared with the users and occupants.

Any proposed actions will be assessed through a robust whole life costing mechanism, to justify any investment. Actions will be assessed and quantified to identify the most cost effective opportunity and will be ranked as one of the following options:

- **Cost effective measures**, delivering benefits that exceed the costs
- **Low cost measures**, low costs with potentially large benefits
- **Managed approach**, where the benefits are outweighed by the cost⁶

The Action Plan will explore all opportunities within the council, such as the investment into new technology, along with low cost measures such as energy awareness campaigns and promoting good house keeping.

7.2 Highways

The Council retains responsibility for ensuring highways maintenance and improvements are undertaken, and are of an acceptable standard. Ringway Jacobs Limited is responsible for measuring and reporting upon emissions as specified in the contract and included in the performance management Indicators.

7.3 Transport

Business mileage and home to work travel are the key areas which can be influenced. Action is already being undertaken to address this area.

8. Monitoring and Review

The Corporate Emission Strategy will be monitored and reviewed on an annual basis by Environment Strategy, to ensure that all the objectives and measures are still relevant, realistic and are being met. Progress of action plans and activities will be included in the Greenhouse gas report. The Greenhouse gas report will be published on the council Internet site in August each year following the submission of CRC data to the Environment Agency. This will evidence the commitment of the council and any ongoing actions to save energy and reduce emissions throughout its scope of influence.

Table 2 summarises reporting and monitoring responsibilities:

9. Future Challenges

⁵ A degree day is a single number that quantifies how hot or cold the weather has been for a certain region over a month (or week). The colder the weather in a given month the higher the degree day value.

⁶ Rising to the challenge–The City of London Corporation's Climate Adaptation Strategy, January 2007.

The carbon reduction agenda, together with the requirement for security of energy supply will mean that there will be a continuing need to reduce consumption and find innovative means of generating energy. Under the Localism Act 2011 there are Government measures which provide for:

- A 'community right to challenge' (a right for voluntary and community groups, social enterprises, parish councils and local council employees) delivering a service to challenge local authorities by expressing an interest in running the services for which they are responsible. Local authorities will have to consider and respond to any challenge. The challenge might trigger a procurement exercise for that service in line with relevant procedure, which the challenging organisation could then bid in, alongside others.
- A 'community right to buy' whereby local authorities will be required to maintain a list of public or private assets of community value, put forward for consideration by communities. When listed assets become available, either under a freehold or long leasehold, communities will be given the chance to develop a bid and raise the capital to purchase or lease the asset.
- The council's strategy to reduce greenhouse gas emissions will need to be considered and allowed for in relation to both the measures above.

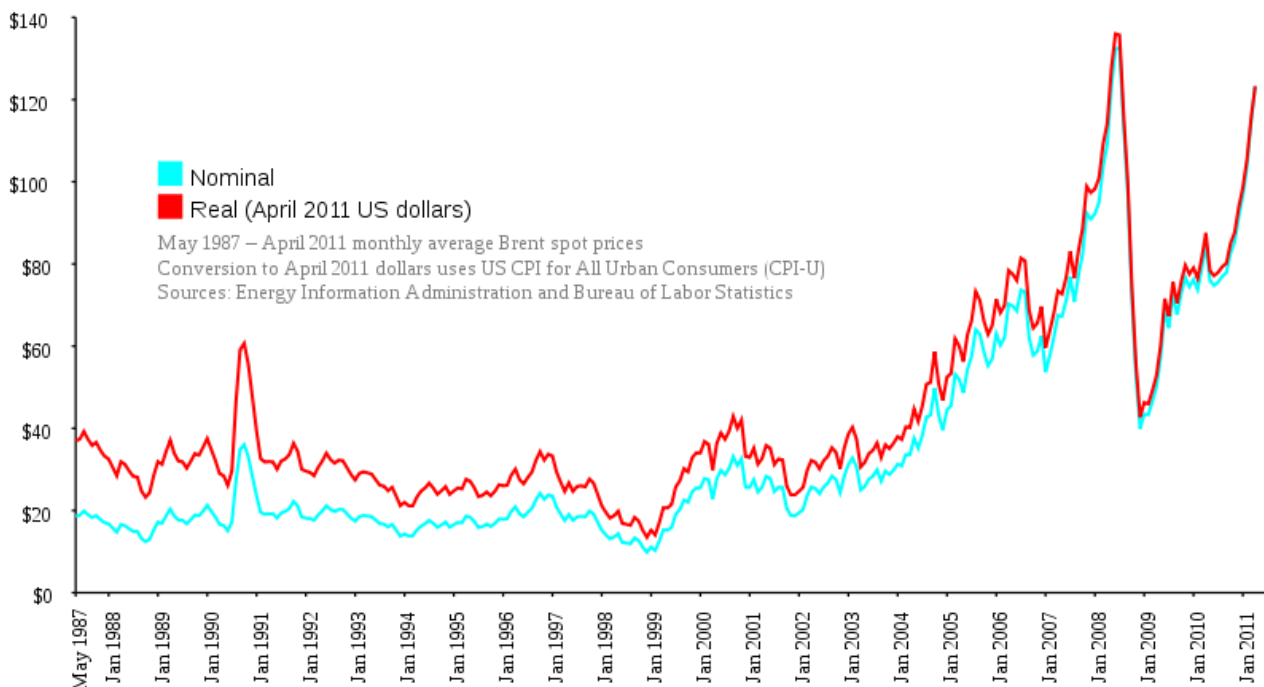
Table 2: Monitoring Responsibilities and Reporting

