

# The Pan-Government Energy Project

Sustainability 2008

The Public Sector spends £3.2 billion per annum on energy and is responsible for 8% of the total demand for gas in the UK and 6.4% of electricity\*. Improving efficiency in this spend, both through demand management and collaborating to drive better value from suppliers, will ensure the Government helps play its role in addressing climate change. It will also offer the prospect of better value for money for the taxpayer, through decreased costs. Government leadership is critical to the success of targeting action by consumers and business through demonstrating the measures that can be taken to reduce carbon emissions.

This document provides a high level overview of key sustainability initiatives currently being promoted by the pan-government energy project.

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### What is it?

Wasted or avoidable electricity, gas, water and liquid fuels consumption is widespread across all buildings, from simultaneous heating and cooling to leaving lights and computers on overnight. The main causes are often behavioural or simple technology 'fixes' that can reduce wasted energy.

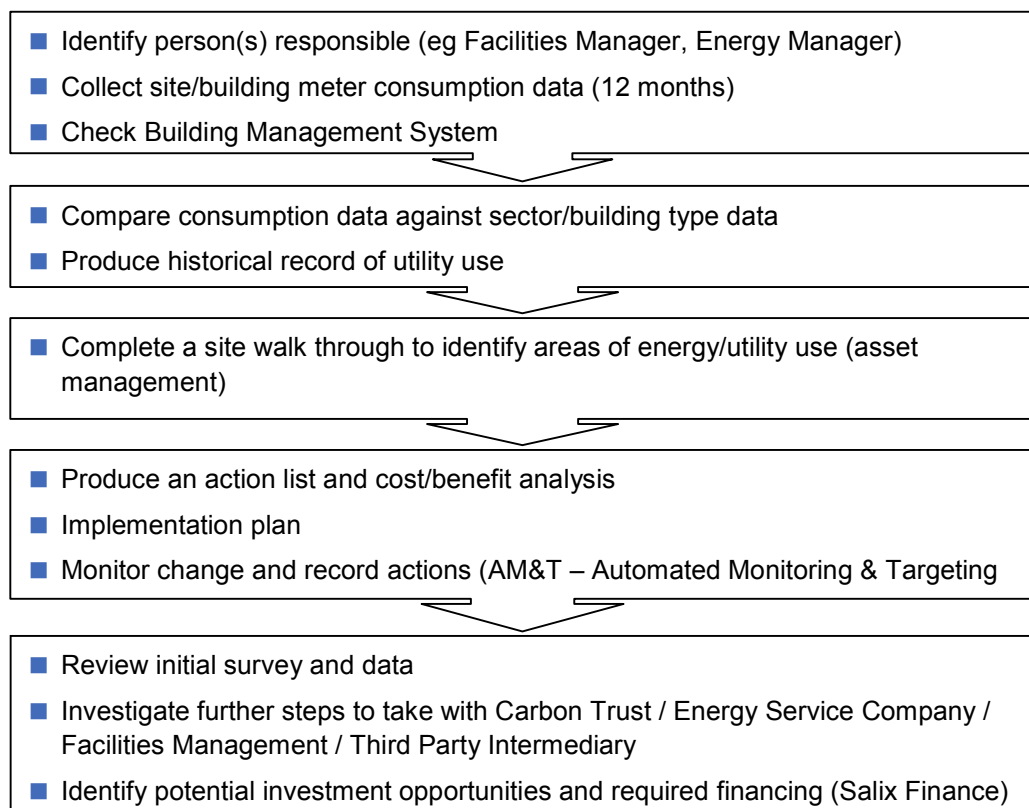
### Benefits

Up to 20% of an energy bill can be reduced with simple measures at little cost. These can also translate into CO<sub>2</sub> savings, not only saving money on the bottom line but also meeting environmental and corporate targets.

**Energy use is not fixed, but controllable and should be managed accordingly**

### Process to follow

The diagram indicates a step-by-step process to follow for the effective management of utility usage. Once the recommendations have been identified, it should be ensured that they are implemented accordingly.



### Need more information?

Visit the Carbon Trust website or the OGC energy website.

# Sustainability targets

## What are they?

There are currently 68 national indicators supporting the UK Government Sustainable development strategy. This page sets out the 5 key targets associated with the energy category for the Central Civil Government office estate, which is a summary of the Sustainable Operations on the Government Estate (SOGE) targets.

