

Our 2011 Sustainability Review

# Better Future

---



# Climate change and environment

As a large communications services company, BT has environmental impacts throughout the value chain – from our suppliers, to our operations, networks and products. Managing these impacts helps to reduce costs, identify market opportunities and differentiate our business from competitors. This section discusses:

- The direct environmental impacts of our operations
- Our environmental strategy, policy and management system
- How we help customers to live and work more sustainably
- Product stewardship.

The BT plc Board first committed to optimising environmental performance in 1990, and we have been reporting our progress since 1992. We operate a rigorous environmental management system across our operations worldwide, and gained ISO14001 certification in 1999.

We continue to aim for world-class environmental management. This involves reducing resource use, emissions and waste from our facilities, cutting the impacts of our travel and transport and reducing the lifecycle impacts of our products. Tackling energy use and climate change is priority for BT and a core element of our Better Future strategy.

## Strategy and approach

We aim to both tackle our own environmental footprint and resource usage and help our customers reduce theirs. Our strategic priorities in this area are:

- **Reducing the [direct impacts of our operations](#)** – our focus is on cutting our carbon dioxide emissions by reducing our energy and fuel use, purchasing low-carbon electricity, and generating our own renewable electricity where viable. We also manage other environmental impacts such as waste, water use and emissions to air.
- **Helping customers live and work more sustainably** – the move towards a [low-carbon economy](#) is creating greater opportunities for BT to grow its business, while reducing environmental harm. BT products and services such as high-speed broadband, data centres, teleconferencing, remote working solutions, and smart metering are helping people and organisations to live and work in a more sustainable way.
- **Offering environmentally preferable [products](#)** – items that consume less energy in use, and are easier to recycle. Compared with the previous version, our latest Home Hub wireless broadband router is 35% more energy efficient on average.

## Environmental policy

### Our commitment

BT is committed to the prevention of pollution and minimising the impact on the environment of its operations globally. In particular, we will contribute to initiatives that seek to address climate change.

## Policy

Our Environmental Policy guides our environmental activities and commits us to setting improvement targets and closely monitoring our environmental performance.

We communicate our environmental objectives, action plans and achievements to help every BT employee understand and implement the policy in their daily work.

BT recognises that in its day-to-day operations it impacts on the environment in a number of ways and we are committed to minimising the potentially harmful effects of such activity wherever and whenever possible. BT strives to make positive contributions to the environment.

This policy statement provides the framework on which our environmental programme is based. This enables us to set targets and measure progress as well as strive for continuous environmental improvement.

BT seeks to maximise opportunities for the provision of services and solutions which can help to reduce negative environmental impacts and which can provide significant environmental benefits.

We have undertaken to help every person who works for and on behalf of BT to understand and implement the relevant aspects of this policy in their day-to-day work through the regular communication of objectives, action plans and achievements.

We will also ensure that BT suppliers and contactors will promote the principles of sound environmental practice externally.

## Governance

The Chief Executive of BT has ultimate responsibility for the company's environmental policy and performance. The Board Committee for Sustainable and Responsible Business (CSRB) oversees the implementation of all social and environmental programmes across the BT Group. In 2011, the CSRB met four times and reported to the Board. The Board committee is chaired by BT's Chairman.

Through a programme of continuous improvement BT and its wholly owned subsidiaries will:

- Meet all applicable legislative and other requirements, and where appropriate exceed or supplement these by setting our own exacting standards,
- Seek to reduce consumption of materials in our operations, reuse rather than dispose whenever possible, and promote recycling and the use of recycled materials,
- Design energy efficiency into new services, buildings and equipment and manage energy wisely in all operations,
- Reduce wherever practicable the level of harmful emissions,
- Develop products that are safe to use, make efficient use of resources, and which can be reused, recycled or disposed of safely,
- Work in partnership with our suppliers to minimise the impact of their operations on the environment,
- Seek to minimise the visual, noise and other impacts on the local environment when sitting and maintaining our buildings, structures and equipment,
- Work with external groups and organisations to promote the concepts and practices of environmental protection,
- Include environmental issues in discussions with the BT unions, within the BT training programmes and encourage the implementation by all BT people of sound environmental practices both at home and at work,
- Monitor progress and publish details of our environmental performance in our Sustainability Report, as a minimum, on an annual basis.
- Implement a programme of external and internal audits to scrutinise our environmental performance, on a regular basis

The Company's environmental management system will monitor delivery of these commitments.

You can download a pdf of this policy [here](#).

# Environmental management system

Good environmental management saves money and improves business efficiency, as well as ensuring we do all we can to reduce the environmental impacts which inevitably result from our operations. In addition, an increasing number of our customers require us to demonstrate our environmental credentials when submitting for bids and tenders.

## ISO 14001 certification

BT's environmental management system (EMS) in the UK has been certified to the international standard ISO 14001 since 1999. Since then, we have extended certification to Belgium, Ireland, Germany and the Netherlands, BT Italy and BT Spain. BT Spain is also certified to the European Eco-management and Audit Scheme (EMAS). ISO 14001 requires us to demonstrate compliance with environmental laws and regulations, effectively control environmental risks and enhance our EMS through continual improvement.

Our EMS is regularly audited by external assessors Lloyds Register Quality Assurance (LRQA), and we are pleased to report that during the 2011 financial year (2011) we maintained ISO 14001 certification across all operations that currently hold the standard. We aim to maintain ISO 14001 certification in our existing operations and seek opportunities to extend certification globally. We also carry out internal environmental audits across all our operations on an annual basis.

## System improvements

Demonstrating that environmental impacts are adequately managed is a key requirement of any EMS. To facilitate this, we use a web-based environmental management tool called enviroMANAGER™. The system records relevant environmental data, allowing us to record compliance with legislation, carry out risk assessments and document our environmental management processes and procedures.

The system is regularly updated with new and forthcoming environmental legislation, allowing us to consider any potential impact on current and future business operations and plan accordingly.

## Worldwide environmental reporting

BT was one of the first UK companies to publish an environment report in 1992. As BT's operations support a worldwide customer base, in 2008 we took the decision to include reporting on our international operations. This is essential as we seek to improve our environmental performance by setting targets designed to minimise the environmental impact of our business activities worldwide. We now collect and assess data from the 20 countries where BT has a significant business presence. These countries represent over 95% of BT's full time employees. We are particularly keen to gauge our performance in minimising our carbon emissions and reducing waste as these constitute two of our key CR performance indicators.

Additionally, we are collecting and analysing a wide range of other environmental data including emissions to air, fuel use and business travel, which we will publish as it becomes more reliable. We have improved our reporting processes and in 2011, we were able to record individual buildings data for most of our international operations. As a result, we are increasingly able to monitor changes within different areas of the business such as data centres, office buildings and network operations.