	EPF/MITIE	Schools SCF	Highways Operations	Procurement	Transport
Responsibility	Operational Properties – less schools	Energy reduction throughout school estate	Management & Maintenance of Council's transport network	Category Management & major contracts	Business mileage, Sustainable travel, fleet mileage and outsourced transport.
Reporting /Governance	CRC Reporting, internal and cross directorate agreement of projects. Current SLT reporting and management	Reporting energy usage to EPF/MITIE	KPI's reported to Performance Team	Inclusion of reduction targets at tender stage. Use of TruCost (or some such programme)	Vehicle mileage, Gray, fleet and other Train travel Car share
Reporting System to be used	Direct reporting to the Environment Agency. Council currently uses Systems Link. MITIE may amend reporting tool	Currently Systems Link, MITIE to reassess system used	Performance Management System	Possibly TruCost carbon measurement tool.	e-pay roll and directorate monitoring systems
Information reported to Environment Strategy	CRC data (energy use) Summary of mitigation strategies and programmes introduced		-	-	-
Information reported to Green House Gas Emissions register	CRC data (energy use) Summary of mitigation strategies and programmes introduced		Vehicle emissions Miles travelled Recycling Levels (as per KPIs)	Levels of emissions from Corporate Contracts where possible (Scope 3)	Vehicle mileage, Gray, fleet and other Train travel Car share and outsourced transport
Corporate Emissions Update	Produced by Environment Strategy in August (following the CRC submission). Summarising the majority of the Corporate emissions for the preceding year. Report is to contain all information required for the annual Green House Gas report.				

10. References/Background Information

- DECC & Defra, Guidance on how to measure and report your greenhouse gas emissions, Defra, London, September 2009
- Rising to the challenge–The City of London Corporation's Climate Adaptation Strategy, January 2007.
- Department of Energy and Climate Change on NI 185 visit: www.decc.gov.uk/en/content/cms/statistics/indicators/ni185/ni185.aspx
- Environment Agency on CRC visit: www.environment-agency.gov.uk/business/topics/pollution/126698.aspx

• What is Brent Crude?



Brent Crude is the biggest of the many major classifications of crude oil consisting of Brent Crude, Brent Sweet Light Crude, Oseberg, Ekofisk, and Forties. Brent Crude is sourced from the North Sea. The Brent Crude oil marker is also known as Brent Blend, London Brent and Brent petroleum. It is used to price two thirds of the world's internationally traded crude oil supplies.

The other well-known classifications (also called references or benchmarks) are the OPEC Reference Basket, Dubai Crude and West Texas Intermediate .

11. Annexes

Annex A: The Carbon Agenda

There are many factors and drivers behind this agenda, the issues which have the greatest effect are as follows:

Climate Change Act (2008)

The Climate Change Act created a new approach to managing and responding to climate change in the UK, by setting ambitious, legally binding targets (such as 80% lower carbon emissions than the 1990 baseline by 2050), taking powers to help meet those targets, strengthening the institutional framework, enhancing the UK's ability to adapt to the impact of climate change, and establishing clear and regular accountability to the UK Parliament and to the devolved legislatures.

The Act is divided into 6 key Parts:

- | | |
|---------|--|
| PART 1: | Carbon target and budgeting |
| PART 2: | The Committee on climate change |
| PART 3: | Trading schemes |
| PART 4: | Impact of adaptation to climate change |
| PART 5: | Other provisions |
| PART 6: | General supplementary provisions |

The rationale for the Act is:

- to improve carbon management and help the transition towards a low carbon economy; and
- intended to demonstrate UK leadership internationally in the fight to reduce greenhouse gas emissions

www.legislation.gov.uk/ukpga/2008/27/contents

Increasing Cost of Energy

As evidenced by the global price of fuel, the council has no control over the price it ultimately has to pay for its energy – other than buying at the most advantageous price and rate. It is anticipated that fuel prices and scarcity will be the greatest driver for implementation and development of new technologies and ways in which business is undertaken.

