

# Transport and Environment Committee

**10 AM, Tuesday, 27 August 2013**

## Energy Policy

<b>Item number</b>	7.12
<b>Report number</b>	
<b>Wards</b>	All

### Links

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**Coalition pledges** [P50](#)  
**Council outcomes** [CO18](#)  
**Single Outcome Agreement** [SO4](#)

#### **Alastair Maclean**

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#### **Mark Turley**

Director of Services for Communities

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# Executive summary

## Energy Policy

### Summary

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This report presents a revised energy policy for the Council to Committee for approval. This policy replaces the current Council energy policy approved in 2000 and takes the format of an overarching policy document supported by ten procedures. The ten procedures outline Council good practice for the key elements of effective energy management as it relates to the City of Edinburgh Council. The policy is also supported by an action plan to meet the policy aims and objectives.

### Recommendations

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It is recommended that Committee:

1. approves the policy, supporting procedures and action plan.
2. agrees that a senior officer be the lead responsibility for energy management Council wide.
3. agree that a forum be established to drive the energy policy forward and address energy issues (e.g. reducing energy consumption) across the organisation; and
4. agree to receive annual reports on the implementation of the policy outlining progress made against policy objectives.

### Measures of success

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The following will be used to measure the effectiveness of the policy:

- robust energy monitoring and reduced energy consumption in Council buildings;
- regular reporting on building energy performance;
- increased efficiency and reduced energy consumption for stair and street lighting;

- the establishment of a corporate forum within the Council to address energy issues for all Service Areas led by a senior officer.

## **Financial impact**

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Implementation of this policy should lead to:

- Reduced energy consumption;
- Reduced carbon emissions;
- Reduced CRC annual cost.

## **Equalities impact**

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The content of this report is not relevant to the public sector equality duty of the Equalities Act 2010.

## **Sustainability impact**

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The impacts of this report in relation to the three elements of the Climate Change (Scotland) Act 2009 Public Bodies Duties have been considered, and the outcomes are summarised below.

- reduced energy consumption;
- reduced carbon emissions;
- increased energy efficiency; and
- improved governance of energy across the organisation.

## **Consultation and engagement**

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The policy and supporting procedures were subject to consultation within the Council. Responses received were taken on board.

## **Background reading / external references**

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Carbon Trust Management Guide CTC733: An energy management best practice model for Scottish local authorities.

## Energy Policy

### 1. Background

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- 1.1 This energy policy replaces the Council's current energy policy approved in 2000. It consists of an overarching policy statement supported by ten procedural documents. This policy revision was supported and assisted by The Carbon Trust, Scotland and was drafted in partnership with Technical Support Services, Transportation and Housing & Regeneration (SfC).

### 2. Main report

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- 2.1 The Council is a large organisation and the use of energy is vital to the delivery of Council services and day to day Council activities. With increasing energy costs, carbon reduction commitment legislation and concerns over climate change, the effective management of energy within the Council is more essential than ever before.
- 2.2 This policy (Appendix1) and its supporting procedures sets out an overarching statement on the Council's commitment to energy management and efficiency. The statement includes six commitments for the Council's Corporate Management Team. Support for the policy at the most senior management level is fundamental to delivery of the objectives and meeting targets.
- 2.3 There are many elements to be considered in the effective management of energy for a large organisation such as the Council. This policy considers ten key elements, each set out as a procedural document to support the policy statement. Each procedure sets out the Council approach, key responsibilities and expected performance where applicable. These procedures will be updated (and new procedures written as required) on a regular basis to reflect any changes in legislation, Council structures, practices etc.

#### **Governance**

- 2.4 A key element of successful energy management within an organisation is the governance arrangements in place. The Governance Overview and Resource procedure sets out the three key staff groupings within the Council that have a role to play. However the procedure also highlights that there is no one senior

officer with overall active responsibility and accountability for energy across the organisation. With energy prices forecast to increase and a tonne of carbon rising to £16/tonne in 2014 under CRC legislation (currently £12/tonne), having a good corporate overview of energy management across the organisation will be vital to efficient energy management.

2.5 The Carbon Trust advises 'that formal responsibilities for energy management should not reside exclusively with the Energy Management Team and recommend that specific responsibilities should be formally assigned to individuals whose support and engagement is necessary for delivering effective energy management<sup>1</sup>'.

2.6 It is envisaged that this role would be:

- The senior advocate for energy management in the organisation;
- Report regularly to CMT on energy management, progress on targets, key investment projects etc;
- Raise issues of concern or problems arising in satisfying the energy policy; and
- Provide feedback, strategic advice and guidance to the core staff that lead on day to day delivery of the energy policy objectives.

2.7 This report is recommending that a Head of Service is appointed to this role. It is suggested that as the majority of energy related functions (Street Lighting, Stair Lighting, Building energy, Council Housing) are managed by SfC, that this be the Head of Corporate Property. This role is seen as being key to the effective implementation of the proposed policy.

2.8 In addition, there is no forum within the Council to drive forward the energy policy and action plan, discuss energy projects corporately, maximise funding opportunities, address issues raised by Services Areas and to maximise synergies organisation wide. This report recommends that such a forum is established and is chaired by the Head of Corporate Property as proposed in Para 2.7. This forum would be supported by the Carbon, Climate and Sustainability Team in Corporate Governance and meet quarterly in line with reporting requirements to CMT.

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<sup>1</sup> Carbon Trust, Management Guide CTC733 An energy management best practice model for Scottish local authorities

## **Communication**

- 2.9 The Communication procedure outlines the methods of communication employed within the Council and identifies key audiences. To implement the policy effectively and to engage with people in the process, two way communication is vital. The establishment of an energy forum would provide a mechanism within the organisation to inform and target effective communications.

## **Measuring & Monitoring**

- 2.10 In order to manage energy effectively consumption must be measured and monitored. The measuring and monitoring procedure sets out how this is done for building and street lighting within the Council. This is often seen as mundane but is essential to reducing the demand for energy in the first place i.e. identifying wastage, incorrect tariffs, bad practice on site etc. This is the first step outlined in the Council's approach to the energy hierarchy (Low zero carbon statement). It is vital that monitoring information is reported regularly to those responsible for the day to day management of buildings and to senior management so that they can see consumption profiles and associated costs. These regular reports can also assist management in making decisions e.g. opening hours for buildings and the energy implications of any changes to service provision etc.

## **Project Register**

- 2.11 The Council received the Carbon Trust Standard in June 2012. One of the key elements raised as part of the assessment process was the importance of a project register to track, report on and evaluate the carbon impact of energy related projects across the Council property portfolio. Hence a key procedure supporting this policy is the adoption of a project register. This register will be held by the Technical Support Services Team (SfC) and will record key energy and financial information on projects and will inform the Council's Carbon Management Plan.

## **Energy & Emissions Reporting**

- 2.12 The Council reports annually on its energy consumption as part of the Scottish Climate Change Declaration and in compliance with CRC legislation. This policy introduces new monthly reporting to senior management across all electricity, gas and oil consumption in Council buildings. CMT has also requested quarterly reporting on energy consumption for the Council's top twenty five high consuming buildings. The first of these reports went to CMT earlier this month.

## **Sustainable Procurement Statement**

- 2.13 This statement complements the Council's Sustainable Procurement policy (approved 2012). A working group within the Council is addressing sustainability as part of the procurement process and energy is a key element on the work programme. This procedure will be regularly updated to reflect working group progress.

## **Building Design & Refurbishment Procedure**

- 2.14 The design of buildings and their refurbishment can have a huge impact on day to day operational energy performance. New regulations such as the Energy Efficiency Directive to be transposed into UK law in 2015/16, brings legally binding measures to use energy more efficiently. This procedure sets out key elements to be considered from the approach to design through to Post Occupancy surveys.

## **Low / Zero Carbon Statement**

- 2.15 This statement sets out the Council's approach to the energy hierarchy and promotes a reduction in energy demand in the first instance. The use of renewable energy technologies is encouraged once the demand for energy has been minimised. It is proposed that a policy on renewable energy for the Council be prepared to complement this statement.

## **Building Performance**

- 2.16 This is a key procedure that addresses day to day energy performance in Council operational buildings. It introduces a heating season and states the temperature ranges within which Council buildings should operate. There will be exceptions to this but it is important for the Council to establish good management practices and to support FM to manage buildings effectively. This is a very important procedure as buildings make up 40% of the Council's carbon footprint and the annual CRC bill is based on electricity and gas consumption.
- 2.17 The Technical Support Services Team also plan to benchmark buildings grouping them as per building type, age, fabric, use etc. Headline performance information will be disseminated to frontline facilities staff on a regular basis. This will enable a greater understanding of those premises which are underperforming in terms of efficient energy use and enable a greater level of internal reporting.
- 2.18 This procedure also sets out user responsibilities for staff to assist with more effective energy management within buildings.

## Management Review & Internal Audit

- 2.19 This procedure has been put in place to ensure that the energy policy is being effectively implemented. A record of the audits will be held and any issues raised will be formally tracked until they are resolved. This is the first time that such a procedure has been put in place with respect to the monitoring of the Council's energy policy.

## Action Plan

- 2.20 The policy objectives are supported by an annual action plan (Appendix 2). This will be a working document and will be flexible to include additional actions/opportunities as they arise during the course of the year. This initial plan focuses on getting key procedural actions in place e.g. establishing a Council energy forum, reporting requirements and populating the project register.

## Finance

- 2.21 This policy focuses on energy consumed in buildings and by street and stair lighting (i.e. gas and electricity consumption). This is in line with the CRC scheme which is also based on the Council's gas and electricity consumption from buildings and from 2014/15 will also include street lighting.
- 2.22 Table 1 shows consumption and spend on energy for buildings and infrastructure (street & stair lighting, traffic and christmas lights) for 2012/13.

**Table 1**

	<b>Total tonnes CO<sub>2</sub></b>	<b>Spend (£)</b>	<b>% of Council Carbon footprint</b>
<b>BUILDINGS</b> (Gas, Electricity & Fuel Oil)	60,695	~ £10.1 million	40
<b>INFRASTRUCTURE</b> (Street & stair lighting, Traffic & Christmas lights)	21,300	~ £3.8 million	14



2.23 The Council's CRC spend for the financial year 2012/13 is £0.73m. The cost of CRC (based on energy consumed) has a significant impact on the overall cost of energy for the Council. The efficient management of energy and the effective implementation of the policy across the Council will play a key role in keeping these costs to a minimum.

### Reporting & Way Forward

2.24 The policy, procedures and action plan will be published on the web and kept up to date. The action plan and procedural documents will be kept live to reflect legislation updates and any changes within the Council.

2.25 Progress on policy implementation will be reported on annually alongside a new action plan for the following twelve months.

## 3. Recommendations

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To recommend that Committee:

1. approves the policy, supporting procedures and action plan.
2. agrees that a senior officer be the lead responsibility for energy management Council wide.
3. agree that a forum be established to drive the energy policy forward and address energy issues (e.g. reducing energy consumption) across the organisation; and
4. agree to receive annual reports on the implementation of the policy outlining progress made against policy objectives.

**Alastair Maclean**

Director of Corporate Governance

**Mark Turley**

Director of Services for Communities

## Links

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[Sustainable Edinburgh 2020](#)

<b>Coalition pledges</b>	P50 - Meet greenhouse gas targets, including the national target of 42% by 2020.
<b>Council outcomes</b>	CO18 - Green - We reduce the local environmental impact of our consumption and production

<b>Single Outcome Agreement</b>	SO 4 - Edinburgh's communities are safer and have improved physical and social fabric
<b>Appendices</b>	1 Energy Policy & Supporting Procedural Documents 2 Action plan



# ENERGY POLICY FOR COUNCIL BUILDINGS<sup>1</sup>

## VERSION CONTROL

This document is reviewed annually to ensure it is accurate and up to date.

No.	Version	Date	Initials	Description
1	1.0	July 2013	JF	Draft for Committee approval

**DOCUMENT OWNER:** Jenny Fausset, Corporate Governance

[jenny.fausset@edinburgh.gov.uk](mailto:jenny.fausset@edinburgh.gov.uk) 0131 469 3538

<sup>1</sup> Includes street and stair lighting

## 1 EXECUTIVE SUMMARY

The City of Edinburgh Council (CEC) buildings produce 60,695 tonnes of CO<sub>2</sub> annually (2012/13 figures). Its operational buildings use 154 GWh of gas, 59 GWh electricity and 352,000 litres of oil (2012/13 figures) equating to an annual energy bill of £10.1m. Street and stair lighting costs approximately £3.8 million per annum. Climate change is a global challenge and requires a global response. The City of Edinburgh Council has shown its commitment to addressing the cause of climate change by signing the Scottish Climate Declaration. Good energy management will not only support the Council's action in response to the threat of climate change but can provide substantial cost savings especially with raising energy costs.

Energy management is not only an issue for services areas with direct control over energy in the Council; it is an issue that all members of the organisation should be aware of as everyone's behaviour is influential. Each individual has a responsibility to support the energy management targets within this policy to ensure that the City of Edinburgh Council is able to meet its objectives, reducing our impact on the environment and lowering energy costs.

**Signed:**

**Chief Executive**

**Date:**

## 2 VISION & STATEMENT OF COMMITMENT

The use of energy is vital to the delivery of Council services and day to day Council operations. With increasing energy costs, carbon reduction legislation and concerns over climate change; effective energy management is essential to the Council. This policy covers management of energy within Council buildings and lighting (stair & street). The Council's Corporate Management Team shall ensure that:

- Sufficient resources are in place to meet the policy targets and objectives;
- Energy and carbon reduction initiatives shall be recorded, regularly reviewed and targets and objectives amended accordingly;
- There is a continued commitment from all staff to improve energy performance;
- There is a commitment to meeting the training and development needs of energy management staff and raising the energy awareness of all staff; and
- There is compliance with all current legislation and government targets and where practical the Council will endeavour to exceed these targets.