We are conscious that to be meaningful, the data collected must be as accurate and consistent as possible. Consequently, we request supporting evidence for the data provided, for example in the form of electricity bills, green energy certificates or waste collection invoices for international operations. This means that as well as increasing confidence that the information is correct, we can calculate our renewable energy use and waste recycling levels more accurately and report on them.

We review our reporting processes regularly with our data providers to ensure it remains current and fit for purpose. In 2011, LRQA has for the second year provided a high level of assurance for the 2011 data that we have published. LRQA has acknowledged the improvements we have made in both data quantity and quality from our non-UK operations.

We continue to report on our two key performance indicators (KPIs) for climate change and waste, which cover our operations worldwide.

See the LRQA assurance [statement](#) for more information.

## Environmental prosecutions

During 2011, BT received no environmental prosecutions.

## Employee awareness

Changing behaviour is essential for tackling serious environmental problems like climate change. As a major employer, we can raise awareness among almost 100,000 people directly, and reach many more by encouraging our people to pass on the message to their families and communities.

BT people already feel strongly about environmental issues. Our 2011 annual corporate responsibility employee survey revealed that 78% of our employees thought that reducing BT's use of energy and our overall environmental impacts such as waste, was very important.

We constantly look for ways to inspire our employees to take action and make a difference. We have committed to working with our people to achieve major cuts in carbon dioxide (CO<sub>2</sub>) emissions – at work and at home. Our target is for 20% of employees to be making active efforts to reduce their carbon footprint by December 2012. At the end of March 2011, 15,463 BT people, more than 15% of the workforce had signed up to at least one of our initiatives.

As we are well ahead on this target, from 1 April 2011 we are revising our approach to set a new, more stretching target on employee engagement, focussed on BT people taking action on climate change by reducing BT's energy consumption. Our largest environmental impact, engagement with energy saving will be measured twice a year via the CARE survey, a BT wide quarterly survey on employee satisfaction.

### *Energy saving campaign*

Our energy saving campaign encourages everyone to help conserve energy around the business. In August 2010, our headquarters in London pledged to reduce its energy consumption by 10%. By working closely with employees and our facilities and catering partners, the three month campaign actually resulted in a 17% reduction.

In October, we launched a wider campaign involving 25 of our major buildings. The resulting changes saved £266,234 in energy costs and 2,074 tonnes of CO<sub>2</sub>. This will translate to savings of £873,649 and 6,527 tonnes of CO<sub>2</sub> if maintained for a full year.

The campaign also recruited 92 Energy Champions: employees who volunteer to promote energy saving at work. The Champions help to raise awareness and reduce energy use by reporting energy faults, such as faulty lighting, auditing energy use in their buildings, and sharing ideas and best practices.

### *Carbon Clubs*

Launched in 2007, Carbon Clubs are a way for employees to come together to develop ideas and take action to reduce their environmental impacts. At the end of March 2011, there were 471 members in 137 Carbon Clubs worldwide.

#### **Case Study: Jogging Walking Cycling**

Members of the Jogging Walking Cycling Carbon Club are dedicated to reducing their carbon footprint while improving their health. They want to spend more time on their feet and wheels, and less time sitting in cars, buses, tubes and trains.

Members track their mileage using an online spreadsheet, which automatically calculates the carbon saved. The club has already clocked up 23,000 miles by jogging, walking and cycling to work.

Club member Michiel Hoefsmit completed an impressive 757 miles in 2010 using a combination of all three activities.

He said: "I cycle to and from work, which is 13 miles each way, at least four times a week. If I decide to run, I first cycle to the station and then run on the way home. Depending on how long I have, I get off the train 3, 5 or 8 kilometers before home and run the rest of the way. It's a great way to stay fit and an excellent way to keep my

carbon footprint down.”

## *Eco Matters*

Our new quarterly newsletter, *Eco Matters*, available on our Intranet, keeps BT people up to date with environmental news within the business and the wider world.

## Our direct impacts

As a major energy user and communications services provider, we must both tackle our own environmental footprint and energy usage. This helps to reduce costs, identify new market opportunities and differentiate our business from our competitors.

Our focus is on cutting carbon dioxide emissions, and we also manage other environmental impacts such as waste, water use and emissions to air.

This section covers

- Carbon emissions
- Emissions to air
- Energy use
- Fuel storage
- Travel and transport
- Waste and recycling

## Emissions to air

**Gases that escape into the air from some equipment and processes can reduce local air quality and contribute to climate change.**

At BT, refrigerant gases that accidentally escape from air conditioning equipment are our most significant emissions to air, after carbon dioxide emissions from our energy and fuel use [[link to Climate change](#)].

Where possible, we use fresh air to cool our data centres and network equipment. On warmer days when fresh air cooling alone does not provide adequate cooling, we also use refrigeration based air conditioning.

All the refrigerant gases used to cool air are believed to contribute to climate change. We set targets for minimising the amount of refrigerant gases we emit and regularly review our performance and approach to ensure we meet them.

Some refrigerants also deplete the ozone layer, and we are eliminating these gases (see below) in line with regulatory requirements. We monitor all refrigerant emissions closely and report them in accordance with the requirements of the [Greenhouse Gas Protocol](#).

### Refrigerant replacement

We have almost entirely phased out the ozone-depleting refrigerants chlorofluorocarbons (CFCs) from our

equipment, and are in the process of phasing out hydrochlorofluorocarbons (HCFCs). European Union (EU) law forbids the purchase or use of HCFCs after 31st December 2009. Reclaimed/recovered HCFCs can be used until the end of 2014.

We are replacing HCFCs with hydrofluorocarbon (HFC) refrigerants, which do not deplete the ozone layer, but are powerful greenhouse gases. All our new refrigeration equipment uses HFC gases and are sealed to prevent leaks. We monitor pressure using electrical devices called transducers instead of refrigerant analyser gauges, through which leakage can occur.

We comply with the EU Ozone Depleting Substances and Fluorinated Gas (F-Gas) regulations, which aim to reduce emissions of fluorinated greenhouse gases covered by the Kyoto Protocol. We are in the process of training our people to the standards required by the new legislation and are ensuring that there are sufficient people trained by June 2011.

We attend the F-Gas stakeholder meetings held by the Department for Environment, Food and Rural Affairs (DEFRA) and the Department for Business, Enterprise and Regulatory Reform (BERR).