### Alternative Energy

Government departments are required to:

- Source 10% of electricity requirements from renewable sources by 2008
- Source 15% of electricity requirements from Combined Heat and Power sources by 2010.

### Carbon Neutral

- Central government office estate to be carbon neutral by 2012.

### Energy Efficiency and Carbon Emissions

The following targets refer to broadly the same goal, to reduce actual onsite use of energy and consequently CO<sub>2</sub> emissions.

- Departments to increase energy efficiency per m<sup>2</sup> by 15% by 2010 relative to 1999-2000 levels This figure is set to rise to 30% by 2020 relative to 1999-2000 levels.
- Reduce carbon emissions by 12.5% by 2010-11, relative to 1999/2000 levels. This target is set to rise to 30% by 2020 relative to 1999/2000 levels.
- Reduce water consumption by 25% on the office and non-office estate by 2020, relative to 2004/05 levels
- Reduce water consumption to an average of 3m<sup>3</sup> per person/yr for all new office builds or major refurbishment projects.

### Interested?

For more information refer to the [OGC Sustainability Targets Guidance Document](#) or the [Sustainable Development in Government 2007](#) report produced by the Sustainable Development Commission.

### Energy Measures Report

This is a report published by BERR (September 2007) that is specifically designed to provide insight for Local Authorities providing an overview of what approach equates to good practice for sustainability in the following areas:

- Community leadership
- Own estate and operations
- Environment
- Planning
- Housing
- Transport
- Schools and education
- Social care
- Economic development and regeneration

Training local authority staff to be energy aware is likely to result in carbon and financial savings for the council as well as in the wider community. Also ensuring that members of the community have access to high quality energy advice can assist in efforts to reduce fuel poverty as well as to tackle climate change.

This report also provides helpful case studies and resources that can be used to help Local Authorities see what possibilities exist to drive forward their sustainability initiatives.

### Interested?

For more information refer to:

[The BERR Energy Measures Report](#)

### Sustainable Energy Self Assessment Tools

Two tools have been developed: a draft benchmark and an interactive toolkit. These interrelated tools will help councils evaluate their own performance and provide guidance for improvement. There are three steps for councils to follow:

- assess current practice
- identify priority areas for action
- learn from others to improve service delivery in key areas of energy management

The benchmark describes how the ideal authority would deliver sustainable energy processes and policies.

### Interested?

Contact [IDeA](#) for the [Sustainable Energy Toolkit](#)

# ICT Power Management

## Background

ICT Power Management is a software 'patch' used to reduce electricity demand thereby subsequently reducing costs and carbon emissions from PC usage.

This software can remotely switch off desktop computers during non-working hours. It also allows computers to be temporarily switched back on for IT upgrades and batch processes to be run.

A report by the National Energy Foundation (NEF) indicated that around 20-30% of computer users in Britain do not switch off computers.

## The Benefits

The software can cut energy costs by around £25 to £45 per PC per year, which is equivalent to 0.06 Tonnes of CO<sub>2</sub>. It is estimated that by switching-off PCs when not in use annual energy cost savings of up to £10.2 million and carbon emission reductions of up to 55,723 tonnes could be achieved within the central government estate.

## Current Offering

The Department for Culture, Media and Sport (DCMS) has put in place a framework agreement for this software, which is enabled for the whole public sector. It is available until May 2012 and the cost of the software has been negotiated down by 30% off the list price, which means that the typical payback is less than 6 months. The software also can attract Salix Finance matched funding support, which can reduce the cost even further.

## Interested?

For more information refer to the [OGC IT Power Management Guidance](#) or visit the [1E Public Sector Portal](#).

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## Steps to Follow

### No Cost Solution

- Understand that PCs may be left on during non-working hours
- Inform and educate staff to 'switch off' PCs
- Use in-built power management for hibernation of PCs

### Assessment of investment solutions

- [1E benefits calculator](#)

### Investment in technology

- Pan-government competitive framework
- [OGC Contracts Database](#)

# Automated Meter Reading (AMR)

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## Background

AMR allows for an increased understanding of the energy consumption on a near real-time basis. AMR allows energy prices to be substantially reduced by eliminating “estimate billing”. It is conservatively estimated that 2% of annual energy costs can be saved by installing AMR. With subsequent demand side management this can increase to as much as 15%.