## 3 OBJECTIVES

- The Council will work towards the adoption of qualitative public commitments or an external recognition/accreditation scheme such as ISO 50001, providing a continuous improvement framework for energy management (see Management reviews and internal audits procedure);
- The Council shall reduce energy consumption (see measuring and monitoring plan, project register) and ensure high standards of energy efficiency across non domestic Council properties (see building performance procedure) thereby minimising expenditure and reducing CO<sub>2</sub> emissions in line with Council's climate change targets (see energy and emissions reporting procedure).
- The Council shall act to improve its energy performance by tackling the challenge of improved energy efficiency and incorporating the use of renewable technologies where appropriate across its estate. (See LZC statement)

- Products used within or on behalf of the Council will meet energy efficiency standards as stated in the **Council's sustainable procurement policy (2012)**. (See sustainable procurement statement also).
- The Council shall incorporate energy efficiency measures, material selection, whole life costing and the recycling of building materials into the design and construction of all new build/ refurbishment schemes (see building design and refurb procedure). The Council will also conduct post occupancy assessments across new and refurbished sites.
- The Council shall raise awareness of this policy and the benefits of efficient energy management with key staff sectors and contractors (communications procedure). In addition the Council will create an ethos of shared yet differentiated responsibility for energy management (see governance and resource planning procedure).
- The Council shall implement a structured staff awareness programme as part of the Council's training programmes (including induction for new staff) in relation to energy management and good housekeeping in Council buildings.

#### 4 TARGETS

The Council will reduce its energy consumption from operational buildings by 20% by 2020 (baseline year 2009/10) in line with the Council's Integrated Property and Facilities Management programme.

There are real opportunities within street lighting and stair lighting to improve efficiency and reduce energy consumption. Robust baselines will be established and targets set to 2020.

#### 5 DELIVERY

The policy sets out the key energy commitments which will be applied to all energy activity relating to buildings and lighting within the Council. Compliance with this policy, associated procedures and other linked policies is mandatory. Where the Council employs third party organisations to undertake activity on their behalf and there is an impact on energy consumption, they shall be required to comply with this policy.

Delivery of the objectives stated in this policy will be supported through the development and implementation of a set of procedural documents and an energy action plan. The procedural documents set out the energy management guidelines for efficient energy management across the diverse Council property portfolio whilst still meeting clients' needs. Procedures supporting this policy include:

- Governance overview and resource planning procedure;
- Communication procedure;
- Measuring and monitoring procedure;
- Project register procedure;
- Energy and emissions reporting and legislation register;
- Sustainable procurement statement;
- Building design and refurbishment procedure;
- Low/zero carbon statement;
- Building Performance procedure; and
- Management review and internal audit procedure

#### 6 CONTINUAL IMPROVEMENT

Progress on the implementation of the policy and the meeting of targets will be reported to Committee annually in line with reporting schedules for the Scottish Climate Change Declaration, the Carbon Management Programme and the CRC Scheme. Corporate Governance (Corporate Policy and Strategy Team) will request and collate information from Service Areas in order to report on progress in relation to this policy. Progress will

also be reported to the Member Officer Working Group on carbon, climate and sustainability.

Progress towards the targeted reduction (for buildings) and the development of targets (for street lighting) will be reviewed and reported on annually to Committee.

# GOVERNANCE OVERVIEW AND RESOURCE PROCEDURE



THIS DOCUMENT SUPPORTS THE COUNCIL'S ENERGY POLICY  
(ENPOL2013)

## Contents

### VERSION CONTROL

This document is reviewed annually to ensure it is accurate and up to date.

No.	Version	Date	Initials	Description
1	1.0	July 2013	JF	Draft for Committee approval

**DOCUMENT OWNER** - Jenny Fausset, Corporate Governance  
[jenny.fausset@edinburgh.gov.uk](mailto:jenny.fausset@edinburgh.gov.uk) 0131 469 3538

## 1 APPLICATION

This procedure applies to all elected members, employees and contractors of the City of Edinburgh Council (CEC).

## 2 BACKGROUND

The City of Edinburgh Council has put this procedure in place to outline the governance relating to energy management within the Council and associated resources which are available. This procedure provides a clear outline of the roles and responsibilities for energy management within the Council. This document has been created to support the Council's energy policy (ENPOL2013).

## 3 RESOURCE COMMITMENT

The Council's commitment to resources to manage energy effectively and successfully has been outlined within the energy policy (ENPOL2013).

In addition to the human resource commitment which is evident within sections 4 to 6 of this document, financial resource commitment to energy management can be seen within the project register, building performance procedure and building design and refurbishment procedure.

## 4 EMPLOYEE ROLES AND REONSIBILITIES

Responsibility for energy management across the Council's staff is provided below; teams have been grouped into having either

- Direct<sup>1</sup> energy management roles and responsibility;
- Operational<sup>2</sup> energy management roles and responsibility; and
- Indirect<sup>3</sup> energy management roles and responsibility.

In addition to these, all staff and contractors have a role to play in the effective management of energy throughout the Council.

### 4.1 Direct roles and responsibility

#### Technical Support Services

Day-to-day responsibility for operational energy management is with the Technical Support Services Team in SfC.

Lead officer: Property Manager  
Email: [energy@edinburgh.gov.uk](mailto:energy@edinburgh.gov.uk)

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<sup>1</sup> Direct responsibility has been defined as those teams who have day to day responsibility and report on energy management

<sup>2</sup> Operational responsibility has been defined as those teams who have opportunity to influence energy management through their day to day operations

<sup>3</sup> Indirect responsibility has been defined as those other teams which provide supporting services which help to ensure good energy management practices.



**Technical Support Services responsibilities:**

- Monitoring and targeting of energy consumption for the Council's property portfolio (this shall involve collating and recording information from third parties that manage buildings on the Council's behalf);
- Management of energy conservation programmes (including Central Energy Efficiency Fund (CEEF));
- Assisting Finance with setting energy budgets;
- Undertaking regular surveys of buildings, plant, equipment and services and proposing projects for future investment;
- Advising service areas on energy efficiency projects and providing supporting energy data;
- Benchmarking the performance of the Council property portfolio;
- Promoting energy efficiency good housekeeping; and
- Provision of robust energy data for the following purposes –
  - Carbon Reduction Commitment (CRC) baseline and reports,
  - Monitoring reports (monthly, quarterly, and as requested) for senior management; and
  - Policy progress reports.

**The Climate, Carbon and Sustainability Team**

The Carbon, Climate and Sustainability (CCS) team in Corporate Governance has day to day responsibility for energy policy.

Lead officer: Corporate Policy & Strategy Team Manager

Email: sustainability@edinburgh.gov.uk

**The Climate, Carbon and Sustainability Team responsibilities:**

- Oversee policy development;
- Regular updating of policy to reflect changes in legislation and local authority commitments; and
- Report on progress on policy implementation to committee annually.

**4.2 Buildings Programme Management****Design Team**

The Design Team manager has day to day responsibilities for Engineering Services, Surveying and Architectural projects. The role that these teams play in influencing projects is very much dependent on the requirements as set by the Client Department underpinned by Council policy and standards.

**Design Team Responsibilities**

- To ensure compliance with Council policies;
- To promote good practice; and
- To carry out Post Occupancy Surveys

**Facilities Management**

Facility Management play a key role in providing the management and delivery of supporting services in the operation of Council buildings.

Lead officer: Corporate Facility Manager

E-mail: [facilitiesmanagement.integratedproperty@edinburgh.gov.uk](mailto:facilitiesmanagement.integratedproperty@edinburgh.gov.uk)

### **Facility Management energy management responsibilities:**

- Energy efficiency is a core element of the management approach taken;
- Reading of all utility meters including sub meters on a monthly basis;
- Carry out regular energy audits of buildings, plant and equipment;
- Ensuring Council buildings within the corporate office estate are operated in a manner that uses energy efficiently;
- Reinforcing and implementing good energy practice with building users;
- Liaising with the Technical Support Services team to report issues with buildings that are impacting on that building's energy performance;
- Ensuring that contractors who have responsibility for the facility management of buildings within the corporate office estate are implementing the Council's energy policy; and
- Providing practical support and advice to building users to enable them to be energy efficient in the use of the building.

### **Strategic Property Asset Management**

The Asset Management Team manages the use of the Council's operational property assets, in order to assist Client Departments' in their delivery of key services.

### **Strategic Property Asset Management energy management responsibilities:**

- Take full account of the opportunities for energy savings that arise out of the rationalisation of the estate or of individual buildings;
- Ensuring that the corporate Asset Management Plan promotes and implements good energy management;
- Ensuring that the Council's energy policy is central to the appointment of consultants and developers/contractors for all capital building projects and major maintenance works; and
- Ensuring that energy efficiency options for capital investments are fully appraised on the basis of whole life costing.

### **Housing Asset Management (SfC)**

#### **Housing Engineering Services and Energy Management**

The Housing Asset Management team (HAM) is responsible for developing and delivering high quality, effective, efficient and well managed customer-focused services to council tenants, homeowners and the wider community, ensuring a thriving, safe, energy efficient, well-maintained and managed, housing sector serving the city's housing needs.

This includes the coordination and implementation of energy and climate change strategies and policies to contribute towards meeting local and national energy and climate change targets and legislative requirements for SfC's property folio (principally Housing and also city-wide private sector housing).

### **Engineering services energy management responsibilities:**

- To incorporate energy efficiency measures into Regeneration and Housing strategies;

- To promote energy efficiency as part of all stair lighting programmes and refurbishments; and
- To assist with and implement measures to improve the energy efficiency of homes and make homes warmer across the city.

### **Street lighting**

The street lighting team maintain and manage all aspects of street lighting (including illuminated signs and bollards) across the city.

Lead officer: Lighting Manager

Email:streetlighting@edinburgh.gov.uk

### **Street lighting energy management responsibilities:**

- To promote and integrate energy efficiency as part of all street lighting programmes and refurbishments.

## **4.3 Indirect responsibility**

### **HR energy management responsibilities:**

- Integrating energy efficiency into Council training and induction programmes for all staff;
- Managing energy training and development as part of individual's overall development where energy is a core activity of the job description;
- Including energy performance competencies in job descriptions where relevant; and

### **Communications Service energy management responsibilities:**

- Assist with on-going communication of the energy efficiency message to Council staff via newsletters, e-mails, web etc.;
- Publicity for energy efficiency projects ;
- Supporting Technical Support Services and the Carbon, Climate and Sustainability team with awareness raising campaigns.

### **Procurement energy management responsibilities:**

- Ensuring energy efficiency is used as procurement criteria where relevant in all Goods and Services contracts in line with the Council's Sustainable Procurement policy;
- Encouraging suppliers to offer energy efficient alternatives/options where available;
- Including energy criteria/performance in service contracts; and
- Encouraging energy efficiency in the supply chain: i.e. favouring suppliers that are active themselves in improving their overall energy efficiency.

### **Corporate Finance energy management responsibilities:**

- Assisting with budget provision and management for Carbon Reduction Commitment (CRC) and other energy efficiency related initiatives;
- Establishing budget codes for individual Council buildings (including those that form part of a group of buildings on a site) in order to report accurately on annual spend on a building by building basis;

- Involving the Technical Support Services team in the setting of energy budgets; and
- Encouraging the use of whole life costing, including placing a value on carbon savings.

#### **4.4 All staff and contractors**

Responsibilities for energy management do not reside exclusively with the Technical Support Services Team or those with operational or indirect responsibilities. **Energy management is everyone's responsibility.**

Each of the Council's Services, employees and contractors has responsibility to:

- Recognise their role as energy consumers and accept responsibility for their energy performance;
- Manage energy consumption through good housekeeping and investment;
- Make a departmental commitment to energy efficiency; and
- Promote energy efficiency through their core activity.

### **5 MANAGEMENT RESPONSIBILITIES**

Management has overall responsibility to ensure that all of the aforementioned service areas, contractors and staff adhere to their responsibilities as defined within this procedure. This shall be ensured through:

- regular review of the performance against remit of the service area and staff with direct responsibility for energy management;
- inclusion of energy management duties within job descriptions of appropriate energy management support staff;
- include in appraisals, a level of adherence to energy management responsibilities for all staff

### **6 WORKING GROUPS RESPONSIBILITIES**

Across the Council there are also cross functional teams/working groups who have a remit to manage energy.

#### **Sustainability and Carbon Reduction Group**

Sustainability and Carbon Reduction is one of the four key workstreams identified as part of the Integrated Property and Facility Management programme (iPFM). This seven year programme is being led by SfC. A working group has been established to drive forward defined projects as part of this workstream. This group will be responsible for implementing the policy with respect to buildings.

#### **A Carbon Reduction Commitment (CRC) project board was established in 2010:**

- to ensure the City of Edinburgh Council's overall compliance with the scheme (including legal, financial and operational aspects);
- to ensure input and co-ordination by all Council departments in response to the legislative requirements;
- to facilitate and promote an overall approach by the City of Edinburgh Council to reduce the Council's carbon footprint year on year;
- to receive updated progress reports from the CRC working group on a regular basis to ensure City of Edinburgh Council is on track to meet legislation milestones; and

- to receive reports from other relevant Council groups (e.g. Corporate Asset Management working group) on measures to reduce the Council's overall carbon footprint.

Due to changes (2012) to the CRC legislation (i.e. removal of the trading element), communication with officers on the Board is virtual.

### **Member Officer Working Group**

A member officer working group has been established within the Council. Updates, briefings and progress reports on the implementation of the energy policy will be sent to this group for scrutiny and discussion.

### **Corporate Energy Forum**

There is no corporate working group existing within Council structures at which all energy issues as they impact on the Council can be discussed, debated and driven forward. It is proposed that an energy forum be established to service this function and oversee the implementation of the policy and that it be chaired by the Head of Corporate Property (SfC).