## Energy

BT consumes significant amounts of energy to operate our networks, data centres and offices. BT consumes around 0.7% of UK electricity generated. BT has reduced global energy consumption by 2.5% this year compared to 2010, with energy reduction projects and investments saving over £18m per annum. This is the second consecutive year that BT has reduced consumption in the UK, despite additional business as usual growth driven by the introduction of new services and technologies.

Over 85% of energy is consumed within the UK, with the majority used to power our networks and data centres. Approximately 15% of energy is consumed outside the UK, and we expect this figure to increase as we expand our business globally.

We have short and long-term targets for reducing our energy use and the associated impact on climate change by improving energy efficiency and using renewable energy. As well as benefiting the environment, reducing energy use helps us cut costs and secure supplies of energy in the long term.

## Our energy and carbon strategy

---

Our energy and carbon strategy consists of three elements:



1. Improving [energy efficiency](#) in our buildings and equipment is our highest priority
2. Next we look for opportunities to generate new [renewable energy](#) either on site or through wind farms, adding to the renewable supplies available
3. We then purchase a proportion of our electricity from existing renewable sources.

## Global energy consumption

---

Our total energy consumption (excluding metered tenants in BT UK properties) decreased by 2.5% during 2011 to 2,755GWh. However, it is still short of our 3% reduction target for the year. Our new target is to reduce absolute usage by 2% by the end of 2011/12 compared to 2010/11.

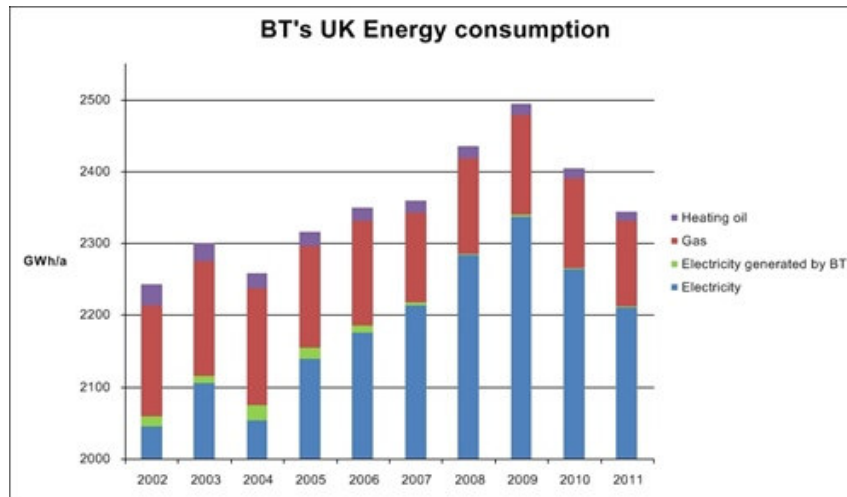
Outside the UK, we collect energy data from 19 countries where electricity usage is significant (currently greater

than 200MWh per annum). In 2011, we used 413 GWh of energy at these sites.

## UK energy consumption

---

Energy use in our UK network and estate (excluding metered tenants) decreased by 2.5 % during 2011, to 2342 GWh.



Source: Invoices (not weather corrected), BT Energy management system

Includes: BT plc, BT Northern Ireland

Excludes: BT Tenants

Heating energy converted to electricity equivalent for comparison

## Energy efficiency

Reducing energy use is an important part of our carbon reduction strategy, and enables us to reduce bottom line costs. It also helps us meet our obligations under the UK Government's Carbon Reduction Commitment Energy Efficiency Scheme.

Reducing energy consumption in our buildings, networks and data centres is business as usual at BT. We do this by increasing energy efficiency, encouraging employees to save energy, improving existing equipment and investing in new technology.

We closely monitor energy consumption from electricity, gas and fuel oil in all our UK buildings and operations. Using a network of electricity and gas smart-meter systems, we collect and analyse data at half-hourly intervals from over 10,000 meters in the UK. Over 9,800 electricity sub-meters allow us to accurately monitor electricity consumption where it is used, so we can identify waste and give our operations detailed feedback about their usage.

## Energy trends

---

Our continued investment in energy reduction has enabled BT to reduce global energy consumption on an absolute basis while our business continues to grow.

In the 2011 financial year, we continued to roll out super-fast broadband and ADSL2+ in the UK, and increased our network and data centre capacity to support the resulting increase in traffic. Despite these activities, global energy use reduced by 2.5%, due to energy efficiency measures and investment in energy reductions in our networks, data centres and offices.

Our use of gas and fuel oil for heating and generation in the UK has decreased by 4.5% since 2010, despite an unusually cold winter.



We maintain electricity generators to provide backup power and prevent service interruptions should the grid electricity supply fail. During 2011, we generated 2.3 GWh of our own electricity, mainly when running our generators during routine maintenance.

## BT's energy reduction & investment programme

---

In 2011, we saved more than £18m per annum of energy through our energy savings programme. Through this programme, we find innovative ways to reduce energy use, for example by switching off old network equipment, using server virtualisation, reducing office space, and auditing building energy use to identify areas for action.

The programme has four main pillars, which span our networks, data- centres, and buildings estate. These are:

- Smart energy control
- Equipment replacement
- Infrastructure rationalisation
- Employee awareness.

### Smart energy control

---

We saved £6.2m per annum of energy through smart control initiatives during 2011. The majority of BT's electricity consumption is now monitored through smart meters giving us real time data on how much energy is being consumed and enabling us to identify and resolve any energy waste.

Key achievements this year include:

- Delivering BEMS (building energy management systems) to 319 sites which will reduce energy cost by £3.7m per annum. BT will continue to deliver the solution to an additional 1000 sites in the 2012 financial year.
- We installed smart metering for gas to 650 sites and improved boiler operation with over £700k per annum energy savings.

### Energy efficient equipment replacement

---

By replacing energy intensive equipment such as fans, motors and lighting with more energy efficient technology such as variable speed drives and low energy lighting, we saved £3.5m per annum in energy.

Key achievements this year include:

- Installing energy efficient fans and variable speed drives with savings of £2.4m per annum

### Infrastructure rationalisation

---

Through de-powering legacy systems and network equipment, optimising server utilisation and rationalising our office estate we have saved £8.7m per annum in energy during 2011.

Key achievements this year include:

- By removing underutilised network equipment we saved £3.1m per annum
- By rationalising our buildings estate we saved £2.7m per annum in energy costs

### Employee awareness

---

This year we ran a series of three month "sprints" to engage employees to reduce energy consumption as part of the build up to London 2012. We now have 92 energy champions in place in key buildings across BT. As part of our annual employee survey, 54% of employees agreed to the question – "I have taken action over the last three months to reduce BT's energy consumption".

