

O11. Environmental

O11.1 Do you have a formal environmental policy for your organisation or for IT?

- Yes
- No

O11.2 Do you monitor the use of energy in your IT environment?

- Yes
- No

O11.2.1 If so, in what levels of the organisation do you measure energy use? [Select all that apply]

- Data Centre
- National Office
- Service Location
- Other Office

O11.2.2 If so, what is the annual power bill for the IT section/function, broken down (if possible) by:

Heating [Please give a number] £ _____

Air conditioning and cooling [Please give a number] £ _____

Lighting [Please give a number] £ _____

Server power [Please give a number] £ _____

Desktop power [Please give a number] £ _____

Other [Please give a number] £ _____

Please specify _____

O11.2.3 If not, what are the main issues or reasons preventing you from doing so? [Select all that apply]

- Don't know how
- Unable to break out IT energy use separately
- Lack of personnel/other capacity to conduct analysis
- Lack of policy/other support
- Other (please specify) _____

O11.3 Do you calculate energy cost in relation to processing power?

- Yes
- No

O11.3.1 What metrics and formula/process do you use to establish this measurement?

O11.3.2 What is the result of your process? _____

O11.4 Do you monitor your organisation's Carbon Emissions or IT's specific carbon emissions?

- Yes
- No

O11.4.1 If so, what were your organisations carbon emissions in the last year?

O11.4.2 Do you use:

- A Standard developed internally
- An external standard/assessment

O11.4.3 If external, which one? _____

O11.4.4 If not, what are the main issues or reasons preventing you from doing so?

[Select all that apply]

- Don't know how
- Unable to break out IT energy use separately
- Lack of personnel/other capacity to conduct analysis
- Lack of policy/other support
- Other (please specify) _____

O11.5 How is your organisation planning to further reduce carbon emissions and increase energy efficiency and environmental awareness in the future? *[Select all that apply]*

- Participate in carbon offsetting scheme
- Migrate to Energy-Star compliant equipment
- Engage specialist/expert advisor to conduct organisational assessment
- Conduct internal assessment
- Other (please specify) _____

O11.6 In overall energy/carbon monitoring, do you utilise the following specific measures/indicators:

Energy Use Measurement

	Yes	No	Planning to
O11.6.1 Utility Energy Consumption Meter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.2 UPS (or Equivalent) Level Meter for IT Energy Consumption	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.3 PDU Level Metering of IT Energy Consumption	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.4 PDU Level Metering of Mechanical and Electrical Energy Consumption	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.5 Power Strip Level Metering of IT Energy Consumption	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.6 Device Level Metering of IT Energy Consumption	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.7 Other please specify below	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Energy Use Collection and Logging

	Yes	No	Planning to
O11.6.8 Periodic Manual Readings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.9 Automated Daily Readings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.10 Automated Hourly Readings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.11 Data and Trend Analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.12 Other please specify below	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Energy Use Reporting

	Yes	No	Planning to
O11.6.13 Written Report	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.14 Energy Reporting Console	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.15 Integrated IT and Energy Reporting Console	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.6.16 Other please specify below	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

O11.7 What would you estimate the cost of your IT energy and carbon monitoring to be per annum? *[Please give a number]* £ _____

Printing

O11.8.1 What percentage of your paper is from recycled sources?

_____ %

O11.8.2 What percentage of your waste paper is recycled?

_____ %

O11.8.3 What percentage of your ink/copier toner is from recycled/reconditioned sources?

_____ %

O11.8.4 What percentage of your ink/copier toner cartridges is recycled?

_____ %

O11.8.5 Does your office have a formal policy on printing documents/E-mails for archival (as opposed to digital scan and management)?

_____ %

O11.8.6 What would you estimate the additional cost of environmentally-friendly printing to be per annum? *[Please give a number]*

£ _____

Employee Working Practices

O11.9 Are your staff informed of your environmental policies?

- Yes
- No

O11.9.1 If so, how: *[Select all that apply]*

- Part of new employee orientation
- Regular announcements/promotions
- Specific individual/group training
- Part of assessment /compensation/bonus scheme
- Other _____

O11.10.1 Do you know the running power of your desktop machines?

- Yes (please specify) _____
- No

O11.10.2 Do you know the idle power of your desktop machines?

- Yes (please specify) _____
- No

O11.10.3 Do you know the standby power of your desktop machines?

- Yes (please specify) _____
- No

O11.10.4 Do you know the suspend power of your desktop machines?

- Yes (please specify) _____
- No

O11.10.5 Do you have a policy to select new hardware based on achieving or exceeding these power ratings?