National Legislations

CRC – see Annex B

Energy Act 2011

The Energy Act 2011 has been designed to provide a step change in the provision of energy efficiency measures to homes and businesses and make

improvements to our framework to enable and secure low-carbon energy supplies and fair competition in the energy markets.

<http://services.parliament.uk/bills/2010-11/energyhl.html>

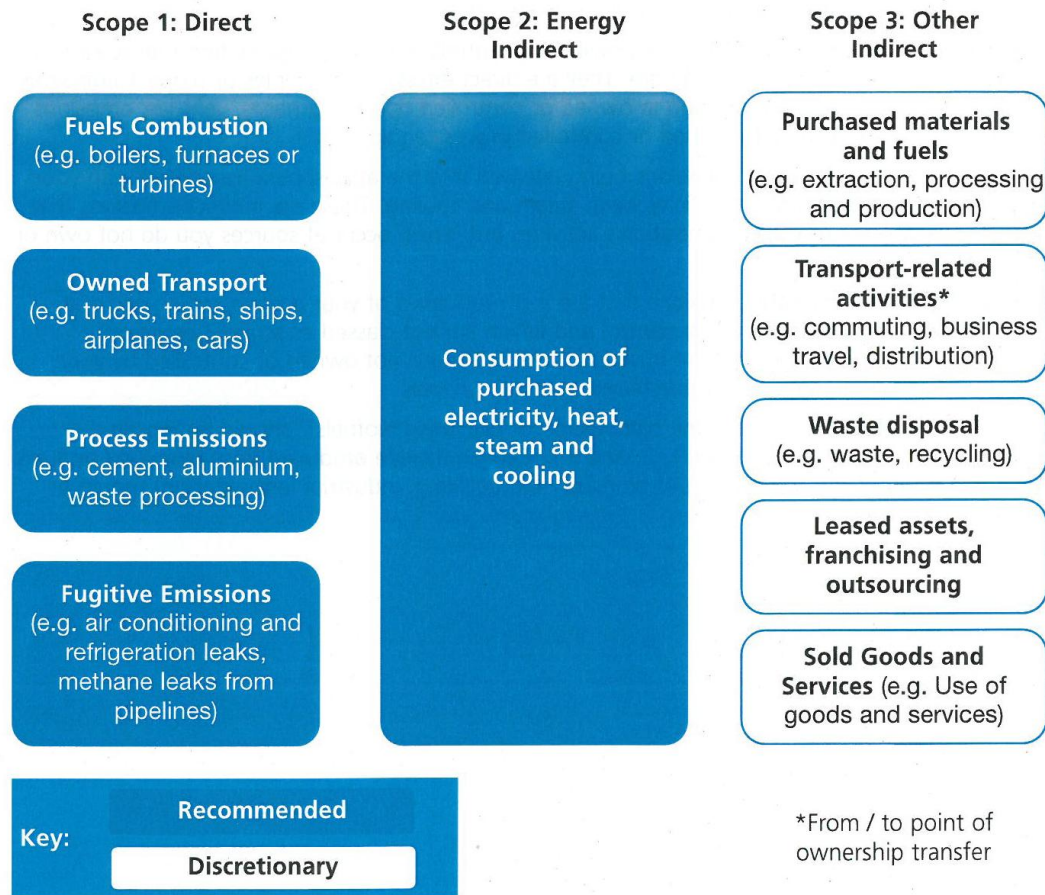
Greenhouse Gas (GHG) Emissions Reporting

The GHG Emissions reporting has replaced the Government's National Indicator 185 (Percentage CO₂ reduction from LA operations) and on 9 March 2011 Department of Energy and Climate Change (DECC) had signed a Memorandum of Understanding (MOU) with the Local Government Group that recognised the pivotal role that Local Authorities (LA) have in tackling climate change at a local level. LA are requested to measure and report their greenhouse gas emissions from their own estate and operations in accordance the with the joint DECC-Defra guidance that was published in September 2009 by the end of July each year.