# Renewable energy

Renewable and low-carbon energy are important elements of our strategy for tackling climate change and securing future energy supplies. We look for opportunities to generate renewable energy, and purchase a proportion of our electricity from renewable or low-carbon sources.

## Purchasing renewable energy

---

Nearly all the electricity we use in the UK comes from low-carbon sources. We meet approximately 42% of our electricity needs in the UK by purchasing renewable energy, and have extended this contract until 2014. 56% of our electricity comes from combined heat and power generation. The remaining 2% is from the grid.

In the 2011 financial year, our use of renewable and low-carbon energy in the UK avoided approximately 802,000 tonnes of carbon dioxide emissions.

We also have low-carbon energy contracts in Germany, Italy, and Belgium.

## Generating renewable energy

---

Supplies of renewable energy in most countries, including the UK, are limited. Generating our own renewable energy gives us the opportunity to secure a proportion of our electricity needs in the long term.

## Wind for Change

---

As a largest electricity user, BT is seeking to secure supplies of renewable energy by building wind farms. Our Wind for Change programme aims to generate up to 25% of our electricity consumption by 2016.

We have identified more than 30 prospective sites, and have submitted planning applications at 8 of them. Two sites were not successful, but the remaining 6 have the potential to generate almost 47MW of power. Our Red Gap wind farm in Teeside, which already has planning permission, will produce over 1% of our UK electricity needs, and we expect to start producing energy in 2012.

See our [Wind for Change](#) website for more information.

## On-site renewables

---

Generating electricity on site, where it is used, is the most effective way of securing supplies and reducing carbon emissions.

Our site in El Segundo (see case study), California, has installed photovoltaic (PV) solar panels, some of which move with the sun to maximise their output. The panels are designed to produce around 1,000 MWh of energy each year.

Our Colombo House site in London generates renewable energy using a 15kW PV solar array. We are using the data to assess the potential of installing PV solar power at other BT buildings.

# Fuel storage

It is important to carefully store fuels for vehicles, heating and standby generation, as leakage can cause harmful pollution to land and water sources. We monitor the condition of our fuel storage tanks using alarm systems, testing and inspections.

## Stock management

During the 2011 financial year (2011), we pressure tested and inspected 828 external fuel tanks. We decommissioned 148 underground network storage tanks at 141 sites and replaced them with new banded tanks, which have a secondary tank surrounding the main tank to contain any leaks. A total of 255 new internal tanks at 241 sites have been installed during the same period. The remaining tank decommissions are planned for completion in the near future.

Our facilities management contractor, Monteray, inspected an additional 482 heating tanks and none required replacing. An additional 3 sites have been upgraded to gas heating systems and the tanks have been decommissioned.

Following an assessment of the fuel stored in all bulk oil storage tanks at our UK sites, in January 2010 we began removing low-grade fuels with high sulphur content. These cause greater environmental pollution than low-sulphur fuels. By 22 Feb 2011, we had replaced this fuel in 1,013 tanks. A further 1,800 tanks have had the fuel replaced under a separate project. We plan to continue the initiative in 2012 and aim to replenish with low-sulphur fuel eventually.

## Biodiesel

In October 2010, BT's Procurement team actively worked with our external suppliers and internal stakeholders in response to the announcement of changes in gas oil fuel regulations. The changes resulted in a further reduction of sulphur content and the inclusion of up to 7% of bio diesel in all fuel that is purchased. As a result, BT is implementing improved fuel storage maintenance arrangements in line with industry recommendations.

## Incident reporting

Even with good controls, spills happen. We investigate any incidents promptly to reduce their severity and use the lessons learned to prevent recurrence. BT classifies environmental incidents as:

- Serious – where the spill has entered, or is likely to enter, either the drainage system or topsoil
- Significant – where the spill covers a wide area but is confined to a hard standing area only and there is no evidence of entry into the drainage system or topsoil
- Minor – where a minor spill is contained within a very small area.

A specialist contractor cleans up significant and serious incidents. We inform the Environment Agency (the regulator for England and Wales) or the Scottish Environment Protection Agency of all serious incidents.

## Incidents

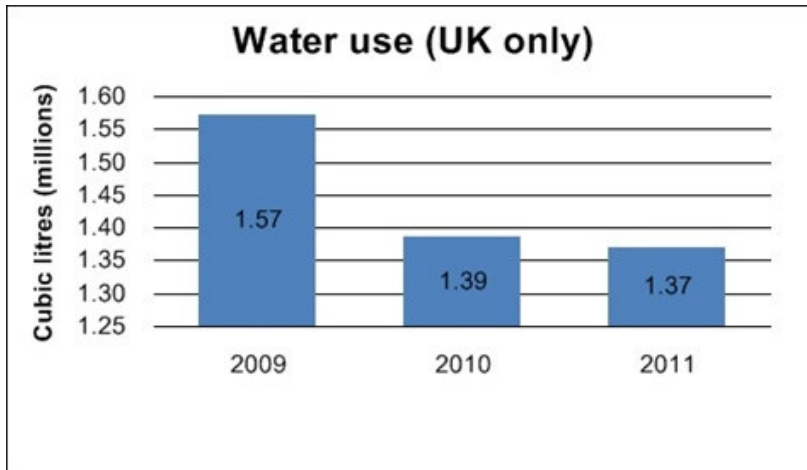
In 2011 30 fuel-related incidents were reported within BT, up from eight in 2010. There were 3 classed as serious, 5 as significant, and 22 as minor.

## Water

We do not use large quantities of water. Our consumption is mainly confined to catering, toilet facilities and vehicle wash stations. The majority of our sites have water meters which enable us to monitor and report on usage.

In the financial year 2011, we achieved water efficiency improvements for the ninth consecutive year, decreasing water use by 1%, from 1.39 million cubic metres to 1.37 million cubic metres in the UK.

The savings were achieved by reducing our office space through our building rationalisation programme and installing water management systems by working with external agencies to ensure leaks are identified and are repaired quickly.