- Yes
- No

O11.11.1 Do you use power optimisers to reduce/save voltage from UK to EU standards?

- Yes
- No

O11.11.2 Does your Ethernet telephone system power-off with close of business (i.e. building alarm/security system is set to 'on')?

- Yes
- No

O11.11.3 Are workstations set to time-out in order to conserve energy?

- Yes
- No

O11.11.4 Do you implement black screen screensavers and auto monitor power off?

- Yes
- No

O11.11.5 Do you use software or human processes to shut down PCs overnight (e.g. 'Nightwatchman' software)?

- Yes
- No

O11.11.6 Do you use technology to reduce travel to meetings, e.g., telephone conferences, video conference, web conferences?

- Yes
- No

O11.11.7 What percentage of meetings use these tools to reduce travel?

_____ %

O11.11.8 Is tele-working encouraged/facilitated where appropriate?

- Yes
- No

O11.11.9. Are the needs and costs for advice and training on tele-working incorporated into the process?

- Yes
- No

O11.11.10 Are there online conference facilities to reduce travel?

- Yes
- No

O11.11.11 Are staff encouraged to bring in recyclable materials (batteries, printer cartridges, old electronics) to be processed by the company's recycling plan?

- Yes
- No

O11.11.12 Have you been able to calculate the additional cost per annum of environmentally friendly employee practices?

- Yes
- No

O11.11.13 What was this cost? [Please give a number] £ _____

O11.11.14 What was the basis of the calculation? _____

Data Centre

O11.12 Do you have a dedicated data centre (a discrete enclosed space housing the organisation's servers and/or IT networking equipment, whether a room or separate building/unit)?

- Yes
- No

Does your data centre (or server/server room) utilise or take into account:

Selection and Deployment of New Power Equipment

	Yes	No	Planning to
O11.12.1 Modular Deployment of UPS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.2 High Efficiency UPS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.3 Use Efficient UPS Operating Modes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.4 Other (Please Specify Below)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Data Centre Building - Physical Layout

	Yes	No	Planning to
O11.12.5 Locate Monitoring and Evaluation Plant Outside the Cooled Area of the Data Centre	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.6 Select a Building with Sufficient Ceiling Height	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.7 Other (Please Specify Below)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Data Centre Building - Geographic Location

	Yes	No	Planning to
O11.12.8 Locate the Data Centre Where Waste Heat Can be Re-used	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.9 Locate the Data Centre in an Area of Low Ambient Temperature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.10 Avoid Locating the Data Centre in High Ambient Humidity Areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.11 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Data Centre Office and Storage Spaces

	Yes	No	Planning to
O11.12.12 Automated Measures to Turn Off Lights	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.13 Automated Measures to Reduce HVAC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.14 Other (Please Specify Below)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Data Centre Management - Resilience Level and Provisioning

	Yes	No	Planning to
O11.12.15 Measures to Build Resilience to Business Requirements Retrofit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.16 Measures to Lean Provisioning of Power and Cooling for 18 Months Worth of Data Floor Capacity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.12.17 Other (Please Specify Below)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

O11.12.18 Have you been able to calculate the additional cost per annum of an environmentally-friendly data centre?

- Yes
- No

O11.12.19 What was this cost? [Please give a number] £ _____

O11.12.20 What was the basis of the calculation? _____

Cooling Plant

O11.13 Do you have/use a cooling plant for your data centre?

- Yes
- No

Does your cooling plant utilise:

Free Cooling

	Yes	No	Planning to
O11.13.1 Fresh Air Cooling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.2 Free Water Cooling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.3 Free Air Cooling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.4 Other (Please Specify Below)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Heavily Economised Cooling

	Yes	No	Planning to
O11.13.5 Air Economiser	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.6 Water Economiser (Free Cooling Coils)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.7 Evaporative Water Economiser	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.8 Adsorptive Chillers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.9 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

High Efficiency Cooling Plant

	Yes	No	Planning to
O11.13.10 High Efficiency Compressed Gas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.11 High Efficiency Chilled Water (Staged Pumps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.12 High Efficiency Chilled Water (Variable Speed Pumps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.13 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Storage of Cooling

	Yes	No	Planning to
O11.13.14 Phase Change Cooling Storage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.15 Cold Water Cooling Storage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.16 Ice Cooling Storage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.17 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Air Flow Management and Design