AMR is a physical product that replaces the current “Dumb” electricity/gas/water meter. Currently most buildings have “Dumb” meters, which need to be read manually, meaning that they are often read irregularly. If AMR is utilised, the “Dumb” meter would either be replaced by a “Smart” meter or a data logger which can increase reading frequency and billing accuracy.

AMR is not a new concept, but due to increases in demand and improvements in technology the unit cost has substantially decreased, which means that they are now also available to increasingly smaller sites.

There are three broad options available for an AMR solution recognised by The Carbon Trust:

- Data only – provision of the meter and access to the meter data, typically via a website with simplified diagnostic tools
- Data and advice – provision of the meter and access to the meter data plus some level of energy saving analysis and advice
- Personal contact – provision of the meter and access to the meter data plus some form of personal contact to provide bespoke energy saving analysis and advice.

## Current offering

The Ministry of Defence currently has a limited framework solution in place, the details of which are available on the [OGC Contracts Database](#). The provider is IMserv, a division of Ivensys, and the framework is available until November 2011. The service provides, amongst other things, access to the utility data via a web-portal.

Work is currently in progress on developing a framework contract that will enable public sector organisations to more easily procure a variety of AMR solutions. Such a framework solution will provide the full spectrum of products and services for all utilities. This solution is being developed by OGCbuying.solutions and it is envisaged that there will be a live contract by April 2009.

Case studies are currently being collated and will be available from the OGC Energy website.

## Interested?

Contact the [OGC Service Desk](#) on **0845 000 4999**.

For more information refer to the [Carbon Trust case study document](#) and visit the [OGC Energy website](#) for updates.

The Carbon Trust was set up as an independent company by the UK Government in 2001. Its mission is to accelerate the move to a low carbon economy by working with public and private organisations to reduce carbon emissions and develop commercial low carbon technologies.

The Carbon Trust delivers practical solutions by working with business and the public sector to identify carbon emissions and find ways of continuously cutting them; it also provides organisations with the knowledge and resources (including funding) to help them do so.

The Carbon Trust has identified the following opportunities for energy saving:

- Heating
- Ventilation and cooling
- Lighting
- Office and low power equipment
- Building fabric (inc. Insulation)
- Catering
- Combined heat and power (CHP)
- Renewable energy
- Micro generation
- Water usage
- Laundries
- Housekeeping and people solutions

## Current Offering

The Carbon Trust offers consultancy services, free advice and financial support.

### Practical Support

- [Design advice service](#)
  - Promotes the construction of more energy-efficient non-domestic buildings
  - Support ranges from self-help guidance to free or subsidised design and construction consultancy.
- [Carbon survey](#)
  - Expert consultants provide a free on-site carbon survey to organisations with annual energy bills over £50,000.
- [Action plan tool](#)
  - A self assessment tool that helps to identify key actions you can take at your site to save energy and reduce carbon emissions.
- [Energy saving starter pack](#)
  - A free pack that includes hints, posters and stickers to support an energy efficiency campaign amongst staff.
- [Public sector carbon management](#)
  - Provides technical and change management support for carbon management within the NHS, Higher Education and Local Authorities.

#### ■ [Carbon footprint calculator](#)

- Calculate your organisation's carbon footprint and see where energy could be saved.

#### ■ [The Carbon Trust Standard](#)

- This is effectively a carbon management kite mark. It provides recognition for organisations that have genuinely reduced their Carbon Footprint and are committed to making further reductions year on year.
- [Case studies](#) from amongst others Defra, DfID and Kings College can be found on their website.

#### ■ [Partnerships for Renewables \(PfR\)](#)

- Works exclusively with the public sector to develop and manage onsite renewable energy projects from screening sites and conducting feasibility studies to construction and operation. The Carbon Trust PfR will cover all development costs, which means great care is taken in screening sights for appropriateness.

## Interested?

Contact the Carbon Trust Customer Centre on **0800 085 2005**.

The Customer Centre offers free advice on saving energy, renewable energy and other low carbon issues. The advisers can also provide further details of all available Carbon Trust products and services.

Opening hours: 8.30am-5.30pm, Monday to Friday.

Or visit the [Carbon Trust website](#)

Salix is an independent, publicly funded company set up to accelerate public sector investment in energy efficiency technologies through invest to save schemes.

Salix has public funding from the Carbon Trust and is working across the public sector with Local Authorities, NHS Foundation Trusts, Higher and Further Education Institutions and Central Government departments.