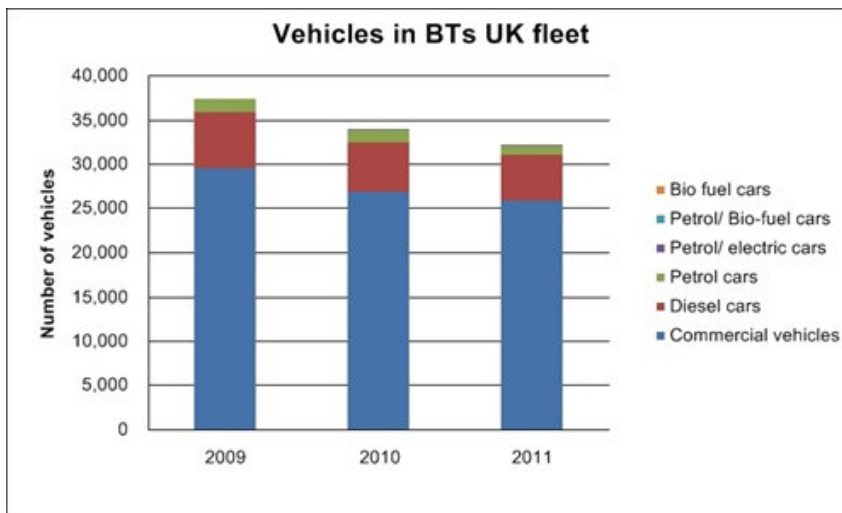


## Travel and transport

In the UK, our subsidiary BT Fleet Limited runs a fleet of 25,803 commercial vehicles and 6,398 company cars.

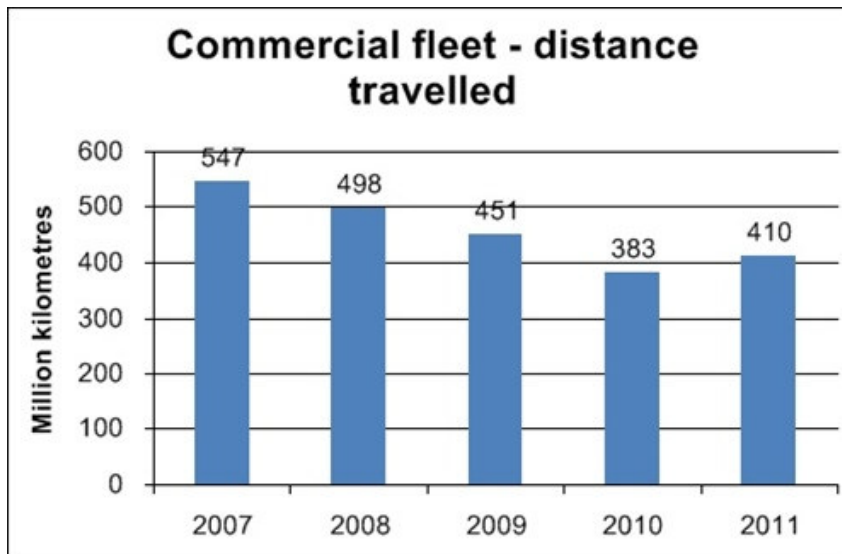
We aim to reduce the climate impact of our fleet by purchasing efficient vehicles, managing them well and encouraging our drivers to adopt fuel-efficient driving techniques.

We also replace older vehicles when newer technologies and emission standards become available, ensuring our fleet is efficient, reliable and requires less maintenance.



Source: BT's Vehicle Database

Our commercial fleet travelled 27 million more kilometres in 2011 compared with the year before, increasing fuel use by 1.3%. This was due to increased demand for Openreach services coupled with the integration of BT Payphones business into Openreach.



Our company car policy supports the UK Government's emissions-based company car taxation initiative, which offers:

- More money for employees who turn down a company car
- Tax benefits for employees who choose lower-emission cars
- Information about choosing lower-emission cars.

We have been recording the average carbon dioxide (CO<sub>2</sub>) emissions of the company cars our employees choose since 2000. The average emissions of vehicles chosen this year were 144 grams of CO<sub>2</sub> per kilometre, compared with 209 grams in 2000 - a 31% reduction. This is partly because more employees choose diesel cars, which are more fuel efficient.

## Key initiatives

In 2011, our efforts to reduce the environmental impacts of our fleet included:

- Beginning trials of four all-electric vans in and
- Introducing a maximum speed of 62 miles per hour on new vans (Gross Vehicle Weight 2000 kgs to 3501 kgs) ordered from September 2010. The previous limit was 70mph
- Continuing to promote fuel saving tips to all drivers

Our efforts won the [Sustainable Transport Project](#) award at edie.net's Awards for Environmental Excellence. The judges commended our 'outstanding results' and the range and scale of our activities. They also recognised the sound commercial basis of our strategy.

## Employee travel

We encourage our employees to use low carbon travel and to use BT's conferencing facilities wherever possible to avoid travel altogether. All business flights are booked via our travel management company and all air travel is pre-authorised.

Our conferencing services and flexible working policies have helped change our people's work styles. Home and remote working is standard business practice for many BT employees which is helping to reduce the environmental impacts of employee commuting.

There are over 9,400 BT people in the UK (12.3% who are home based workers). We estimate that each homeworker avoids an average of 1.4 tonnes of CO<sub>2</sub> emissions per annum. Read more in the [flexible working](#) section.

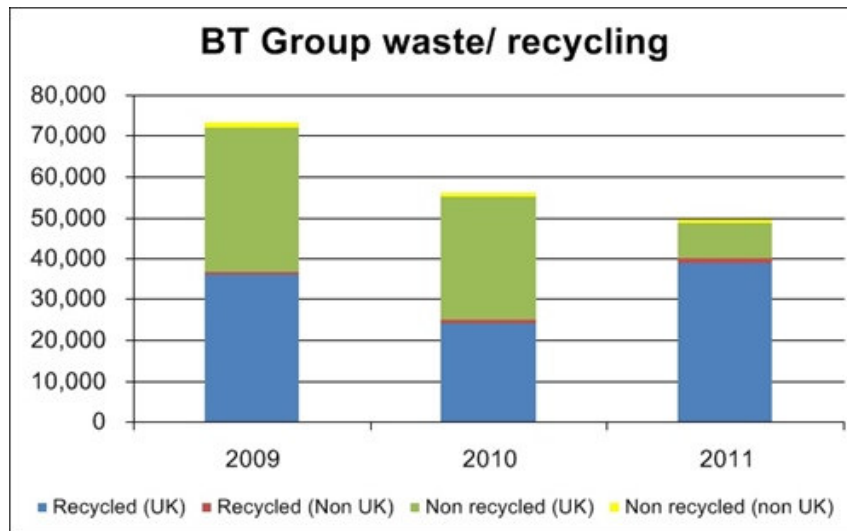
# Waste

Waste is a key environmental issue for BT. We try hard to avoid creating waste, and when we do, we reuse or recycle it where possible. As a last resort we send it to landfill.

Our waste ranges from used paper and general office waste to decommissioned network equipment, cabling and telegraph poles. Our UK business creates around 96% of our waste.

Most of our waste is handled by contractors, with whom we work in partnership to ensure effective waste management that meets all legal requirements as a minimum.

