



Government's Green IT Strategy - Greening Government ICT

GBC's Management Summary
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Greening Government ICT – the Green IT Strategy

As Britain's largest purchaser of ICT, Government wants to set an example in the sustainable use and disposal of computers, servers and printers. The Greening Government ICT strategy sets out the first steps towards reducing the carbon footprint.

1. UK Government Position

UK Government has set a target for the central government office estate to achieve carbon neutrality by 2012. The UK has an overarching target to reduce greenhouse gases by 26% or more by 2020 and by at least 60% by 2050. In addition to the current Sustainable Operations on the Government Estate (SOGE) targets that were announced by the Prime Minister in 2006, Government has the following commitments:

- Departments to source at least 10% of electricity from renewables by 31 March 2008
- Departments to source at least 15% of electricity from Combined Heat and Power (2010)

2. Green ICT Vision

The Government's vision for ICT in central departments is:

- To make energy consumption of Government ICT on the office estate carbon neutral by 2012
- By 2020 Government ICT will be carbon neutral across its lifecycle

3. The ICT Contribution

ICT is a key enabler for most Transformational Government programmes and can be used to generate environmental benefits in government operations and the UK, for example through tele and video conferencing, remote and home working. The use of ICT can reduce building occupancy and travel. But these changes are likely to require an increase in ICT investments, making it all the more important to significantly reduce the carbon footprint of new investments.

4. Green ICT Strategic Objectives

- By January 2009 all departments are to consider the impact on carbon emissions of all new ICT purchases.
- Power consumption of equipment used will be lowered, including outsourced contracts and services. Emissions will also be reduced through changes in business processes and working practices, minimising transport and minimising paper use.
- By 2020 Government aims to comply with and where possible lead global best practice for sustainability across the whole ICT lifecycle, covering carbon neutrality and sustainable use of materials, water, accommodation and transport in the manufacture, use and disposal of ICT.
- Off-setting to be seen as a last resort.

This will be delivered by implementing actions such as:

- Extend the lifecycle of all ICT purchases to their natural demise caused by failure, inability to support business objectives, excessive maintenance costs or carbon footprint and energy consumption
- Reduce the overall number of PCs and laptops
- Implement active device power management
- Reduce the overall number of printers and replace with multi-function devices and use green printing defaults such as double-sided and multiple pages printing
- Increase average server capacity utilisation to achieve a minimum of 50% where possible

Actions are set out in 'Areas for ICT Carbon Reduction' which can be found at www.cio.gov.uk

The approach is to:

- Create awareness of the impact ICT can have and encourage different ways of working
- Work with departments and industry to identify more radical proposals to go beyond the easy changes
- Understand the resources required, costs and issues which need to be addressed if more radical proposals are to be introduced
- Increase awareness of the importance of manufacture and design for ease of re-use and recycle
- Task Finance Directors to assure environmental consequences of procurements are fully evaluated

- Ensure CIOs demonstrate leadership, sign a sustainable ICT charter with industry providers, review existing contracts and procurement processes

5. Progress to date

- A Green ICT Delivery group has been established
- A Green ICT Scorecard is being piloted as one of a number of tools
- A CIO Green ICT SOGE map has been developed
- A list of immediate steps has been developed to encourage early implementation of simple but high impact actions, including:
 - Running a long life asset campaign to increase lifespan where appropriate
 - Turning off PCs when not in use
 - Ensuring printers are purchased with automatic duplexing functionality or default to duplex and grey scale
 - Removing active screen savers and utilising power management functionality for monitors
 - Ensuring peripheral equipment is switched off overnight
 - Putting PCs in low power modes after periods of inactivity
 - Re-using or re-distributing legacy ICT and related goods

Departments should also consider opportunities for sharing ICT services with other departments.

Progress will be reported in the Transformational Government Annual Report.

Further work will:

- Address more complex options
- Identify Green ICT standards and measurement criteria for discussion with CIOs and the European Commission
- Embed best practices into mainstream supply chains and reflect these in procurement standards
- Encourage the use of ICT to help reduce energy consumption in other parts of the organisation e.g. reducing occupancy, travel and the need to print documents
- Assess the environmental impact of delivery, support and project development of ICT services

6. Risks and mitigations

There are a number of risks which will be considered and addressed, including people not taking targets seriously, the effort of measurement exceeding the value of what is being done, cultural change not happening, lack of benchmark data, operational requirements taking precedence over environmental concerns and new technologies making current best practices redundant.

The Greening Government ICT paper includes two appendices summarising SOGE targets and the Sustainable Procurement Action Plan, as well as detailing areas for ICT carbon reduction.

Areas for ICT carbon reduction

PCs and laptops

- Remove active screensavers
- Switch monitors to standby after 5 minutes of inactivity
- Shut down PCs after office hours
- Enable active power management
- Ensure re-use of equipment
- Specify low-power consumption CPUs and high-efficiency Power Supply Units (80% conversion or better)
- Apply thin client technology

Other office ICT equipment

- Apply timer switches to non-networked technology and printers
- Set default green printing including duplex and grey scale
- Optimise power saving sleep mode on printers
- Printer consolidation
- Device consolidation

Data centres

- Server optimisation – implement storage virtualisation and capacity management, convert physical servers to virtual servers, turn off servers outside their SLA
- Reduce cooling to appropriate levels and increase ambient room temperature
- Decommission idle servers and data disks
- Specify low-power consumption
- Ensure re-use of equipment
- Data centre audit

A further list of areas for ICT carbon reduction can be found at www.cio.gov.uk.