## Current Offering

The role of Salix is to secure the delivery of practical carbon saving projects in the public sector, through suitable financial vehicles. Salix primarily provides interest-free, matched funding, structured so that the energy savings pay the total fund back over time.

In addition, Salix also provides:

1. Protection for energy efficiency budgets from budget cuts.
2. External funding which significantly increases the likelihood of agreement to project commitment.
3. A “ring fenced” fund structure which safeguards energy efficiency budgets from annularity problems.
4. Funding which allows for multiple small projects to be consolidated so that they are seen as significant spend.
5. A fund structure that requires a review of the skills and numbers of energy management projects currently in place.
6. Tangible demonstrations of green credentials.
7. Matched funding that allows for targets to be met more quickly and aid prompt decision-making.

## Salix Finance in Practice

### Kings College London

With Salix Funding of £100k, Kings College has a total fund value of £200k to be spent over a two and half year period. In the first nine months of the scheme they have undertaken four main projects with a total value of £194k giving annual energy savings of £50k and annual CO<sub>2</sub> savings of 400T.

## Interested?

Contact [Salix Finance](#) on **020 3043 8800** or visit the [Salix Finance website](#) for [Case Studies](#).

# Low Carbon Buildings Programme

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## Background

The BERR led programme provides grants for up to 50% of the installation of micro-generation technologies which are available to public sector buildings (including schools, hospitals, Housing Associations and Local Authorities) and charitable bodies.

Applications for Phase 2 are being accepted now. It is currently anticipated that funds will be committed through to mid-2009, but this will depend on the actual rate of applications. Once applications are approved, claimants will be given details of the latest date grants can be claimed.

## Current Offering

Grants will be provided towards the cost of installing the following technologies:

- Solar photovoltaic
- Wind turbines
- Small scale hydro
- Solar thermal hot water
- Ground source heat pumps
- Air source heat pumps
- Biomass
- Renewable CHP
- MicroCHP (Combined heat and power)
- Fuel cells

## Interested?

Contact the [Low Carbon Buildings Programme Phase 2](#) on **08704 23 23 13**.

Or visit their [website](#)

## Get more on-line

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### OGC Contracts Database

- <http://www.ogc.gov.uk/contractsdatabase/>

### Carbon Reduction Commitment

- [www.defra.gov.uk/Environment/climatechange/uk/business/crc/index.htm](http://www.defra.gov.uk/Environment/climatechange/uk/business/crc/index.htm)

### Low Carbon Buildings Programme

- For community groups, public sector and not for profit organisations:  
[www.lowcarbonbuildingsphase2.org.uk/](http://www.lowcarbonbuildingsphase2.org.uk/)

### European Union – Emissions Trading Scheme

- [www.defra.gov.uk/environment/climatechange/trading/eu/index.htm](http://www.defra.gov.uk/environment/climatechange/trading/eu/index.htm)

### Display Energy Certificates

- <http://www.communities.gov.uk/documents/planningandbuilding/pdf/20.pdf>

### Energy Performance Buildings Directive

- [www.diag.org.uk/](http://www.diag.org.uk/)

### Energy Services Directive

- [www.defra.gov.uk/Environment/climatechange/uk/energy/energyservices/index.htm](http://www.defra.gov.uk/Environment/climatechange/uk/energy/energyservices/index.htm)

### Energy Measures Report

- <http://www.berr.gov.uk/energy/environment/measures/page41270.html>

### Carbon Trust

- <http://www.carbontrust.co.uk/>

### Carbon Footprint Calculator

- <http://www.nef.org.uk/greencompany/co2calculator.htm>
- <http://www.carbontrust.co.uk/solutions/CarbonFootprinting/FootprintCalculators.htm>

### OGC Energy website

- [http://www.ogc.gov.uk/commodities\\_procurement\\_energy\\_6740.asp](http://www.ogc.gov.uk/commodities_procurement_energy_6740.asp)

## Need further help?

Call the OGC Service Desk on  
**0845 000 4999**

or email

[servicedesk@ogc.gsi.gov.uk](mailto:servicedesk@ogc.gsi.gov.uk)



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#### **About OGC**

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#### **OGC Service Desk**

OGC customers can contact the central OGC Service Desk about all aspects of OGC business.

The Service Desk will also channel queries to the appropriate second-line support. We look forward to hearing from you.

You can contact the Service Desk 8am - 6pm Monday to Friday

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