	Yes	No	Planning to
O11.13.18 Rack Air Flow Management - Blanking Plates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.19 Rack Air Flow Management - Other Openings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.20 Raised Floor Air Flow Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.21 Raised Floor Air Flow Management - Obstructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.22 Design - Contained Hot or Cold Air (Retrofit)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.23 Design - Contained Hot or Cold Air (New Build)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.24 Design - Hot / Cold Aisle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.25 Design - Raised Floor or Suspended Ceiling Height	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.26 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Computer Room Air Conditioners

	Yes	No	Planning to
O11.13.27 Variable Speed Fans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.28 Direct Water Cooling of IT Devices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.29 Sequencing of CRAC Units	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.30 Pressure Controlled Air Flow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.31 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Re-Use of Waste Heat

	Yes	No	Planning to
O11.13.32 Waste Heat Direct Re-Use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.33 Heat Pump Assisted Waste Heat Re-use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.34 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Cooling Management

	Yes	No	Planning to
O11.13.35 Shut Down of Unnecessary Cooling Equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.36 Review of Cooling Before IT Equipment Changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.37 Review of Cooling Strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.38 Review CRAC Settings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.39 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Temperature and Humidity Settings:

Have you conducted a review and (if possible) implemented an increase in the:

	Yes	No	Planning to
O11.13.40 Target IT Equipment Intake Air Temperature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.41 Chilled Water Loop Temperature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.42 Working Humidity Range	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.13.43 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

O11.13.44 Have you been able to calculate the additional cost per annum of an environmentally-friendly cooling plant?

- Yes
- No

O11.12.45 What was this cost? [Please give a number] £ _____

O11.12.46 What was the basis of the calculation? _____

IT Equipment and Services

O11.14 Do you manage procurement of IT equipment and services internally?

- Yes
- No

In your procurement of IT equipment and services, do you take into account measures to:

Selection and Deployment of New IT Hardware

	Yes	No	Planning to
O11.14.2 Consider if updates necessary (requiring full replacement or only parts)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.3 Consider location (transportation of components etc) and method of manufacture of goods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.4 Consider energy efficiency and carbon footprint in the manufacturing of equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.5 Consider energy efficiency and carbon footprint in the delivery of equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.6 Consider energy efficiency and carbon footprint in the running of equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.7 Consider the distance for the delivery of spare parts and servicing of equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.8 Check and require proof of the implementation of the policies for primary and	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.9 Secondary suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.10 Check and require proof of the implementation of the policies for outsourcers and their suppliers and supply chain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.11 Multiple Tender for IT Hardware - Power Efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.12 Multiple Tender for IT Hardware - Operating Thermal and Humidity Range	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.13 Select Equipment Suitable for the Data Centre Design Power Density	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.14 Select Equipment Suitable for the Data Centre - Air Flow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.15 Enable Power Management Features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.16 Provision to the As-Configured Power	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.17 Consider Energy Star Hardware	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.18 Energy and Temperature Reporting Hardware	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.19 Monitor final disposal of equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

O11.14.20 Other (Please Specify) _____

Deployment of New IT Services

	Yes	No	Planning to
O11.14.21 Grid and Virtualisation ? Require Approval for Deployments of Dedicated Hardware	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.22 Reduce IT Hardware Resilience Level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.23 Reduce Hot/Cold Standby Equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.24 Select Efficient Software	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.25 Eliminate Hardware Clusters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.26 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Management of Existing IT Services

	Yes	No	Planning to
O11.14.27 Decommission Unused Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.28 Virtualise and Archive Legacy Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.29 Consolidation of Existing Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.30 Define a Data Management Policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.31 Reduce Total Data Volume	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.32 Reduce Total Storage Volume	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.33 Audit Existing Estate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.34 Low Power Storage Devices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.35 Shut Down or Sleep Idle Equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.14.36 Other (Please Specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

O11.14.37 Have you been able to calculate the additional cost per annum of environmentally-friendly IT equipment and services?

- Yes
- No

O11.1(.38 What was this cost? [Please give a number] £ _____

O11.1(.39 What was the basis of the calculation? _____

Industry/Standards Review, Integration

Please indicate your level of compliance with the following directives/codes of conduct:

	Not aware	Aware but not following	In the process of registration	Fully compliant
O11.15.1 Waste Electrical and Electronic Equipment (WEEE)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.15.2 European Union Code of Conduct for Data Centre Operators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.15.3 Building Research Establishment Environmental Assessment Method (BREAAAM)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O11.15.4 Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

O11.15.5 Have you been able to calculate the additional cost per annum of staying up-to-date and complying with industry standards?

- Yes
- No

O11.15.6 What was this cost? [Please give a number] £ _____

O11.15.7 What was the basis of the calculation? _____