## **7 TRAINING**

The Council understands the need for energy management training for those with direct responsibility over energy management and throughout the Council as whole. Training should be made available where appropriate. Examples of staff with direct responsibility include:

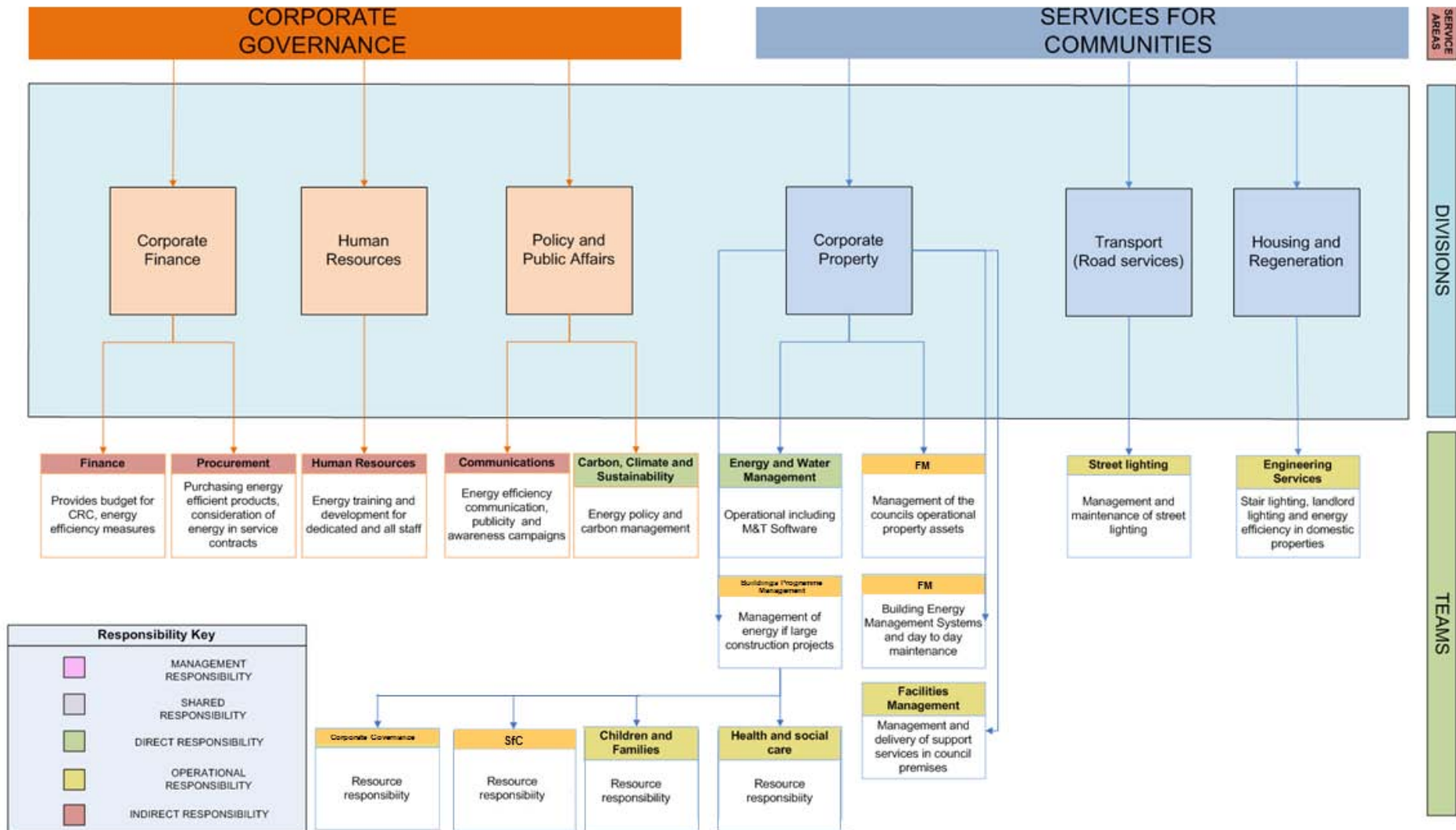
Technical Support Services staff are members of the Scottish Energy Officers Network (SEON) and regularly attend their meetings and training workshops. Staff also attend regular Systems Link workshops, Energy Performance Certificate training events as well as bespoke workshops e.g. on BEMS controls and lighting technologies.

CCS staff are members of the Sustainable Scotland Network (SSN) and attend quarterly meetings and training workshops to learn and share good practice on climate change.

In addition to this, energy management awareness campaigns have been carried out throughout the organisation. Currently the Council is taking part in the Carbon Management Awareness Campaign supported by the Carbon Trust. This programme aims to assist the Council to create, launch and maintain a robust energy awareness campaign that will yield energy, carbon and financial savings over a three year period and beyond.

## 7 ORGANOGRAMS

The diagrams below describe how the teams interconnect within the organisation and the associated level of responsibility.



## **8 FUTURE CHANGES**

The Corporate Property structure is currently under consultation for an extensive reorganisation. As this division holds a number of teams which have direct or operational responsibility for energy management it is essential that any changes which occur are reflected in updated versions of this document as appropriate. The text above is based on the draft format of the reorganisation and will be amended accordingly based on finalisation of this structure.

## **9 CONTINUOUS IMPROVEMENT**

To ensure that all relevant parties are aware of their roles and responsibilities regarding energy management within the Council, this document is reviewed annually and any changes communicated to all stakeholders.

## Appendix 1

## Business Manager (Schools)

- Regularly monitor and validate energy consumption using data from utility bills and onsite readings;
- Play a lead role in the property's approach to energy management;
- Work with local FM staff to identify and progress opportunities for saving energy;
- Liaise with Technical Support Services to identify and develop good practice;
- Monitor performance against benchmarks and targets on an ongoing basis;
- Ensure that objectives identified in School Energy Action Plans are met and that governance documents are kept up to date;
- Support teaching and local FM staff to reduce energy.

## Service Support Officer (Schools)

- Responsible for the day to day management of energy;
- Provide support, assistance and expertise to local energy reduction campaigns;
- Work with Facilities Manager, Business Manager and other relevant staff to identify and progress opportunities for energy saving;
- Liaise with Business Manager/Head Teacher on areas of improvement;
- Read meters frequently and record information;
- Liaise with Technical Support Services on Building Management System (BMS) settings and requirements;
- Ensure that faults to equipment, boilers, controls and plant are reported and properly recorded/monitored until service/repair;
- Ensure that local timers and controls are correctly set to requirements;
- Where applicable ensure that pool covers are deployed when the pool is not in use;
- Work with local staff and FM to develop a bespoke approach to achieving energy reduction within the property.

## Head Teacher

- Lead and support the school's energy reduction campaign;
- Support Business Manager, SSO and teaching staff in reducing energy;
- Show visible support and commitment for the Energy Action Plans/Policy with the whole school community;
- Maintain an overview of the school's energy performance against set targets/benchmarks;
- Maintain an overview of energy policy and associated governance documents for the school;
- Identify and support opportunities for incorporating energy into the school curriculum.

## Technical Support Services to Business Managers/SSOs/Facility Managers etc

- Provide access to energy consumption and cost data;
- Provide benchmarking information and exceptions to performance;
- Carry out energy audits and identify and advise on project proposals;
- Maximise the use of CEEF funding to implement projects;
- Set targets for properties and provide necessary guidance and support to meet these;



- Provide supporting information/evidence to support budget setting;
- Keep abreast of relevant regulatory/government policy requirements and advise accordingly;
- Ensure that boilers and plant are maintained/serviced regularly;
- Liaise with local FM staff to ensure that BMS are set up to meet local requirements and are in line with parameters outlines in the Council's Energy Policy.

#### Facilities Manager

- Responsible for maintaining an overview of energy performance in properties in their area;
- Liaise with Technical Support Services to identify and develop good practice;
- Monitor performance of properties against benchmarks and targets on an ongoing basis raising any issues directly with the site or Technical Support Services as appropriate;
- Ensure that properties are meeting objectives identified in Energy Action Plans and that governance documents are kept up to date;
- Provide support and assistance to energy reduction campaigns
- Maintain an overview of faults to equipment, boilers, controls and plant ensuring that the correct procedure for reporting and monitoring of faults are followed.

# COMMUNICATIONS PROCEDURE



**THIS DOCUMENT SUPPORTS THE COUNCIL'S ENERGY POLICY  
(ENPOL2013)**

## Contents

### VERSION CONTROL

This document is reviewed annually to ensure it is accurate and up to date.

No.	Version	Date	Initials	Description
1	1.0	July 2013	JF	Draft for Committee approval

DOCUMENT OWNER - **Jenny Fausset, Corporate Governance**  
**[jenny.fausset@edinburgh.gov.uk](mailto:jenny.fausset@edinburgh.gov.uk) 0131 469 3538**

## **1 APPLICATION**

This procedure applies to all elected members, employees and contractors of the City of Edinburgh Council (CEC).

## **2 BACKGROUND**

City of Edinburgh Council has put this procedure in place to outline the communication methods relating to energy efficiency and emissions reduction within the Council and externally to the general public. This procedure provides a clear outline of the communication methods, channels and actions taken to meet the objectives and targets within the energy management policy (ENPOL2013).

## **3 METHODS OF COMMUNICATION**

In order to address the challenges that the Council faces regarding energy and achieve the requirements set out in the Council's energy policy, effective channels for communication are necessary. Communication must be two way allowing the energy policy to be communicated down throughout the organisation but also enable staff to feedback into the process.

At the current time the Communications Team is going through a process of change (June 2013) it is difficult to define exact methods that will be available. The following channels will still be available and supported by the communications team but may be in a different format to those currently established.

- Face to Face;
- Electronic;
- Printed;
- Other forms of media.

Feedback will also be received through these channels. There will be more emphasis placed on electronic feedback for ease, anonymity and to allow a quick response.

## **4 TARGET AUDIENCE**

As noted within the application section this procedure applies to all individuals related to the Council be they elected members, staff or subcontractors. Communications however will be targeted at different groups of staff as there are different actions and priorities which face different groups.

Below are the communication groups that have been created. The internal groups are based on those outlined in the Governance procedure.

<b>Group</b>	<b>Includes</b>
Shared responsibility	All staff
Direct responsibility	Technical Support Services Team; Carbon, Climate & Sustainability Team
Operational responsibility	Asset Management, Major Projects, Property Services, Architectural Services, Facilities Management, Street Lighting, Engineering services
Indirect responsibility	Finance, Procurement, HR, Communications
Management Responsibility	All Heads of Service Management throughout the Council
Client Roles	Departments who act in client roles for projects, such as Children's Services
<b>External</b>	
Partner organisations	e.g. Edinburgh Leisure
Suppliers	Contractors carrying out a service on behalf of the Council e.g. Norland
The Public	Residents of the city of Edinburgh

## 5 SHORT TERM / INTERIM COMMUNICATION PROGRAM

A series of recommendations were drawn up with the communications team which need to be implemented or reviewed before a full communications program can be drawn up. These actions are outlined below.

<b>Recommendations</b>	<b>Completion Date</b>
<b>To implement</b>	
Engage a senior member of management as a champion for the Energy Policy to add credibility and highlight the need to be taken as a serious and currently important issue.	September 2013
Have one dedicated point of contact within the communications team to be able to track what new resources for communication will be available and to develop any reward based scheme.	
Resurrecting Carbon/ Energy Champions (not on a volunteer basis).	
Publication of projects which provide large savings and to also give	

recognition to the good work that has already been undertaken.	
Strengthen internal communication between Service Areas to allow feedback on project successes.	
<b>To Review</b>	
Raise the issue of a minimum energy management standard to be included in the PRD process.	
Possibility of a reward based scheme for those who go above and beyond this minimum standard. Recognition needs to be appropriate to the role of the individual. Integration of these actions with the carbon management awareness training program (CMAC) which is set to commence (January 2013)	

Once these actions have been reviewed the dedicated member of staff from the Communications team will work with the Carbon, Climate and Sustainability and Technical Support Services Team to produce a full communication action plan.

## **6 ENCOURAGING AND ACKNOWLEDGING BEST PRACTICE**

Through internal discussions it has been highlighted that action is required to ensure that staff who have already engaged in actions to improve energy efficiency or management should be recognised retrospectively.

As such, these staff will be identified and used in a program to highlighting the type of action that can be taken under the different member groups. This will then be carried on across the authority using the channels described above in section 3.

# MEASURING, MONITORING AND ANALYSIS PROCEDURE



**THIS DOCUMENT SUPPORTS THE COUNCIL'S ENERGY POLICY  
(ENPOL2013)**

## Contents

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[jenny.fausset@edinburgh.gov.uk](mailto:jenny.fausset@edinburgh.gov.uk) 0131 469 3538

## 1 APPLICATION

This procedure applies to all elected members, employees and contractors of the City of Edinburgh Council (CEC).

The City of Edinburgh Council has put this procedure in place to outline the measuring and monitoring practices relating to energy management within the Council and associated resources which are available. This document has been created to support the Council's energy management policy (ENPOL2013).

## 2 DRIVERS OF ENERGY USE

The drivers of energy use come from our service provision. The main drivers are as follows

- Corporate Buildings
- Education Estate
- Street and stair lighting

We also have other requirements for energy which are less significant than those listed above but are addressed in our actions to reduce energy consumption and improve efficiency.

## 3 SIGNIFICANT ENERGY USES

Significant energy uses are the following:

- Gas (for heating);
- Electricity; and
- Gas Oil (for heating – limited sites)

## 4 MEASURING

The Council's street lighting portfolio is administered by Roads Services and is traded on a passive half hourly basis.

The Technical Support Services team receive information from a number of different sources to enable them to build up a profile of energy use within each property.

Measurement methods used by the Technical Support Services team include:

### **Direct meter reads from sites/ Systems Link portal**

The Council recognises that it is important to ensure that measurement from both personnel and equipment is as accurate as possible. Personnel are provided with training and guidance in order to provide accurate meter readings. A number of sites have the ability to directly enter their meter readings into an online portal for the energy management software (SystemsLink). This information can be used to inform billing and the verification process. All billable meters are licensed by our supplier and approved by Ofgem. Suppliers are required to read and inspect meter(s) at least every two years.

**Automatic Meter Reading (AMR)**

The roll out of AMRs across the Council's operational estate has improved the accuracy of invoice data for gas and electricity. The Council currently has 203 gas and 343 electricity AMR devices across an estate of around 1000 supplies.

The Council has a policy of installing AMR equipment on electricity supplies where there is a dynamic consumption profile and annual consumption will be greater than 10,000 KWh per annum and 73,200 KWh per annum for gas supplies. AMRs communicate using GSM signals to allow remote reading of consumption data and meter registers.

This results in the elimination of estimated reads with the benefit of more accurate bills. It also allows for more accurate and automatic monitoring and reporting of consumption data (including half hourly consumption profile data) and carbon emissions. This has increasing importance with greater demands for accurate reporting on internal carbon emission reduction targets and also for external reporting.