LA have been asked to publish their own GHG report locally on their own website, in order to support the localism agenda by ensuring LA are accountable to their local people for their greenhouse gas emissions.

www.decc.gov.uk/en/content/cms/statistics/indicators/ni185/ni185.aspx

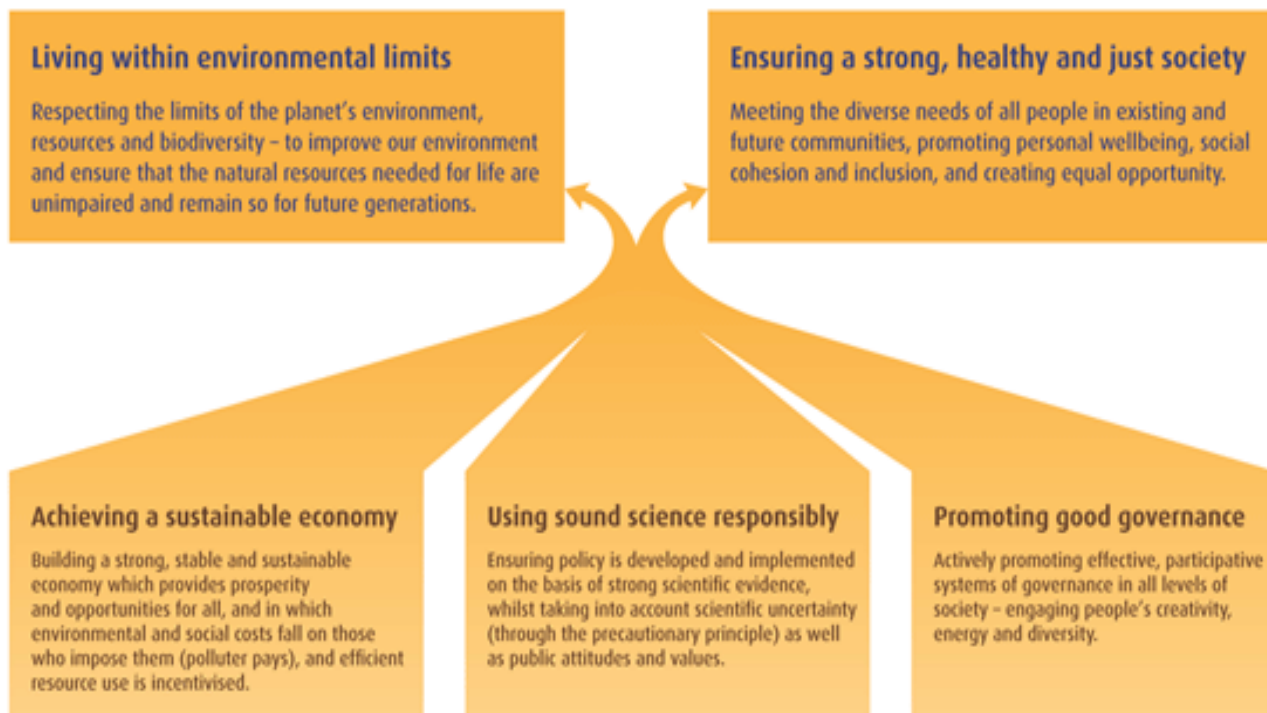
The following diagram identifies the main types of emissions sources under each scope:



Sustainable Development

In 2005 the UK Government published 'Securing the Future' setting out its strategy for Sustainable Development. The UK identified five main priority areas (shown in diagram below) and four priority areas for immediate action, shared across the UK, these are:

- Sustainable Consumption and Production
- Climate Change and Energy.
- Natural Resource Protection and Environmental Enhancement.
- Sustainable Communities.



www.sd-commission.org.uk/pages/what-is-sustainable-development.html

Feed-in Tariffs (FITs)

FITs became available on 1st April 2010 and is designed as an incentive for organisations, businesses, communities and individuals to move away from conventional fossil fuels to renewable energy sources. Under the Government legislation, energy suppliers have to make regular payments to those who generate their own electricity from renewable or low carbon sources, such as solar electricity panels (PV) or wind turbines.

The FITs scheme guarantees a minimum payment for all electricity generated by the system, as well as a separate payment for the electricity exported to grid. These payments are in addition to the bill savings made by using the electricity generated on-site.