We have reduced the total tonnage of waste not recycled by 69% for last year and increase recycling by 37%. The last part of this improvement was the result of switching our UK waste management contract to a specialist recycling company and introduction of in building recycling scheme at all main office vastly increasing the amount of waste sent to specialist depots for recycling.



Our full waste related information can be found in the [data section](#) of this report.

# Hazardous waste

Some types of waste can harm people and the environment if not carefully treated and properly disposed of, and the management of these wastes is governed by strict regulation.

To comply with these regulations, each year we register over 2,000 sites in England and Wales with the Environment Agency. These sites are mostly telephone exchanges, and each produce around 500kg of hazardous waste annually – a fraction of our total waste.

Hazardous waste produced at these sites includes:

- Fluorescent lighting tubes
- Refrigerants
- Batteries
- Clinical waste

- Oil
- Vehicle waste
- Gas cylinders.

We have rigorous processes to ensure our waste management contractors handle our hazardous waste appropriately. These contractors are externally audited under our Duty of Care obligation.

## Recycling

We dispose of most of our general waste through material recovery facilities (MRFs) or waste transfer stations (WTS), which separate out recyclable materials like paper, cans, cardboard, plastic and paper cups. These recyclables are sent for reprocessing, while non-recyclable materials go to landfill.

We run schemes to collect recyclable materials at our sites. As well as benefiting the environment, this reduces landfill costs and, in many cases, generates revenue, as we are paid for the materials collected.

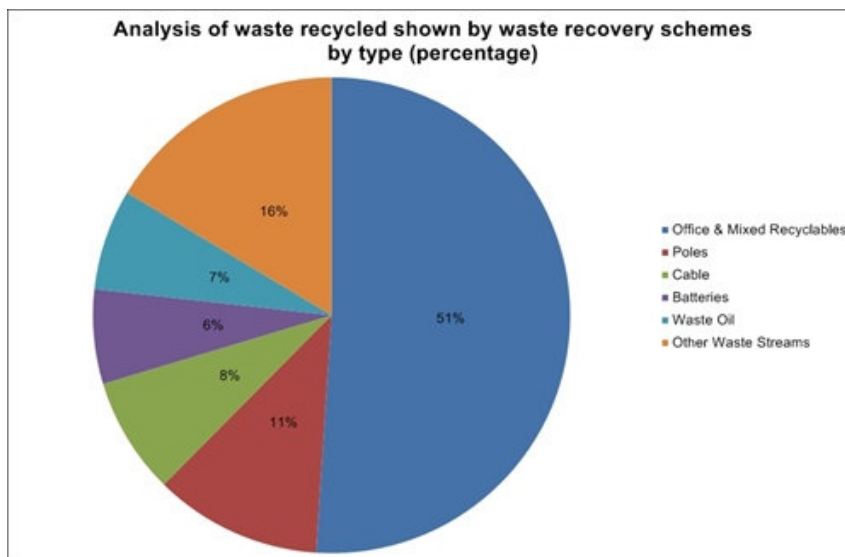
During 2011 we:

- Awarded our recycling waste management contract to Greenstar UK (now part of Biffa), in conjunction with our facilities management provider, Monterey. This is vastly increasing the amount of our waste sent to specialist recycling depots.
- Introduced an onsite recycling scheme at over 200 of our offices, which collects paper, cardboard, plastic cups and bottles, aluminium cans, newspapers, magazines and cardboard coffee cups.
- Arranged for earth and rubble generated by the installation of telegraph poles to be recycled. This waste was previously sent to landfill – nearly 6,000 tonnes in 2010.

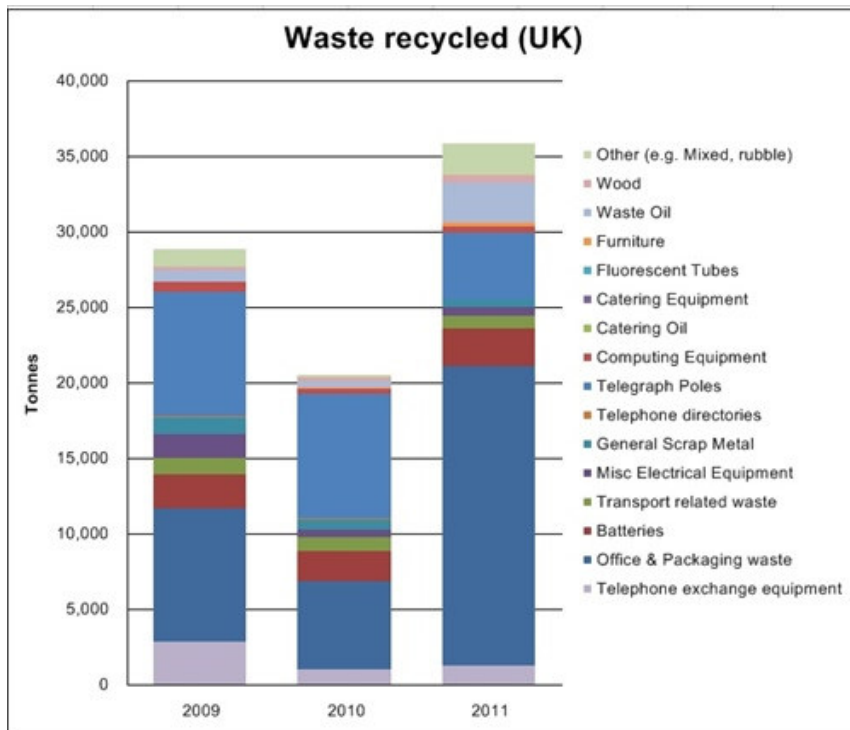
## Performance

In 2011, BT Group recycled 39,944 tonnes or 81% of our total waste, an improvement from 44% in the previous year. This is because we increased the tonnage sent to MRFs and WTSs from 1,184 to 14,369 tonnes in the UK.

Chart showing breakdown of the types of waste recycled.



Waste recycled (tonnes) in the UK



In the UK:

- All our major sites have dedicated paper recycling facilities. In 2011, we recycled 685 tonnes of paper, a 30% increase from the previous year.
- The amount of scrap metal recovered declined by 24% from 2010, due to a reduction in the equipment programme work in telephone exchanges.
- As part of a national programme, we recovered nearly 56,000 tonnes of redundant cable from our network. This is excluded from our recycling figures as it is part of a special project rather than business as usual.

There are full details of the types of waste we create and recycle in our [Data section](#) which provides five years of data.

## Waste management

We have rigorous processes for effectively managing the production and disposal of waste. This forms a vital part of retaining our ISO 14001 certification.