**Energy Bills / Delivery notes for fuel**

Accurate billing is vitally important and action has been taken to support this goal through training for staff taking direct readings (as mentioned above) and implementation of AMR. In addition to this, bills are verified based on consumption and financial spend. Sites are also encouraged to notify the Technical Support Services team of errors found in bills so that this can be raised and rectified with the supplier timeously.

**Building Energy Management Systems**

The Property Management team also collect information through the Building Energy Management Systems (BEMS). BEMS allow for more sophisticated control strategies with remote monitoring and adjustments to ensure that faults and energy waste is identified early and that potential energy savings are maximised. A strategic review of the BEMS is currently underway. This will inform a programme of BEMS upgrade across the estate. This will increase the energy efficiency of buildings and allow for better monitoring.

**Street lighting**

Supplies to street lighting are un-metered. Energy is charged on a passive half hourly trading profile based on dusk to dawn burning. This method does not use any actual recorded data and instead relies on the calculated sunrise/sunset times. Passive Half Hourly cannot use any data from a Photo Electric Cell Unit (PECU) Array or a Central Management System (CMS). The Council does not currently operate a CMS system for street lighting.

Energy consumed is declared by the Council on a monthly basis based on data contained within "Hilight Horizon" the Street Lighting Asset Management database. This data is updated daily as the inventory (street lighting, illuminated signs and bollards asset) changes.

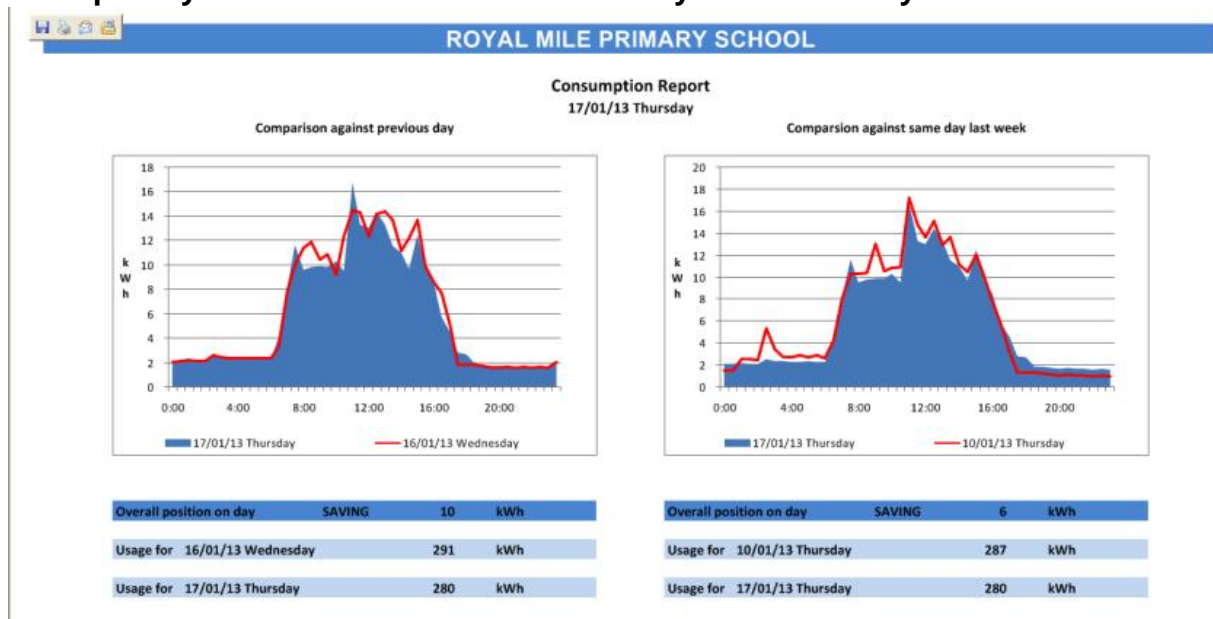


## 5 MONITORING

### Technical Support Services Team

The Technical Support Services team record consumption data and monitor consumption on Systems Link. The team has recently set up online access to Systems Link’s web reporting system and are rolling out access across the operational estate. The website will be used as a platform from which to engage with and encourage energy users’ awareness of consumption and associated cost. Furthermore, the ability for property users to submit actual meter readings through the system will increase the accuracy of billing and consumption data where AMR installation has not been feasible. Where users agree to submit monthly readings through the system non-AMR, quarterly billed supplies will have the option of moving to monthly billing. Through the web portal, sites will be able to review half hourly profile consumption data to analyse the impact of changes to the operation of the building, to monitor out of hours and peak consumption and to validate efficiency savings through improved housekeeping.

### Example: Systems Link screen shots for Royal Mile Primary School



EDINBURGH THE CITY OF EDINBURGH COUNCIL

Powered by SystemLink

Administration  
 Site List  
 Contact Us  
 Log Out

**ROYAL MILE PRIMARY SCHOOL**  
 Data Sets  
 Site Reports  
 Add New Readings

**Data Sets For Site**

Site Name: ROYAL MILE PRIMARY SCHOOL  
 Site Code: PSC/C&F/ROYAM  
 Address: 06 CANONGATE, EDINBURGH, EH8 0BZ

View detailed site information

Edit Table Layout

Type	Meter Serial Number	Custom 3	MPAN/MPRN	Units		
Electricity	K10UP00057	smart meter	1800022289753	kWh		
Electricity	K10UP08058	smart meter	1800035161812	kWh		
Electricity	P908845869		1800022289744	kWh		
Gas	920203		19046705	kWh		
Gas	7534230		18863205	kWh		
Gas	707180		18863104	kWh		
Water	06M273798	Water		Cubic metres		
Water	12M101958	Water		Cubic Metres		

As part of the Council's Energy Awareness Campaign it is planned that Systems Link's web reporting system will be used to provide monthly reports across all supplies to key managers. League table reporting will be one mechanism employed to raise awareness and motivate properties to reduce energy use.

Funding has been secured from the Carbon Trust to carry out energy audits on Council buildings and there is an ongoing relationship with the Carbon Trust to develop further support for strategic low carbon advice and support. A rolling programme of audits across the estate is also undertaken by the Technical Support Services team.

### **CCS team**

The CCS team use an Excel based database ('Carbonstat') for recording corporate Council carbon emissions year on year. The CCS team holds the database and is responsible for collating information from other Service Areas across the organisation. The database was reviewed and updated as part of the Carbon Management Revisited programme (2011).

### **Street lighting team**

All street lighting data is contained within the asset management database "Hilight Horizon" which holds a complete inventory of street lighting, illuminated signs and bollards assets. It is not a monitoring system in terms of being "active" (i.e. a Central Management System (CMS)), it simply holds all the data relating to the type of lighting installation.

Consumption (kWh) and CO<sub>2</sub> emissions are monitored on a monthly basis and can be compared annually. Numerical half hourly data and daily demand are also provided.

## **6 ANALYSIS**

In addition to the data produced from the various measuring and monitoring regimes, analysis is conducted on the building energy data to further determine any issues or areas for improvement.

This includes the following activities:

**Degree Day analysis;**  
**Operating period analysis (i.e. identifying wastage); and**  
**Comparison between actual and expected usage (including target setting).**

Data is also analysed after an energy efficiency project had been implemented to determine the savings that have been made in terms of money, energy and carbon. This information is recorded within the project register (ENPOL\_PROJREG) and available for all relevant parties to view.

## **7 ENERGY PERFORMANCE INDICATORS**

The following energy performance indicators (EnPI) have been established in line with the Council's energy policy objectives and targets:

kWh per m<sup>2</sup>;  
kWh per occupant; and  
kWh per hour open.

Performance of buildings in terms of these indicators will be included as part of the monthly reports to management.

## **8 CONTINUOUS IMPROVEMENT**

A proposal has been developed by the Technical Support Services team with a number of recommendations that will have positive impacts on energy consumption and its management. These are:

- to set performance targets for building tenures;
- to locate the Building Energy Management System (BMS) operations with the Technical Support Services team;
- the Technical Support Services team develop a replacement strategy for the BMS targeting energy savings, best value and building performance.
- the Technical Support Services develop a performance specification for their BMS to deliver on the BMS strategy including procurement, operation and maintenance of the Council's BMS.

These proposals will be reviewed annually by the Technical Support Services team and following decisions made all relevant procedural documents shall be amended. In order to ensure continual improvement the actions taken within this document shall be reviewed annually with an aim to further support the objectives of the energy policy.

# OPPORTUNITIES/PROJECT REGISTER PROCEDURE



**THIS DOCUMENT SUPPORTS THE COUNCIL'S ENERGY POLICY (ENPOL2013)**

## Contents

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## **1 APPLICATION**

This procedure applies to all elected members, employees and contractors of the City of Edinburgh Council (CEC).

## **2 BACKGROUND**

The City of Edinburgh Council has put in place this procedure to outline the process for maintaining and updating the opportunities and project register of all projects directly relating to energy management within the Council. This document has been created to support the Council's energy management policy (ENPOL2013).

## **3 OPPORTUNITIES IDENTIFICATION**

Opportunities for energy efficiency projects are identified in a number of ways:

- Data monitoring and analysis (See Measuring, Monitoring And Analysis Procedure );
- Information provided by occupants/contractors;
- Energy audits carried out by City of Edinburgh Council staff;
- Energy audits by external energy contractors;
- Building Energy Management systems (BMS);
- Maintenance;

A variety of different individuals can be involved in this process included Council staff occupying premises, Council staff with a direct energy responsibility (See Governance Procedure), external support services or external contractors.

All opportunities which arise are assessed and recorded within the opportunities/project register, a live document owned by the Technical Support Services team. Contributors are advised to contact the Technical Support Services team to provide details of potential opportunities observed or notified of to ensure they can be tracked.

Opportunities are assigned to an individual to pursue further action and deadlines are created for whether to progress or shelve an opportunity. A tracking system is in place where projects are colour coded based on the likelihood of becoming fully integrated projects.

## **4 OPPORTUNITES ASSESMENT**

Opportunities once recorded are further investigated with particular emphasis on the following criteria:

**Maintenance or Energy Efficiency**

The opportunity is assessed to determine whether it is routine required maintenance only or an energy efficiency opportunity. Where the project is a maintenance/refurbishment or design project the appropriate Council department should manage the project with the support of the Technical Support Services team where required.

**Current work in progress**

The project is assessed to ensure that it is not already being carried out or could be added into an existing program of work.

**Financial viability**

At a minimum this includes assessment of available funding and payback period. The Council is trying to integrate a whole life costing approach to this assessment but this is still in the process of being developed.

**Energy and carbon savings potential**

Calculations are conducted to determine the energy and carbon savings that can be achieved and compared to the financial requirement to conduct the project.

**Resource requirement**

Out with financial resource, the human and time elements of the opportunity will be assessed.

**Consequential improvement**

Some opportunities may not exist exclusively and may benefit from additional works or may arise as the result of a works that have been conducted. These aspects will also be considered.

All of the aspects considered, the opportunity is then classed as not viable or transferred over into the project register.

## 5 PROJECT REGISTER

Once an opportunity has been confirmed as viable it is then transferred onto the [project register](#). This includes more detail on the project, expected and actual savings in terms of energy, carbon and financial. This register should be used to track the status of a project and demonstrate if expected savings are equivalent to the actual savings achieved. This information will then be included in any monitoring and management reports (See Measuring, Monitoring and Analysis Procedure).

## 6 CONTINUAL IMPROVEMENT

The project register is continually updated to detail the status of opportunities and projects which have been taken forward by members of the Technical Support Services team. The format of the register is also reviewed to ensure the correct level of detail is recorded to inform future projects of a similar nature.

# ENERGY AND EMISSIONS REPORTING PROCEDURE



THIS DOCUMENT SUPPORTS THE  
COUNCIL'S ENERGY POLICY  
(ENPOL2013)

## Contents

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## 1 APPLICATION

This procedure applies to all elected members, employees and contractors of the City of Edinburgh Council (CEC).

## 2 BACKGROUND

The City of Edinburgh Council has put in place this procedure to outline the internal, mandated and external reporting requirements relating to energy and emissions within the Council. This procedure provides a clear outline of the reporting requirement and actions taken to meet these. This document has been created to support the Council's energy policy (**ENPOL2013**).

## 3 INTERNAL REPORTING

All reports relating to energy and carbon management performance are submitted for approval to Committee. Reports are approved by the Council's Corporate Management Team (CMT) prior to going to Committee. Committee reports are available on the Council's web pages for staff and the public to view.

Progress reports on consumption, emissions and reduction performance are also prepared for senior management to provide an ongoing overview of progress to date. Reports are provided to:

- Internal Boards and Working Groups. This includes the CRC Project Board and the Member Officer working group on Sustainability. The Technical Support Services team provides update reports for Corporate Asset Management Group meetings and for finance.
- The Carbon Climate and Sustainability team and the Technical Support Services team work closely with colleagues from the Council's Internal Audit Team on joint reports to CMT e.g. on CRC compliance and Value for Money (e.g. water management). These reports highlight areas for the attention of senior management and make recommendations.
- The Technical Support Services team has identified the need to produce monthly reporting across electricity, gas and oil consumption and league table reporting to reward high achievers. These reports will be provided for management.
- A diagram of the reporting structure can be seen within appendix A.



## 4 MANDATED EXTERNAL REPORTING

A number of reporting obligations cover wider areas than just energy but have been included demonstrating how energy is sourced and reported within these requirements.

### **Scottish Climate Change Declaration**

The Scottish Climate Change Declaration report is prepared annually by the CCS team on behalf of the Council. Collated estimated [Scottish data](#) is available from the Department for Energy and Climate Change (DECC) for the city as a whole and it is this data which is used for the production based footprint. This footprint includes the following areas

- Industry and commercial;
- Domestic;
- Road Transport;
- Land Use/ Land Use Change; and
- Forestry

CEC also provides a consumption based footprint report for the city using the Stockholm Environment Institute's REAP software.

The current report (2011) was approved by Policy and Strategy Committee on 27 March 2012. It is available on the Council's web and also on the [Sustainable Scotland Network](#) web pages.