The scheme covers the following electricity-generating technologies, up to an installation size of 5 Mega Watts:

- Solar electricity (PV) (roof mounted or stand alone)
- Wind turbine (building mounted or free standing)
- Hydroelectricity
- Anaerobic digestion
- Micro combined heat and power (micro CHP)

www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/feedin_tariff/feedin_tariff.aspx

Renewable Heat Incentive (RHI) Scheme

On 10 March 2011, the Government announced the details of the Renewable Heat Incentive policy to revolutionise the way heat is generated and used in buildings and homes.

www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/incentive/incentive.aspx

Annex B: Carbon Reduction Commitment Energy Efficiency Scheme

Background to CRC

The carbon reduction commitment (CRC) is the UK's first mandatory carbon trading scheme and will cover both public and private sector organisations,

including local authorities. It is designed to encourage large non-energy intensive organisations in the UK to reduce their CO₂ emissions.

The initial phase of the CRC was compulsory for organisations whose annual half-hourly metered electricity use in the UK was above 6000 Mega Watt hours during the period January 2008 to December 2008.

How will this affect ECC?

ECC is responsible for:

- Calculating their emissions responsibility under the scheme
- Purchasing allowances to cover their emissions
- Monitoring and reporting their annual energy consumption (including electricity, gas and other fuel types) except for transport emissions
- Surrendering sufficient allowances to cover their stated emissions
- Keeping an evidence pack which provides an audit trail to demonstrate how they have calculated their total energy use

How will it work?

The main aim of the CRC is to encourage large non-energy intensive organisations of all kinds to become more energy efficient and so reduce their CO₂ emissions. The more energy efficient an organisation becomes the fewer emissions it will generate and the fewer allowances it will have to buy under the scheme.

The first year of the scheme was from April 2010 to March 2011 and during this time, participants were required to monitor all energy sources and use this data to prepare a Footprint Report which was submitted at the end of July 2011.

Summary Explanation:

- The actual annual report that has to be submitted to the Environment Agency online portal summarises the information that must be kept by ECC as an “evidence pack”.
- An evidence pack contains all supporting information that was used in the compilation of the **footprint report**.
- In 2010/11 we submitted both an **annual report**, a **footprint report** along with an **evidence pack**.
- The annual report concerns only certain types of energy consumption. This includes any electricity consumed through “half hourly” meters and meters which start 05 to 08 (these are often large consuming sites but not as large as HH meters) and gas consumption from meters that have consumed over a threshold of 73,200kWh. These are all known as “**Core**” sources of emissions. These are the regulated ones we have to buy permits for. (See table 1 below)

- Any consumption in an **annual report** that is based on **estimated** billing must include a 10% uplift. This is to encourage people to move towards more accurate billing.
- The **footprint report** must include all our **Core** emissions, as well as some “**residual**” emissions. This includes metered gas and electricity supplies not covered above, and other fuels included in the guidance.
- The emissions included in our annual report have to cover at least 90% of our carbon footprint, which included all the core emissions. The remaining 10% of our emissions may be omitted, primarily because the administrative burden of accounting for some very small energy sources every year would be disproportionately large. However, if all the core emissions do not make up 90% of our total emissions, we may have to include some residual emissions to bring our regulated emissions up to 90%.
- Electricity that is from unmetered supplies is not counted in either our footprint or annual report (as is transport, domestic use, etc).
- The data supplied from 10/11 was a reporting year only (it was not necessary to buy allowances). The data was however used by the Environment Agency to compile a league table of scheme participants.
- The allowances bought in April 2012 will be for emissions from April 2011 to March 2012.
- All participants are required to surrender allowances for their CRC emissions. One allowance is equivalent to one tonne of CO₂. Allowances will be sold at a fixed price of £12 per tonne of CO₂ until 2013/14.
- The qualification year for phase two is the financial year of 2012/13.
- Trading of emissions will not start until the second “phase” of the scheme which starts in 2013/14.

Table 1: Core emissions & residual emissions

Core emissions include:	Residual Emissions
Core electricity supplies: ■ all settled HHMs ■ all non-settled HHMs ■ all <i>non-domestic meters</i>, and ■ all <i>dynamic supply</i> Core gas supplies: ■ all daily meters ■ all half hourly meters, and ■ all <i>large gas point meters</i> Supplies through meters with any ancillary devices that allow the meter to be read remotely will count towards core gas supplies.	Residual sources are any energy supply other than the core sources listed.

Financial Risks:

In summary the financial risks are as follows:

- There is a financial penalty mechanism for non-compliance and inaccurate reporting.
- ECC will be responsible for the purchase of allowances for the total carbon emission produced by the key energy areas of the Council.
- The cost per tonne will initially be £12 per tonne of CO₂ and thereafter set by the budget process.
- By 2020 CRC carbon allowances could reach £32/ tonne (a Treasury assumption).
- Cost of energy could increase by £300 per tonne of CO₂.
- The Council is also responsible for ensuring it has accurate data from all schools where applicable

This booklet is issued by

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