We have three categories of waste:

- Category 1 – does not present a danger of environmental pollution, such as paper
- Category 2 – not toxic or hazardous in unmodified form, but which has the potential to become so if not treated properly on disposal, such as cable
- Category 3 – inherently toxic or hazardous and requires the most careful handling at all stages of the disposal process, such as diesel oil. See hazardous waste for more details.

In the 2011 financial year, BT Group produced 49,590 tonnes of waste, a reduction of over 11% on 2010. Of this, 9,646 tonnes went to landfill, 69% less than in 2010. This reduction is the result of rationalising waste collections and improving access to recycling facilities and schemes in over 200 major office buildings. To support our programme, our facilities management provider, Monteray, switched its waste management contract to a recycling company, Greenstar UK (part of Biffa). See the recycling section for more details.



We have a named person responsible for coordinating waste management processes to ensure high standards across the company. This person chairs an internal waste forum, made up of the people directly responsible for our different waste streams. The forum's role is to:

- Consider new ideas for managing waste
- Set and monitor waste targets
- Review contractors' environmental performance
- Ensure we comply with all waste legislation
- Manage our packaging obligations
- Promote environmental initiatives and awareness.

## Carbon emissions

As a major energy user and ICT services provider, we must both tackle our own energy use and carbon emissions and help our customers reduce theirs. This helps to reduce costs, identify new market opportunities and differentiate our business from our competitors.

Our strategic priorities in this area are to:

- Reducing our own footprint
- Influencing our customers and suppliers to encourage them to reduce their footprints. Read more in the [Low Carbon Economy](#) and [Supply chain sections](#).
- Engaging with our employees to help reduce their personal footprints. Read more in our [employee awareness](#) section.

## Our direct impacts

---

We have reported our carbon emissions since 1992 and follow the Climate Disclosure Standards Board (CDSB) framework which builds on the World Resource Institute / World Business Council for Sustainable Development Greenhouse Gas Protocol (GHGP). We also report our emissions for the Carbon Disclosure Project, EU Emissions Trading Scheme and under the UK Government's CRC Energy Efficiency Scheme (formerly known as the Carbon Reduction Commitment).

For full transparency, our carbon accounts this year show our gross footprint based on the 'grid average' carbon content of purchased electricity and our net footprint which takes account of the carbon savings associated with the purchase of low carbon electricity.

At the core of our approach are the following principles:-

- To report consistently internationally
- To provide as true a picture of our emissions as possible
- To handle all emissions (or lack of them) in a similar way
- To use our reporting to drive behaviour that helps to deliver a low carbon economy.

You can download our full 2011 carbon emissions statement [here](#).

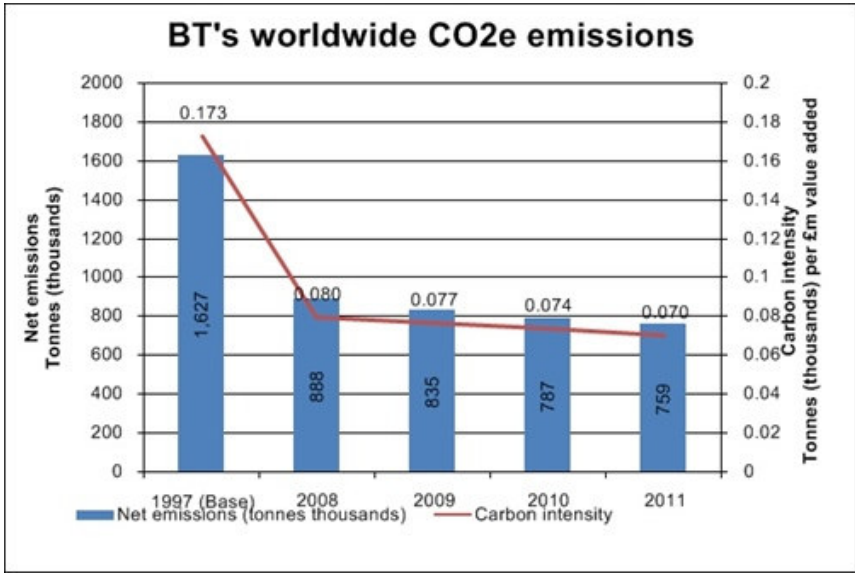
More details on our approach to reporting can be found [here](#).

## Our performance

---

**Target (Key Performance Indicator) - By December 2020, BT Group will reduce its CO<sub>2</sub>e emission intensity by 80% against 1997 levels (target set in 2008).**

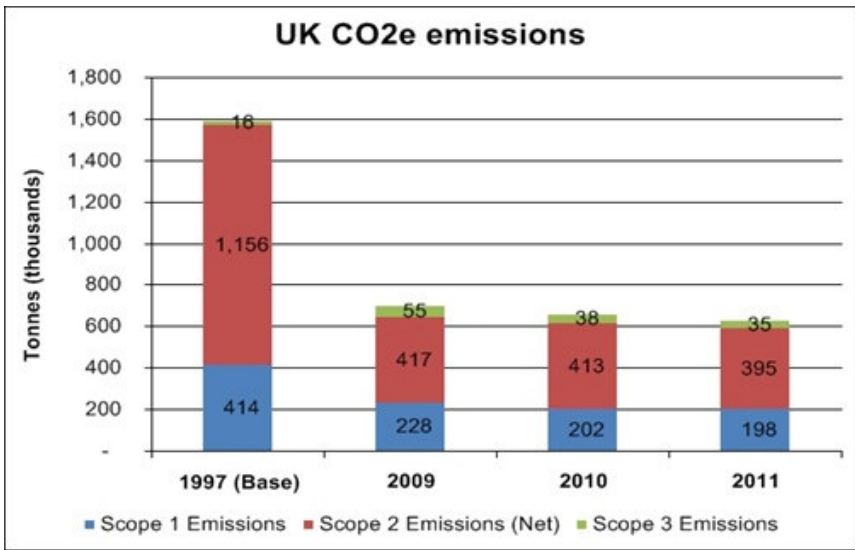
**2011 update:** in 1997 our CO<sub>2</sub>e emissions intensity was 0.173 thousand tonnes CO<sub>2</sub>e per £ million value added (= EBITDA + employee costs), our 2011 intensity is 0.070 a 59% reduction from our 1997 base.