### **Carbon Management Plan**

The Council's Carbon Management Plan (CMP) is a 5 year plan with a rolling annual action plan that sets out the Council's commitment to meeting national carbon reduction targets (i.e. 42% by 2020 and 80% by 2050). The Plan is prepared by the CCS team and is reviewed annually. The CMP covers:

- Council buildings (energy data sourced from the Technical Support Services Team)
- Edinburgh leisure (energy data sourced from Edinburgh Leisure)
- Street lighting and stair lighting (energy data sourced from street lighting team and Engineering Services respectively)
- Transport; and
- Waste (municipal).

### **CRC Energy Efficiency Scheme (CRC)**

The Carbon Reduction Commitment Energy Efficiency Scheme (CRC) is a mandatory scheme which requires full participants within the scheme to report annually and hold evidence which supports their reporting submissions.

CRC footprint and annual reports are prepared in compliance with [CRC Scheme guidance](#) as produced by the Environment Agency. The CCS team manages the reporting requirements and the Technical Support Services team collate and provide the data to be reported based on the scheme guidelines.

CRC requires all participants to produce an annual report in every year of a phase (Regulator's Guidance for participants in Phase 1 (2010/11–2013/14)). The annual report is due on the last working day of July.

Participants must purchase enough allowances<sup>1</sup> to cover the CO<sub>2</sub> emissions reported within the annual report by the last working day in July in the scheme year. The allowances must then be surrendered on or before the last working day of September each year.

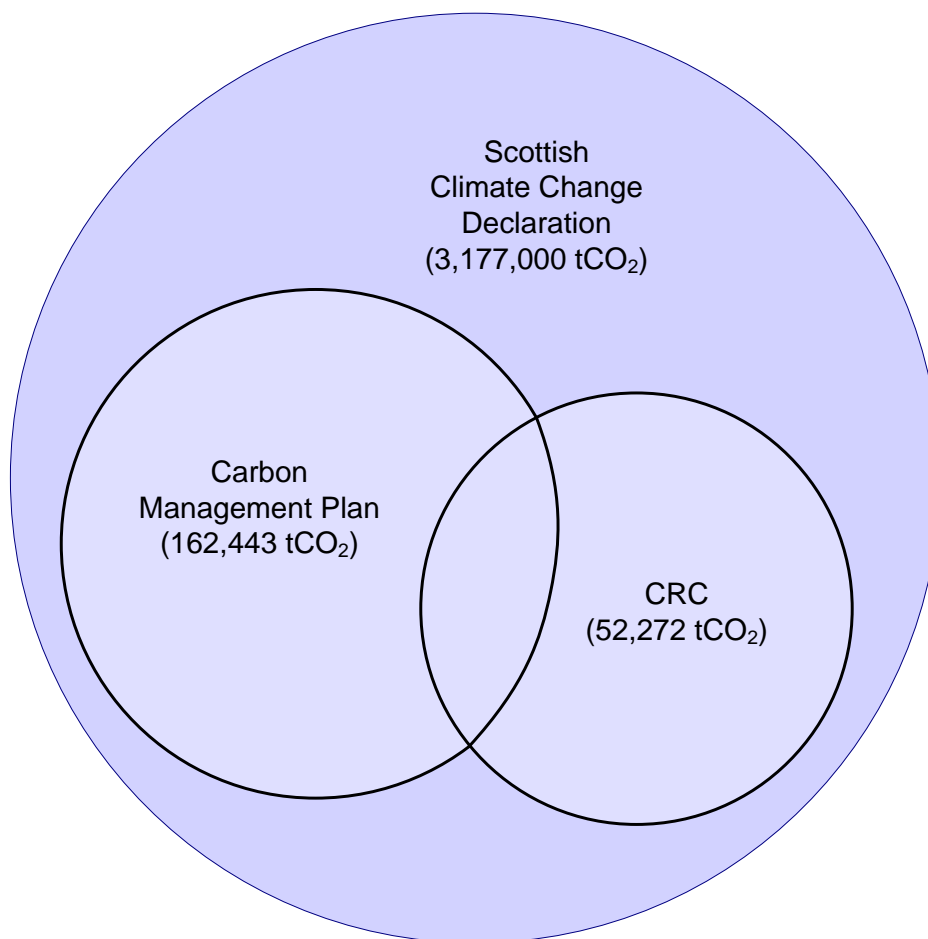
In addition to the yearly reporting and allowance purchase requirements, participants are also required to maintain an evidence pack. The CCS team hold and update the evidence pack for the Council. This includes supporting documentation regarding their qualification and reporting requirements. Reporting is provided in energy terms and converted into CO<sub>2</sub> via an online reporting system.

### **COUNCIL CARBON FOOTPRINTS**

Due to the above range of reporting requirements, the Council has a number of carbon footprints, those which are reported regularly (as described above) are shown in the diagram below (quoting 2011/12 figures).

---

<sup>1</sup> £12/tonne of CO<sub>2</sub> in 2012/13 and will rise to £16/tonne of CO<sub>2</sub> in 2014/15 as per Chancellor's Autumn statement 2012



It should be noted that this diagram is for illustrative purposes only and the accompanying text above should be referred to as it outlines the scope and methodology for each footprint.

Separate to this, is the Council housing footprint. This is not reported as part of the CMP as it distorts the footprint dramatically and influence over it is out with the operational control of the authority. This footprint was first reported in 2012 and was calculated using figures available from DECC and pro-rata techniques based on the Council housing stock. The Council acknowledges that as it has no operational control over the energy use in these premises it is difficult to report more accurately as the data is not available to the Council.

The Council also stores information on all Council properties for which it holds the energy contract, through the Systems Link energy management system. This information feeds into the reporting structures above as appropriate based on the reporting requirements.

## 5 CONTINUAL IMPROVEMENT

It should be noted that the majority of reporting described within this procedure is in terms of CO<sub>2</sub> or CO<sub>2e</sub> depending on the reporting requirement. Although not purely energy the reporting of these emissions highlights the amount of energy being used

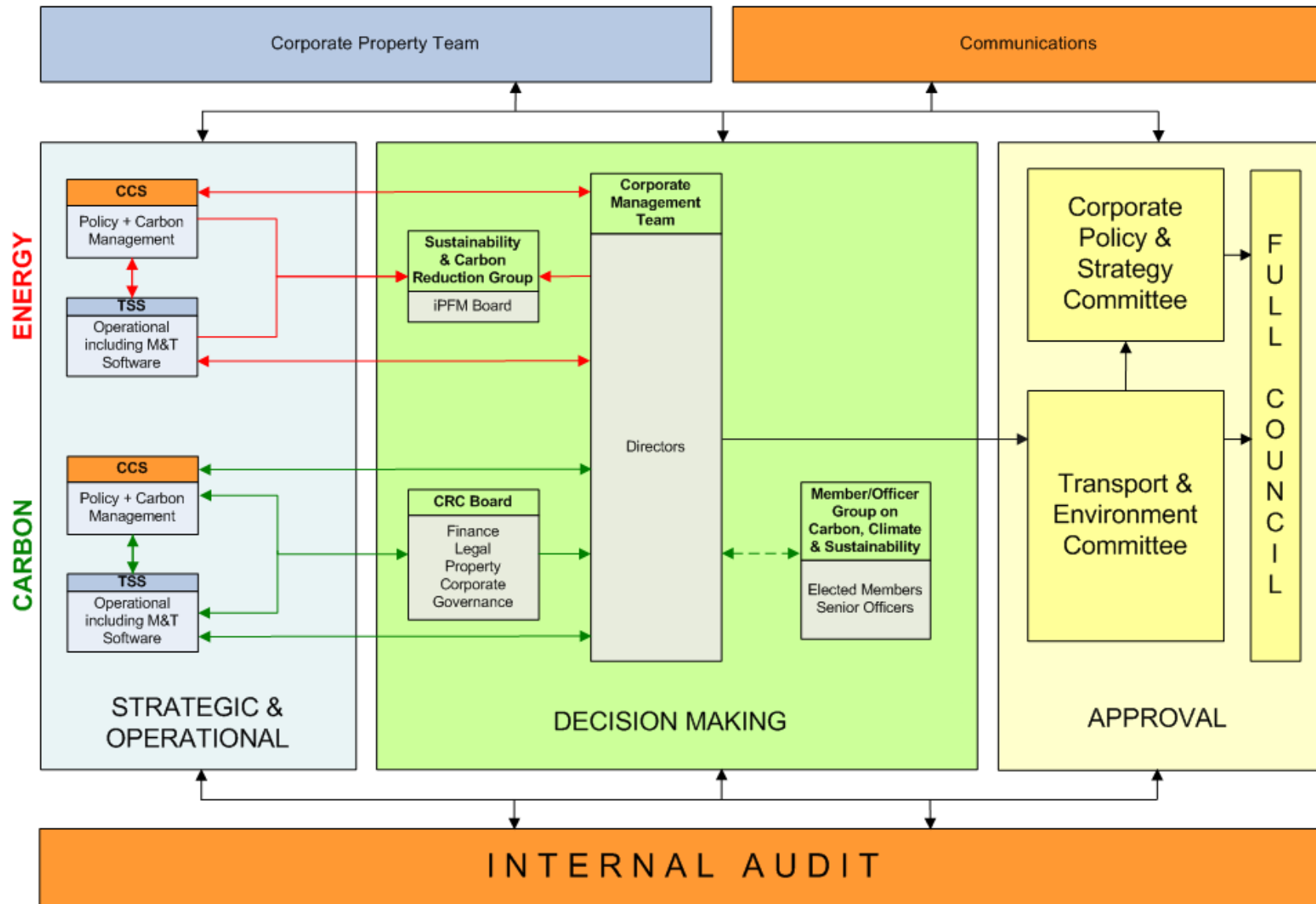
and helps to encourage reduction/more efficient use along with changes in energy source. CEC recognises the importance of reporting energy used along with conversion in to CO<sub>2</sub> or other GHG emissions and aims to improve this reporting both internally and externally.

As part of a Divisional restructuring proposal (January 2013), the mid-term objectives for the Technical Support Services team include detailed target setting for properties, monthly reporting to senior management across all electricity, gas and oil consumption and league table reporting to reward high achievers. This improvement in internal reporting will strengthen the profile of energy management within the Council and highlight the significant gains that can be made across the building portfolio.

The Council has developed a register of all of the legislation relating to energy that it has to comply with and that which is of interest. This will be reviewed regularly and amended as necessary. The register can be found in Appendix B of this document and applies mainly to non-domestic energy use.

APPENDIX A – REPORTING STRUCTURE

Reporting Structures for Energy and Carbon



APPENDIX A – REPORTING STRUCTURE

APPENDIX B - LEGAL REGISTER (Primarily for Non-Domestic)

Reference	
Mandatory	M
Of Interest	I

Ref	Topic	Legislation	Brief description of how it affects CEC	Affected Aspect or Activity	Method of Control	Responsible Individuals	Enforcement Date
M	Carbon Reduction Commitment Energy Efficiency Scheme	CRC Energy Efficiency Scheme Order 2010 SI 768,  CRC Energy Efficiency Scheme (Amendment) Order 2011 SI 234	The scheme is a mandatory emissions trading scheme in which the council must report of a set boundary of emissions annually and purchase allowances to cover these emissions annually. Further information available from: <a href="http://www.environment-agency.gov.uk/business/topics/pollution/126698.aspx">http://www.environment-agency.gov.uk/business/topics/pollution/126698.aspx</a>	All energy supplies defined within the CRC boundary and including in the organisation's annual report.	Program of actions to increase energy efficiency, reducing emissions and hence reduce allowance purchase.	Senior contact: Project sponsor: CEO Operational responsibility: Energy & Water Management Team and Climate, Carbon & sustainability team.	Since October 2008

APPENDIX A – REPORTING STRUCTURE

Ref	Topic	Legislation	Brief description of how it affects CEC	Affected Aspect or Activity	Method of Control	Responsible Individuals	Enforcement Date
M	Energy Performance of Buildings Directive	<p>Energy Performance of Buildings (Scotland) Regulations 2008 SSI 309</p> <p>The Energy performance of buildings (Scotland) Amendment Regulations 2012 No. 190, The Energy performance of buildings (Scotland) Amendment (No.2) Regulations 2012 No.208,</p> <p>Energy performance of buildings</p>	<p>Requirement to have energy performance certificates (EPCs). Initially for public buildings over 1000m<sup>2</sup>, this has now been revised to over 500m<sup>2</sup>. EPCs required for all sale or let properties domestic and non-domestic.</p> <p><a href="http://www.scotland.gov.uk/Topics/Built-Environment/Building/Building-standards/profinfo/epcintro">http://www.scotland.gov.uk/Topics/Built-Environment/Building/Building-standards/profinfo/epcintro</a> (Directive 2010/31/EU on the Energy Performance of Buildings (recast))</p>	<p>All public buildings above 500m<sup>2</sup>, all sale or let properties domestic and non-domestic.</p> <p><b>Article 9 Nearly Zero Buildings.</b> All new buildings are to be ‘nearly zero-energy’ by 31 December 2020. Public sector role as an exemplar is identified – from 31 December 2018, new buildings occupied and owned by public authorities to be nearly zero-energy buildings.</p>	<p>Instruction of consultants to conduct EPC program for public non domestic sites down to 500 m<sup>2</sup></p>	<p>Corporate property</p>	<p>Since Jan 2009</p>

APPENDIX A – REPORTING STRUCTURE

Ref	Topic	Legislation	Brief description of how it affects CEC	Affected Aspect or Activity	Method of Control	Responsible Individuals	Enforcement Date
		(Scotland) Amendment Regulations 2012 No. 209					
M	EPC Register and lodgement fee	As part of Energy Performance of Buildings (Scotland) Regulations 2008 SSI 309	All domestic and non- domestic EPCs in Scotland will be required to be lodged.  The lodgement fee is set at £1.38 (£1.15 + VAT) for domestic EPCs and £6.43 (£5.36 +VAT) for non- domestic EPCs. VAT is currently payable at the standard rate of 20%.	All non-domestic and domestic EPCs will have to be lodged and payment made for this lodgement.	Ensure that EPCs are registered within the required time frame after completion either as part of the EPC contract or internally.	Corporate Property	It is likely to be operational from early November 2012.
M	Climate Change (Scotland) Act 2009	Climate Change (Scotland) Act 2009	Statutory targets of 80% emissions reductions by 2050 and an interim target of 42% emissions reductions by 2020.	Whole council operations	Reporting through the Climate Change Declaration.		2009 onwards



APPENDIX A – REPORTING STRUCTURE

Ref	Topic	Legislation	Brief description of how it affects CEC	Affected Aspect or Activity	Method of Control	Responsible Individuals	Enforcement Date
			<p>Annual targets must also be set for each year from 2010 to 2050. For each year until 2019 these should be set at a level that ensures that the interim target is met. From 2020, annual emissions targets must be at least 3% less than the target for the preceding year.</p> <p>A duty for public bodies to act in a way that best contributes to these targets, and powers to allow Scottish Ministers to impose further obligations on public bodies in relation to climate change.</p>				

APPENDIX A – REPORTING STRUCTURE

Ref	Topic	Legislation	Brief description of how it affects CEC	Affected Aspect or Activity	Method of Control	Responsible Individuals	Enforcement Date
I	Green Deal	Energy Act 2011	<p>The Act creates a new financing framework to enable the provision of fixed improvements to the energy efficiency of households and non-domestic properties (The Green Deal), funded by a charge on energy bills that avoids the need for consumers to pay upfront costs.</p> <p><b>Quick Guides for the Green Deal can found at</b></p> <p><a href="http://www.decc.gov.uk/en/content/cms/tackling/green_deal/gd_quick_guides/gd_quickguides.aspx">http://www.decc.gov.uk/en/content/cms/tackling/green_deal/gd_quick_guides/gd_quickguides.aspx</a></p>	CEC may wish to participate within or act in another capacity such as funding green deal works.	n/a		The domestic version of the scheme is set to be opened in Jan 2013; the non-domestic scheme will be opened at a later date tbc.
I	Feed In Tariff	Introduced in the	Feed in Tariff is a	Renewable	n/a		2008

APPENDIX A – REPORTING STRUCTURE

Ref	Topic	Legislation	Brief description of how it affects CEC	Affected Aspect or Activity	Method of Control	Responsible Individuals	Enforcement Date
		<p>Energy Act 2008</p> <p>The Feed-in Tariffs ( several amendments)</p>	<p>payment available to generators of renewable electricity at a smaller scale (&lt;5MW) than those claiming renewable obligation certificates. The council may claim FIT for installations of renewable electricity. The tariffs have been altered to include a degression mechanism and energy performance mechanism (for solar PV only) which also affects the amount received by the generator.</p> <p>Further information can be found from <a href="http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable">http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable</a></p>	<p>electricity installations.</p>			

APPENDIX A – REPORTING STRUCTURE

Ref	Topic	Legislation	Brief description of how it affects CEC	Affected Aspect or Activity	Method of Control	Responsible Individuals	Enforcement Date
			<a href="#">ener/feedin_tariff/feedin_tariff.aspx</a>				
I	Renewable Heat Incentive (Non domestic only)	The Renewable Heat Incentive Scheme (several amendments)	<p>Similar to the FIT, RHI is a payment mechanism (though excludes an export payment) for those generators of renewable or low carbon heat.</p> <p>Further information can be found from</p> <p><a href="http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/incentive/incentive.aspx">http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/incentive/incentive.aspx</a></p>	Renewable/ low carbon heat installations	n/a		November 2011

# PROCUREMENT STATEMENT



**THIS DOCUMENT SUPPORTS THE COUNCIL'S ENERGY POLICY  
(ENPOL2013)**

## Contents

### VERSION CONTROL

This document is reviewed annually to ensure it is accurate and up to date.

No.	Version	Date	Initials	Description
1	1.0	July 2013	JF	Draft for committee

**DOCUMENT OWNER - Jenny Fausset, Corporate Governance**  
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## 1 APPLICATION

This procedure applies to all elected members, employees and contractors of the City of Edinburgh Council (CEC).

## 2 BACKGROUND

The City of Edinburgh Council has put in place this procedure to outline the process for procurement of energy and energy related products. This document has been created to support the council's energy management policy (ENPOL2013).

## 3 ENERGY PROCUREMENT

There are three main aspects of procurement that are relevant to energy management:

- Procurement of energy;
- Procurement energy consuming equipment; and
- Procurement of building design and construction services.

### Energy

The City of Edinburgh Council has signed an agency agreement for Procurement Scotland to procure electricity and gas as follows:

Electricity – Supplier EDF - 01/04/2013 - 31/03/2016 (Option to extend to 31/03/2019)

Gas – Supplier Total Gas and Power - 01/04/2010 - 31/03/2014

Oil - Procured through Government Procurement Services (formerly Buying Solutions) - supplier Scottish Fuels.

It is still the responsibility of the Technical Support Services Team to maintain an accurate database of all the Council's energy supplies across all its operational properties for an effective procurement process and the subsequent management of these contracts during a transfer of supplier, new connections, disconnections and the validation of bills.

### Services and Equipment

The energy performance of services and equipment must be taken into account when procurement decisions are made. All staff involved in procurement should be made aware of this requirement and that they can consult with the Technical Support team over purchasing decisions.

The Council has a [sustainable procurement policy](#) which should be referred to in relation to purchasing of services and equipment. With specific relation to energy this states that

6.24 "We will procure goods, services and works that minimise carbon based energy-use and its associated emissions, use of non-renewable resources, waste-creation and pollution to air, water and land. In doing so, we will consider all stages of the life-

cycle including design, resource extraction and sourcing, manufacturing and production, transportation, service delivery, operation and maintenance, reuse, recycling and disposal”.

6.29 “We will specify the most energy efficient goods, services and works in line with current best practice standards and specifications”.

### **Procurement of Buildings**

The procurement of buildings refers to not only new build projects but refurbishment projects where there is investment in the existing building stock. Please refer to the latest Refurbishment and Design Procedure. Evaluate the future energy and water costs and carbon emissions for the building and aim to minimise these costs through low carbon design principles.

As a minimum all procured buildings must conform to the relevant building regulations. The Council aims to exceed the regulatory standards in terms of energy performance and sustainability.

The [Energy Efficiency Directive](#) places an imperative on the public sector to undertake energy efficiency improvements through renovation works covering at least 3% of their total floor area annually from about 2015/16.

It is likely that more stringent targets will be developed over time and as such it would be useful for the Council to stipulate that new buildings should be of a flexible design to allow for upgrading in future. Section 4 of the Refurbishment and Design Procedure defines the approach to design for the Council and Section 5 describes which areas of a project should be covered by targets.

Section 8 of the Refurbishment and Design Procedure details that budgeting should allow for time and resources to allow sophisticated modelling and design work to be undertaken in order to optimise the design and prioritise passive features.

Section 9 of the Refurbishment and Design Procedure describes the imperative on the Council to take into account whole-life costings when making decisions on building refurbishment or construction.

Also note the statement within the sustainable procurement guidance:

6.31 “Minimisation of energy needs through a combination of design for energy efficiency and the incorporation of low or zero carbon equipment”.

## REFURBISHMENT AND DESIGN PROCEDURE



### THIS DOCUMENT SUPPORTS THE COUNCIL'S ENERGY POLICY (ENPOL2013)

#### Contents

#### VERSION CONTROL

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**DOCUMENT OWNER - Jenny Fausset, Corporate Governance**  
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## 1 APPLICATION

This procedure applies to all elected members, employees and contractors of the City of Edinburgh Council (CEC).

## 2 BACKGROUND

The City of Edinburgh Council has put this procedure in place to outline the building refurbishment and design elements relating to energy efficiency and emissions reduction within the Council. This procedure provides a clear outline of the aspects of building design and refurbishment actions taken to meet the objectives and targets within the energy management policy (ENPOL2013). The Council already has in place a sustainable design guide which was developed in 2006 and building energy and design is a key chapter.

## 3 REGULATIONS

The Council conforms to all requirements of the building regulations regarding new build and refurbishment projects and ensure that all agents acting on our behalf do the same. Regulations provide the basic legislative requirements for energy performance. It is often more appropriate to measure standards using benchmarking systems. The Council aims to exceed the regulatory standards.

New regulation such as the Energy Efficiency Directive ([http://ec.europa.eu/energy/efficiency/eed/eed\\_en.htm](http://ec.europa.eu/energy/efficiency/eed/eed_en.htm)) will also place an imperative on the Council. The Directive brings forward legally binding measures to step up Member States' efforts to use energy more efficiently. There is to be an exemplary role to be played by the public sector with measures including:

- Progressively reduce the energy consumed in public sector premises by carrying out every year the required renovation works covering at least 3% of their total floor area.

This legislation has just been approved by the European parliament and is set to now be transposed into UK law, coming into force in 2015/2016. There will be more stringent targets in future so designers should ensure that they build flexibility for future use, or for new technologies into their designs.

## 4 APPROACH TO DESIGN

The Council has a defined approach to design which is laid out in the following sections to ensure energy use is a key consideration.

- Understand the main criteria and drivers for the refurbishment or new build such as a good working environment, improved space utilisation etc.;

- Understand how energy will be used in the building type including a thorough assessment of the equipment and small power that will be installed;
- Understand how the use of the building may change in the future;
- Minimise energy demand through choice of fabric, shape and configuration of a building;
- The importance of insulation and air tightness;
- Efficient building services;
- Whole life assessment;
- Sustainable Procurement;
- Use of renewable technologies where appropriate;
- Consider the operation of the building and post occupancy assessments.

## 5 ENERGY PERFORMANCE

Within each new building or refurbishment project the Council shall consider energy performance in use of the premises and act to provide the most efficient solutions based on the building requirements.

Energy Performance Indicators such as kWh/m<sup>2</sup>/yr (as outlined within the Measurement and Monitoring procedure) are used as energy consumption benchmarks.

Targets will be put in place for all new build and refurbishment projects. As a minimum targets for new builds should include:

- Overall operating energy target (kWh/m<sup>2</sup>);
- Heating balance temperature;
- Heating load under design conditions;
- Day lighting;
- Maximum lighting energy;
- Maximum lux levels; and
- Air tightness

Targets for refurbishment projects will depend on the scope of the works. For example, any lighting project should include targets for maximum lighting energy and maximum lux levels.

Guidance on use of these targets is given in Appendix 3 of the Carbon Trust document "Delivering the Future Today: Project Managers Guide". It should be

specified how these targets will be measured during commissioning and first year of operation.

## **6 TENDER PROCESS**

The performance targets discussed above must be reflected in any contractual arrangements. Any failure to meet a target will be classified as a defect and be required to be rectified during the defect liability period.

It should be specified how these targets will be measured during commissioning and first year of operation.

## **7 DETAILED TARGETS**

Detailed environmental schedules and room data sheets must be developed for each room following the guidance on format and targets in Appendices 9 and 10 of the Carbon Trust document “Delivering the Future Today: Project Managers Guide”.

## **8 DESIGN BUDGET**

The budget must have sufficient allowance for the architect and M&E designers to carry out the necessary modelling and liaison to ensure that the building form, fabric and systems are optimised. This should allow passive features to be maximised and services minimised where appropriate.

## **9 WHOLE LIFE COSTING / WHOLE LIFE ASSESSMENT**

The Council has made a commitment to ensure that whole life costing is conducted within any new build or refurbishment project. The Local Government in Scotland Act (2003) Best value guidance (18) chapter five: Characteristics of best value arrangements states. “That it produces clear recommendations based on factual analysis and consideration of quality, social impact and whole-life costs”.

Whole-life costing ensures that decisions are made on the total cost of the building and its component parts over the building lifetime and not only on the initial capital cost. It includes all aspects of project design, construction, commissioning, operation, decommissioning and disposal. The table below taken from the Carbon Trust guidance “Building the Future today” indicates aspects which must be considered (those in bold are deemed essential)

Type	Acquisition/Construction	Operation and maintenance	End of life costs and residual value
New build	<p><b>Site costs (purchase, improvement, infrastructure provision)</b></p> <p><b>Design/Engineering costs</b></p> <p><b>Regulatory/Planning costs</b></p> <p><b>Construction and earthworks</b></p> <p><b>Commissioning costs/fees</b></p> <p><b>Business use of in-house resources and administration</b></p>	<p>The performance over time of each element</p> <p>Costs associated with degraded performance</p> <p><b>The likely lifetime of each element</b></p> <p><b>Maintenance and replacement costs</b></p> <p><b>Cleaning and minor repairs</b></p> <p>Costs associated with loss of amenity due to unavailability or failure</p> <p><b>Energy, other utility and carbon costs</b></p>	<p>Inspection costs</p> <p>Decommissioning costs</p> <p>Recycling costs</p> <p>Disposal costs</p>
Refurbishment	<p><b>Initial survey costs</b></p> <p><b>Design/Engineering costs</b></p> <p><b>Regulatory/Planning costs</b></p> <p><b>Decanting costs</b></p> <p><b>Decommissioning, recycling and disposal costs of existing equipment and building fabric</b></p> <p><b>Construction and earthworks</b></p> <p><b>Commissioning costs/fees</b></p> <p><b>Business use of in-house resources and administration</b></p>	<p>The performance over time of each element</p> <p>Costs associated with degraded performance</p> <p><b>The likely lifetime of each element</b></p> <p><b>Maintenance and replacement costs</b></p> <p><b>Cleaning and minor repairs</b></p> <p>Costs associated with loss of amenity due to unavailability or failure</p> <p><b>Energy, other utility and carbon costs</b></p>	<p>Inspection costs</p> <p>Decommissioning costs</p> <p>Recycling costs</p> <p>Disposal costs</p>
Lease	<p><b>Lease administration costs</b></p> <p><b>Temporary costs/Decanting costs</b></p> <p><b>Design/Engineering costs</b></p>	<p><b>Lease costs</b></p> <p><b>Costs rechargeable by landlord</b></p> <p><b>Maintenance and replacement costs</b></p> <p><b>Cleaning and minor</b></p>	<p><b>Removal costs</b></p> <p><b>Reinstatement costs</b></p>

	<p><b>Regulatory/Planning costs</b></p> <p><b>Fit out costs</b></p> <p><b>Commissioning costs/fees</b></p> <p><b>Business use of in-house resources and administration</b></p>	<p><b>repairs</b></p> <p>Costs associated with loss of amenity due to unavailability or failure</p> <p><b>Energy, other utility and carbon costs</b></p>	
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The Council’s whole-life costing methodology has the following elements:

- All aspects of procurement, construction, operation, maintenance and decommissioning to be included;
- Realistic forecasts of energy and carbon prices must be used; and
- The assessment should last for the expected lifetime of the building or 100 years, whichever is shorter.

A joint Life Cycle Assessment (LCA) and WLC approach can be very useful.

## 10 PROCUREMENT

The Building Programme Management and Corporate Facilities Management teams work closely with colleagues regarding the procurement of materials. The Council’s [Sustainable Procurement Policy](#) and the [Sustainable Timber Policy](#) are key documents.

Sustainable procurement considers the social, economic and environmental consequences of what is procured through all stages of its life-cycle. This includes considering design, resource extraction and sourcing, manufacturing and production, transportation, service delivery, operation and maintenance, reuse, recycling and disposal. It is also about questioning whether the purchase requires to be made in the first place.

## 11 VALUE ENGINEERING

The impact of any value engineering on both building energy performance and carbon emissions, and on the whole life costs of the building must be evaluated prior to agreement of such changes.

## 12 COMMISSIONING

A holistic approach to commissioning should be taken to ensure that the whole building is commissioned, not just individual items of equipment. A commissioning plan should be developed at design stage to ensure that necessary metering and monitoring is installed to allow the required commissioning process to be assessed.

The commissioning process should be agreed at the commencement of the process and shall occur at stages throughout the project as elements of the project are completed, not just at the end of the project.

### **13 BUILDING INFORMATION MODELLING (BIM)**

BIM is the process of generating and managing data about a building, during its life cycle. Typically BIM uses three-dimensional, real-time, dynamic building modelling software to increase productivity in the design and construction stages. It covers geometry, spatial relationships, light analysis, geographic information, quantities and properties of building components. BIM data can be used to illustrate the entire building life cycle, from cradle to cradle; quantities and properties of materials can be extracted easily and the scope of works can be easily defined. Furthermore systems, assemblies and sequences can be shown in a relative scale to each other and relative to the entire project.

BIM systems should be considered by the Council to inform projects. If used by all members of the project team, from early design through to completion, changes can be automatically coordinated across the project and resulting information generated is of high quality. Using a building information model can lead to substantial cost savings, from design and construction through to maintenance.

BIM systems will only be as useful and up to date as the information entered into them. As such, if the Council wishes to use BIM, they shall ensure all parties on the project are aware of this and shall undertake to populate the BIM with all appropriate data.

### **14 LOG BOOK AND USER GUIDES**

It should be ensured that the log book follows the guidance for CIBSE TM31. This should be supplemented with a user guide for the occupant explaining how the building works and how they can influence it. In the case of schools and other buildings with janitors or building managers, a second guide should be produced explaining in clear language how they can control the building. Building user guides should also be developed in accordance with Section 7 of the Building Standards.

### **15 POST OCCUPANCY SURVEYS**

The reassessment of buildings once occupied is a key step in understanding how the effective actions taken in designing or refurbishing the building have been. Reviewing buildings to ensure that they continue to perform as predicted and that they are updated, or adapted, as circumstances change is one area of best practice which the Council intends to develop further, in line with its objectives within its Energy Policy (ENPOL2013).

# LOW AND ZERO CARBON STATEMENT



## Contents

### VERSION CONTROL

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No.	Version	Date	Initials	Description
1	1.0	July 2013	JF	Draft for Committee approval

**DOCUMENT OWNER - Jenny Fausset, Corporate Governance**  
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## 1 LOW AND ZERO CARBON STATEMENT

The Council acknowledges the Scottish Government targets to have 100% of electricity produced in Scotland come from renewable sources by 2020<sup>1</sup>

The Council's approach to supporting this target is to encourage renewable energy developments across the city and where appropriate and effective install renewable/low carbon technologies within its own estate.

The Council will assess opportunities and synergies between renewable energy production and its energy requirements. The Council shall act to improve its energy performance by tackling the challenge of improved energy efficiency firstly and then incorporating the use of renewable technologies where suitable.

## 2 ENERGY HIERARCHY

The following hierarchy should be employed in attempts to reduce the negative impacts of energy consumption:

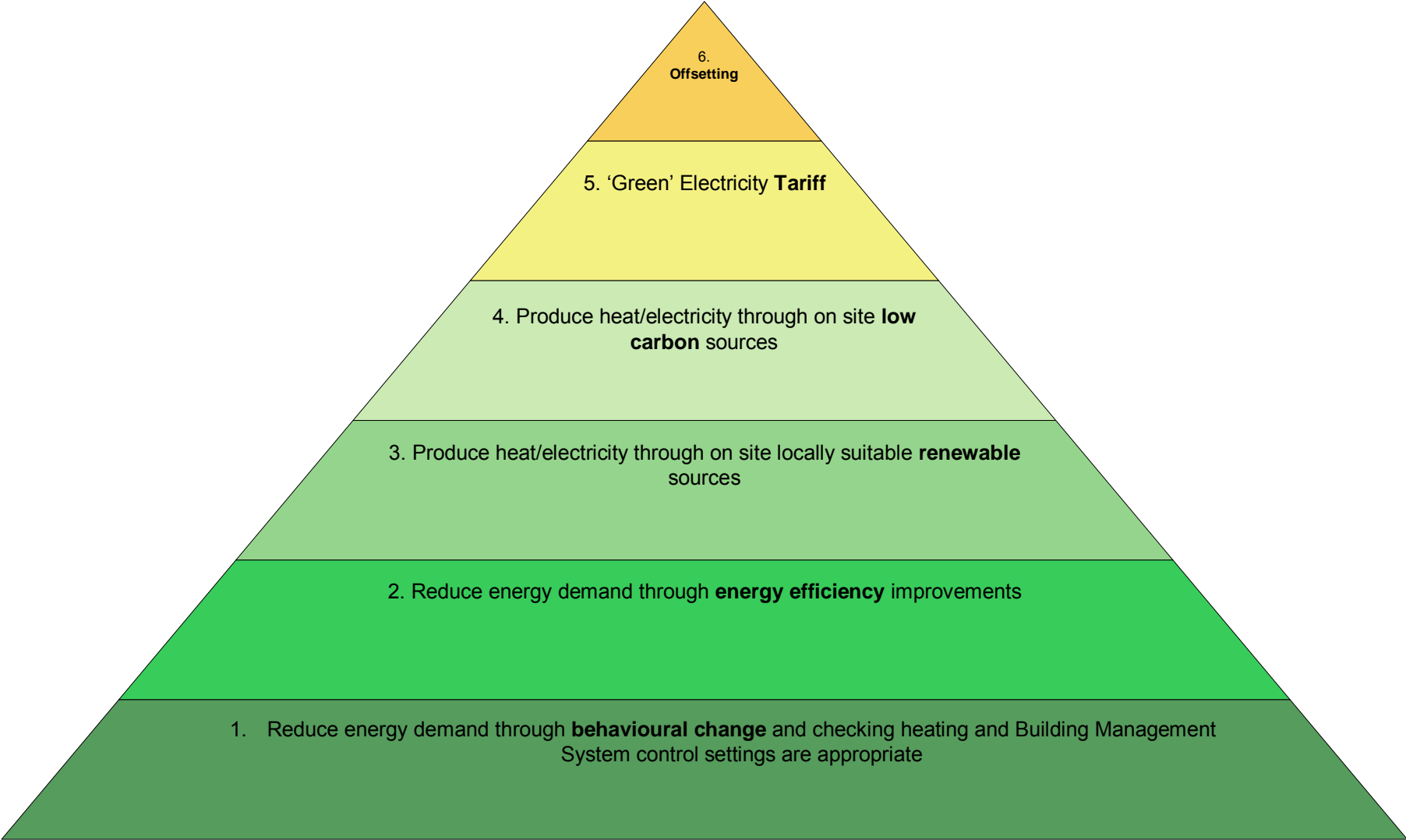
1. Reduce energy demand through no-cost actions such as behavioural changes, and assessing settings (for example on heating systems) to ensure they are appropriate. Encouraging staff to 'dress for the weather' will allow for lower office (heating and cooling) energy consumption.
2. Reduce energy demand through energy efficiency improvement technologies (i.e. replacing old equipment with modern energy efficient equivalents, or improving insulation/draught proofing/lighting technologies levels).
3. Produce heat/electricity on-site through locally suitable renewable sources:
  - a. Wind
  - b. Solar PV
  - c. Solar Thermal
  - d. Anaerobic Digestion
4. Produce heat/electricity on-site through low carbon sources
  - a. Air Source Heat Pumps
  - b. Ground Source Heat Pumps
  - c. Combined Heat and Power
  - d. Biomass – the current Administration does not encourage the use of industrial biomass incineration (Pledge No. 52). Biomass in Edinburgh should be only be deployed in heat-only or combined heat and power schemes, be located off the gas-grid, be located outside the urban area and have appropriate and effective abatement systems to control emissions.
5. Purchase electricity through a 'green tariff' where a guarantee is made that electricity was generated through additional renewable sources.
6. Offset additional emissions through appropriately accredited and auditable offsetting schemes. The City of Edinburgh Council will only partake in offsetting schemes as a last resort, and only after the Council is satisfied that such schemes are suitably robust, with credible accreditation and verification that sustainability standards have been achieved.

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<sup>1</sup> Scotland's Renewables Ambition and Paths to Delivery  
<http://www.scotland.gov.uk/Publications/2011/08/04110353/3>



CITY OF EDINBURGH COUNCIL ENERGY HIERARCHY



## BUILDING ENERGY PERFORMANCE PROCEDURE

THIS DOCUMENT SUPPORTS THE  
COUNCIL'S ENERGY POLICY (ENPOL2013)



### Contents

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**[jenny.fausset@edinburgh.gov.uk](mailto:jenny.fausset@edinburgh.gov.uk) 0131 469 3538**

## 1 APPLICATION

This procedure applies to all elected members, employees and contractors of the City of Edinburgh Council (CEC) who work in Council owned or leased buildings.

## 2 BACKGROUND

The City of Edinburgh Council has put this procedure in place to cover aspects of building performance relating to energy efficiency and emissions reduction within the Council. This procedure provides a clear outline of building management actions to be taken to meet the objectives and targets within the energy policy (ENPOL2013).

## 3 OPERATIONAL PERFORMANCE

The Council (Technical Support Services) already records energy data as outlined within the Measuring, Monitoring and Analysis procedure

In addition to recording and analysing this data individually, the Technical Support Services team shall produce operational ratings for its large corporate sites. This will initially include the Council's top 100 CO<sub>2</sub> emitting sites and will be produced based on consumption for 2012/13.

This is the start of a wider benchmarking program which will see buildings being grouped as per their building type, age, fabric, use etc. The use of operational performance league tables will also be considered as part of the Council's energy and water awareness campaign.

Headline performance information will be disseminated to Facility Management staff on a regular basis. This will enable greater understanding of those premises which are underperforming in terms of efficient energy use and enable a greater level of internal reporting.

## 4 ASSET PERFORMANCE

Each public building with a floor area greater than 500m<sup>2</sup> requires an Energy Performance Certificate (EPC) to be displayed in a prominent place within the building (as per the Energy Performance of Buildings Directive (applicable Scottish legislation detailed in the legal register within the Energy and Emissions Reporting procedure). An EPC provide the assets rating of the building based on the fabric of the building and not on how it is being used. As per the recast of this directive an EPC rating (A-G) will be required to be displayed in all public buildings over 250m<sup>2</sup> by 2015. The EPC should be displayed in any marketing/sales particulars for all public buildings over 500 m<sup>2</sup> now. (A copy of an EPC has been included in Appendix 1).

The Council in 2008 procured the services of contractors to produce EPCs for over 300 buildings down to 500m<sup>2</sup>. EPCs for sites which are sold or let should be carried out on an on-going basis.

## 5 HEATING AND COOLING

The recommended temperature for a building during the heating season is 18-21°C as per table below (unless special dispensation is given). The heating standard will apply between agreed operational hours, except for holidays, and during the heating season. Exemptions will apply to special schools. Based on weather conditions facility management may take the decision to extend or shorten the heating season. **The heating season will run from 1st October to 30<sup>th</sup> April.**

### Preset Temperatures

Heating season: October to April	
Office	18-21°C
Classroom	18-21°C
Libraries	18-21°C
Community Centres	18-21°C
Residential care homes	23°C
Gyms/Sports Halls	12-18°C
Non heating season: May to September	
Desired temperature for all spaces	24°C +4 / -6°C

### Warm up

Portable heaters shall not be used within Council properties except within the following constraints:

- where permanently installed as part of the designed heating system;
- in areas where Facility Management has agreed that electrical heaters are necessary to maintain the recommended environmental air temperatures and has issued suitable heaters;
- in the event of heating system failure, such heaters may be issued by Facility Management.
- it shall be the Council's policy wherever practical to modify such areas and eliminate the need for temporary electric heaters.

Individuals are prohibited from using their own heaters in Council buildings.

### Cool down

The Council is aware that in certain circumstances additional cooling is required and that there are a range of Council buildings where there is no mechanical cooling. However there are many ways in which to achieve a cooler air temperature than turning to mechanical cooling.

The following steps should be taken before activation of mechanical cooling:

- Switch off – minimise heat output from equipment by switching it off when not required. The location of this equipment is also important. Placing it in a well-ventilated space will reduce heat gains.
- Ventilate – open windows and other natural ventilation means.

Portable fans shall **not** be used within Council properties except within the following constraints:

- When agreed by Facility Management.

Individuals are prohibited from using their own fans in Council buildings.

### **Simple heating improvement measures**

Where there are local controls such as thermostatic radiator valves (TRVs) installed these should be set to obtain the desired room temperature. There are several important aspects of these controls that all staff should be aware of.

- The area surrounding the TRV/temperature sensor should be free from obstruction which will give an inaccurate reading of the temperature, causing over or under heating.
- TRVs should be set to **off** if windows are to be opened as the cool air will cause the TRV to open and the radiator will further heat the room. Once the windows are closed, the TRV can then be turned to the optimal setting.
- Heater emitters such as radiators and floor grills should be free from obstruction.

## **6 BUILDING ENERGY MANAGEMENT SYSTEMS (BEMS)**

The Council operates a network of building energy management systems (BEMS) to control heating, ventilation and cooling equipment and where appropriate to enable remote monitoring and control. BEMS allow for more sophisticated control strategies with remote monitoring and adjustments to ensure that faults and energy waste is identified early and that potential energy savings are maximised. A strategic review of the BEMS is currently underway. This will inform a programme of BEMS upgrade across the estate. This will increase the energy efficiency of buildings and allow for better monitoring.

Where available, BEMS will be used to control operational parameters as set within this procedural document(s).

For staff who work in buildings where there is a BEMS, details of the BEMS specification and requests can be made to the Facilities Management Helpdesk [corporateproperty.helpdesk@edinburgh.gov.uk](mailto:corporateproperty.helpdesk@edinburgh.gov.uk) Telephone 0131 529 7878

In order to allow appropriate monitoring and targeting of consumption, operational hours must be defined and agreed by Facility Managers. Any scheduled changes to operational hours need to be recorded and an assessment of the energy impact considered by Facility Management. Physical changes to the property or service delivery such as an increase in work force or a computer upgrade should also be

recorded. Retaining such information will contribute towards the qualitative assessment of consumption.

## 7 MAINTENANCE

When reactive and planned maintenance is required on building fabric and services then the energy efficiency of the building should be at least be maintained or, preferably, enhanced.

Corrective and improvement actions should be considered at all times based on lifecycle costings and energy efficiency.

### **For example:**

Controls - if a lighting or heating controller fails then it must be replaced with an equivalent or improved controller and not simply bypassed/removed. By-passing of plant/controls to keep a property operational should only be used as a short term solution. Measures shall be taken to ensure that energy efficient operation of plant is maintained.

Insulation – If work is required to be carried out on pipe work or fabric then existing levels of insulation must be maintained/replaced or enhanced.

## 8 METERING

Any works that require new electricity, gas or water supplies to be connected or existing supplies to be upgraded or disconnected must be notified to the Council's suppliers through Corporate Facilities Management. This is so that the supply benefits from the Council's energy contract. This also allows costs and carbon emissions for all sites to be tracked through suppliers. Rates outwith Council contracts can be significantly more expensive than Council procured contract rates.

Template site works forms can be obtained directly from Corporate Facilities Management. These forms should be submitted to Technical Support Services within appropriate time frames.

## 9 IT EQUIPMENT

There is an increased presence of flat screens being erected in Council buildings. These screens are often left on continuously. Facility Management staff (security staff) will switch off any large plasma screens if they are still on when staff are doing their security check of the building at the end of the working day. However, the priority is that staff should take responsibility to switch off their own monitors and any adjacent screens when not in use and at the end of the working day.

A procedure for the Council's approach to good energy practice with respect to 'mobile' and desk top (fixed) IT equipment will be developed to support the policy's objectives and targets.

## 10 USER ENERGY MANAGEMENT RESPONSIBILITIES

The Council appreciates that all staff have a varied role within the organisation and are limited by these roles with regards to the actions that they can undertake to control energy usage. The Council has however set out some basic rules which set a minimum standard which should be adhered to **by all staff**.

In the first instance the room temperature should be measured if there are issues with people feeling uncomfortable. It must be remembered that individuals have different temperature preferences and actions that maintain your own comfort levels which do not affect others should first be exploited. This includes dressing appropriately based on the weather and your personal preference.

### USER RESPONSIBILITIES

- Electrical equipment – **Switch off** when not in use.
- Lighting – **Switch off** when not required.
- Heating - **Check** the room temperature first and then adjust controls, to the appropriate setting not to max. **Do not overheat rooms!**
- Cooling - **Check** is the heating on? Can you adjust controls before opening a window or switching on air conditioning?
- Communication – **Inform** facility management when you see a waste of energy or when you have an idea to reduce wasted energy. If you do not inform facility management the issue may not be resolved.

## 11 CONTINUOUS IMPROVEMENT

Facility Management will work with individuals to address local site specific issues to improve comfort levels

In order to ensure continual improvement the actions outlined within this document shall be reviewed annually with an aim to further support the objectives of the energy policy (ENPOL2013).

Appendix 1 – EPC Example

Energy Performance Certificate for buildings other than dwellings

Energy Performance Certificate	Building Energy Performance		Scotland	
	Calculated asset rating using DesignBuilder v.1.8.1.001 [SBEM]	Building type Office	Current rating	
	<b>Carbon Neutral</b>		Excellent	
	<b>A</b> (0 to 15)			
	<b>B</b> (16 to 30)			
	<b>C</b> (31 to 45)		C	
	<b>D</b> (46 to 60)			
	<b>E</b> (61 to 80)			
	<b>F</b> (81 to 100)			
	<b>G</b> (100+)		Very Poor	
	<b>Carbon Dioxide Emissions</b> The number refers to the calculated carbon dioxide emissions in terms of kg per m <sup>2</sup> of floor area per year			<b>42</b>
	Approximate current energy use per m <sup>2</sup> of floor area:			<b>148 kWh/m<sup>2</sup></b>
Main heating fuel: Natural Gas		Building Services: Heating with Nat. Vent.		
Renewable energy source:		Electricity: Grid supplied		
Carbon Dioxide is a greenhouse gas which contributes to climate change. Less Carbon Dioxide emissions from buildings helps the environment.				
<b>Benchmarks</b>				
A building of this type built to building regulations standards current at the date of issue of this certificate would have a rating:		38	C	
Where the accompanying recommendations for the cost effective improvement of energy performance are applied, this building would have a rating:		41	C	
<b>Recommendations for the cost-effective improvement (lower cost measures) of the energy performance</b>				
1. Some spaces have a significant risk of overheating. Consider solar control measures such as the application of reflective coating or shading devices to windows.				
2. Add local time control to heating system.				
3. Consider installing building mounted wind turbine(s).				

Address: Waverley Court, 4 East Market Street, Edinburgh, EH8 8BG  
 Conditioned area (m<sup>2</sup>): 21410  
 Name of protocol organisation: BRE, [EPC00086]  
 Date of issue of certificate: 22 Jan 2009 (Valid for a period not exceeding 10 years)  
 This certificate is a requirement of EU Directive 2002/91/EC on the energy performance of buildings.

**NB THIS CERTIFICATE MUST BE AFFIXED TO THE BUILDING AND NOT REMOVED UNLESS REPLACED WITH AN UPDATED VERSION AND FOR PUBLIC BUILDINGS DISPLAYED IN A PROMINENT PLACE**



# AUDIT AND MANAGEMENT REVIEW PROCEDURE



**THIS DOCUMENT SUPPORTS THE COUNCIL'S ENERGY POLICY  
(ENPOL2013)**

## Contents

### VERSION CONTROL

This document is reviewed annually to ensure it is accurate and up to date.

Next review date:

No.	Version	Date	Initials	Description
1	1.0	January 2013	JF	Draft for Committee approval

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## **1 APPLICATION**

This procedure applies to all elected members, employees and contractors of the City of Edinburgh Council (CEC).

## **2 BACKGROUND**

The City of Edinburgh Council has put this procedure in place to outline the internal audit methods relating to energy efficiency and emissions reduction within the Council and externally to the general public. This procedure provides a clear outline of the internal audit methods, channels and actions taken to meet the objectives and targets within the energy policy (ENPOL2013).

## **3 INTERNAL AUDITS**

The Council will work in conjunction with its own internal audit staff to review the energy policy and supporting procedures. Carbon Climate and Sustainability (CCS) staff will work with the Principal Audit Manager from Internal Audit to ensure that the energy policy is effectively implemented and maintained and improves CEC energy performance.

Internal Audit will liaise with staff in the Corporate Policy and Strategy Team in Corporate Governance each year at the Audit Planning stage to agree the scope and timing of audits to be carried out. A record of audits to be conducted will be held and any issues raised will be formally tracked until resolved.

A report will be produced by the auditor for review within the CCS and the Technical Support Services team. Actions will be prioritised and timescales set for addressing any non - conformities. The outputs of the audit will be presented to senior management and will feed into the management review process.

## **4 MANAGEMENT REVIEW**

Management reviews shall be undertaken at a frequency greater than or equal to once per year. The meeting shall be held between at least one of the Heads of Service and an energy representative.

Minutes of the meeting shall be taken and the minutes shall be stored and actions assigned to individual for completion within a defined time period.

The meeting shall cover the following points:

- Follow up on previous management review actions;
- Results of the internal audit;
- Any non-conformances identified;
- Results of evaluation of compliance with legal requirements and other requirements to which CEC subscribes;

- Communications with external interested parties, including complaints;
- Energy performance of CEC and related performance indicators;
- Review Energy Policy;
- The extent to which energy objectives and targets have been met and adherence to energy performance indicators;
- The status of any corrective or preventative actions;
- Follow-up actions from previous management reviews;
- Changes in circumstances, including developments in legal and other requirements related to environmental aspects; and
- Recommendations for improvement.

## ACTION PLAN TO SUPPORT ENERGY POLICY (ENPOL2013) 2013/2014

PRIMARY PROCEDURE	ENERGY POLICY OBJECTIVES	ACTION	TIMESCALE	LEAD RESPONSIBILITY	OTHER LINKED PROCEDURES
GOVERNANCE	1 The Council will work towards the adoption of qualitative public commitments or an external recognition/accreditation scheme such as ISO 50001, providing a continuous improvement framework for energy management.	1.1 Paper to be prepared for CMT outlining the advantages, disadvantages and resources necessary to implement such an accreditation scheme within the Council.	Oct-13	Carbon, Climate & Sustainability Team (Corporate Policy & Strategy Team, Corporate Governance)	Management review and internal audit
		1.2 Forum for overseeing policy implementation and to act as a locus for corporate energy discussions be established.	Sep-13	LEAD: Head of Corporate Property To be supported by the Carbon, Climate & Sustainability Team (Corporate Policy & Strategy Team, Corporate Governance)	
MEASURING AND MONITORING	2 The Council shall reduce energy consumption and ensure high standards of energy efficiency across non domestic Council properties thereby minimising expenditure and reducing CO <sub>2</sub> emissions in line with Council's climate change targets.	2.1 The Technical Support Services Team will report quarterly to CMT on energy performance data for high energy consuming operational Council buildings.	Quarterly (Commencing in August 2013)	Technical Support Services (SfC) & Business Intelligence Services (Corporate Governance)	Project register; Building performance; Energy and emissions reporting
		2.2 A review of the current Building Energy Management System (BEMS) will be carried out and a paper prepared based on the review, setting out future investment required to install and operate a fit for purpose BEMS.	Oct-13	Technical Support Services	
		2.3 The Technical Support Services Team will (i) provide monthly reports to key managers across all supplies; (ii) set energy targets for properties; and (iii) league table reporting to award high achievers	Sep-13	Technical Support Services (SfC) & Business Intelligence Services (Corporate Governance)	
	3 The Council shall act to improve its energy performance by tackling the challenge of improved energy efficiency and incorporating the use of renewable technologies where appropriate across its estate.	3.1 To develop a long term strategy to reduce energy consumption by street lighting, taking into account (1) the procurement of a new street lighting management system (CONFIRM); (2) the preparation of a business case for Spend to Save funding to implement energy efficiency physical works, (3) the impact on the Council's CRC of the inclusion of	(1) 01/01/2014; (2) 31/10/2013; (3) 01/07/2013 and (4) 31/03/2013	Road Services (Street Lighting)	Sustainable procurement procedure

### VERSION CONTROL

This action plan is reviewed annually to ensure it is accurate and up to date.

Additional actions may be added to reflect opportunities.

Verson 1.0 July 2013 JF Draft for Committee Approval

## ACTION PLAN TO SUPPORT ENERGY POLICY (ENPOL2013) 2013/2014

PRIMARY PROCEDURE	ENERGY POLICY OBJECTIVES	ACTION	TIMESCALE	LEAD RESPONSIBILITY	OTHER LINKED PROCEDURES
		3.2 To populate the opportunities/project register and to keep it up to date with respect to key projects and suggestions put forward by staff.	Set up Sept 2013 Ongoing	Technical Support Services	Project Register
SUSTAINABLE PROCUREMENT PROCEDURE	4 Products used within or on behalf of the Council will meet energy efficiency standards as stated in the Council's sustainable procurement policy (2012).	4.1 Guidance on minimising energy use (as part of the Sustainability Outcomes) shall be prepared in partnership with the Procurement Service for inclusion in procurement projects going forward.	Feb-14	Procurement Project Team (Corporate Governance)	Sustainable procurement procedure
BUILDING DESIGN AND REFURBISHMENT	5 The Council shall incorporate energy efficiency measures, material selection, whole life costing and the recycling of building materials into the design and construction of all new build/ refurbishment schemes. The Council will also conduct post occupancy assessments across new and refurbished sites.	5.1 The employment of a whole life costing tool will be researched and rolled out for a pilot number of projects (specific elements of contracts depending on scale) to inform future action.	Feb-14	Building Design	
		5.2 The use of a Building information Modelling system will be used to inform a pilot number of projects	Mar-14	Building Design	Communications; Governance and Resource Planning
COMMUNICATIONS	6 The Council shall raise awareness of this policy and the benefits of efficient energy management with key staff sectors and contractors. In addition the Council will create an ethos of shared yet differentiated responsibility for energy management.	6.1 Policy & procedures will be publicised on the ORB and Council web site, promoted within Service Areas with key staff sectors. (Procedural documents will be kept update to reflect any legislative or structural changes within the organisation).	Sept 2013 Ongoing	Carbon, Climate & Sustainability Team (Corporate Policy & Strategy Team, Corporate Governance)	

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**ACTION PLAN TO SUPPORT ENERGY POLICY (ENPOL2013) 2013/2014**

PRIMARY PROCEDURE	ENERGY POLICY OBJECTIVES	ACTION	TIMESCALE	LEAD RESPONSIBILITY	OTHER LINKED PROCEDURES
	<p><b>7</b> The Council shall implement a structured staff awareness programme as part of the Council's training programmes (including induction for new staff) in relation to energy management and good housekeeping in Council buildings.</p>	<p>7.1 Promote the CECiL course on energy awareness and proactively target staff groups that have not completed course.</p>	<p>Ongoing</p>	<p>Organisational Development Corporate Governance</p>	

**VERSION CONTROL**

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