More details on the rationale behind normalising carbon emission by value added can be found in this paper from Dr. Chris Tuppen, BT's former chief sustainability officer, [Climate Stabilisation Intensity targets](#) which offers a model that links a company's financial and environmental performance to the necessary carbon reductions the planet must make

**Target - BT will reduce its UK carbon dioxide emissions (measured in tonnes CO<sub>2</sub> equivalent) to 80% below 1997 levels**

**2011 update:** In 1997 our UK CO<sub>2</sub>e emissions were 1,585 thousand tonnes and in 2011 628 thousand tonnes – on track with a 60% reduction from base. This includes the purchase of low and zero carbon electricity.



## Supporting the low-carbon economy

Reducing global greenhouse gas emissions requires a transformation in the way business and society operates, to

create a low-carbon economy. The information and communications technology (ICT) industry will play a key role in this transition, and has the potential to reduce global carbon dioxide emissions by 15% by 2020 ([www.smart2020.org](http://www.smart2020.org)).

ICT will enable other sectors to become more efficient, by streamlining their processes and providing transparent data for managing energy use. Incentives for businesses to take advantage of ICT are growing, as government initiatives such as the UK [Carbon Reduction Commitment Energy Efficiency Scheme](#) require larger companies to monitor and report their energy use and purchase annual energy allowances based on this information.

BT already offers products and services that help customers to reduce their carbon footprint. Services which help reduce business travel, such as video and audioconferencing, are well-established parts of our portfolio. We are reducing the energy consumption of the ICT products we provide, including the Home Hub wireless network router, the BT Vision digital TV box, and our telephones. See the [product stewardship](#) section for more details.

We are managing the carbon footprint of our direct operations, to reduce our impact and assure our customers that doing business with BT will help reduce emissions in their supply chain. See [our direct impacts](#) for more details.

Our greatest opportunity to contribute to the low-carbon economy lies in using ICT to create smarter, greener businesses and communities. Read more about the [‘smart’ digital technologies](#) we are working with others to develop.

## Helping customers live and work more sustainably

Super-fast broadband has great potential to help transform the UK to a low-carbon economy, by enabling new ways of living and working. BT’s Innovate and Design team is testing ‘cool broadband’, a new approach to energy management that could significantly reduce the carbon footprint of broadband lines.

Cool broadband means configuring our 21<sup>st</sup> Century Network ADSL2plus lines to be ‘always available’ rather than ‘always fully on’. Lines automatically switch to a low-power mode when user or network traffic is low and return to full speed when traffic picks up. This reduces energy consumption (by around 30% per line) and costs, without affecting service.

There are a number of technical challenges to overcome, but this technique could play a key role in helping us further reduce the environmental impacts of broadband products and services.

### Our Sustainability Practice for business customers

Our Sustainability Practice has created a portfolio of products and services to help business customers “Build a Sustainable Organisation”, cutting costs, power use and carbon dioxide (CO<sub>2</sub>) emissions. The [portfolio](#) includes:

- Video and audioconferencing services that enable employees to meet without travelling, cutting costs and CO<sub>2</sub> emissions
- Our Field Force automation solution, which provides real-time information and work schedules to employees ‘on the road’, helping to reduce journeys and related CO<sub>2</sub> emissions by up to 20%
- Services that make customer ICT more efficient, such as our virtual data centres. These provide efficient, on-demand virtual computing services for customers without the need for them to invest in their own infrastructure, cutting costs, power use and CO<sub>2</sub> emissions
- Flexible working solutions that improve customer service and reduce office space needs. Based on our own experience, customers can avoid up to 1.4 tonnes of CO<sub>2</sub> emissions for every employee who works from home. This [case study](#) on the Smart 2020 website provides details.
- Intelligent buildings and energy management services, which centralise customers’ building services to cut operational costs, improve environmental performance, and provide a more secure and comfortable workplace.

Our Sustainability Practice uses this portfolio to help business and government customers to reduce their CO<sub>2</sub> emissions and other environmental impacts. The Practice currently operates in the UK, Germany, France, Benelux, Spain, Italy and the USA.

During 2011, our consultancy service conducted five carbon impact assessments for customers in the UK, Korea and Benelux. In Spain, we implemented our new Intelligent Energy Management system at a leading retail bank, to help improve data about energy use in its 370 branches. We estimated that the system would reduce electricity use by 20%, and branches where the system was installed achieved actual reductions of up to 35%.

Our Intelligent Buildings service connects utilities such as heating and lighting to a central network, so they can be controlled for optimal performance. Said the head of IT Services at one leading UK university:

*“One of the huge benefits of the network is we can manage it with a small team from anywhere at any time... I have staff who can access the network and perform any kind of maintenance or development work from home and that makes the network so easy to manage.”*

## Sustainable Olympic Games

BT is communications provider and sustainability partner of the London 2012 Olympic and Paralympic Games. Every image from the Games, every sports report, every visit to the London 2012 website and millions of related calls, emails and texts will be delivered over BT communications networks. We are working with the London 2012 Organising Committee to help London host the most sustainable Games ever. We're focusing on two priorities – delivering a sustainable communications technology for the Games and creating lasting social and economic benefits for the host communities. See the [case study](#) for more information.

## Low-carbon solutions in development

We are working in a number of additional areas to develop more services connected with the creation of a low-carbon economy. Here are some brief examples:

- Substation automation – BT is exploring how smart technology can help electricity substations match supply with demand, making them a more efficient part of the overall smart grid
- Electric vehicles – as these become more widely available, better infrastructure is needed to ensure they can be easily recharged and maintained. BT is investigating the feasibility of creating the required communications infrastructure
- Connected homes – BT is investigating how homes of the future might function and the role our services can play in areas such as energy management, security and healthcare. This will enable us to offer improved products and services and better entertainment, while reducing environmental impact.

## Industry collaboration

The design and manufacture of Information and Communication Technology (ICT) equipment is governed by a range of international standards. Developing new and improving existing global standards, for example to incorporate energy efficiency measures, will help reduce the climate impact of the use of ICT worldwide. We work with trade associations, companies and standards organisations to improve global ICT standards and identify new ways for ICT to support the transition to a low-carbon economy.

## European Union Codes of Conduct

BT is a signatory to the European Union Broadband Code of Conduct and Data Centre Code of Conduct, voluntary codes through which signatories agree to power consumption targets for broadband equipment and data centres.

## CBI Climate Change Board

Gavin Patterson, CEO of BT Retail, represents BT on the Confederation of British Industry (CBI) Climate Change Board. The Board is comprised of 17 leaders from the business community who have committed to tackling climate change. They represent key sectors of the UK economy, whose companies globally employ nearly two million people and generate annual revenues of approximately £1,000bn.

## Greenhouse Gas Protocol Initiative

BT contributed to the joint World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSD) initiative to develop a new standard for accounting and reporting product lifecycle greenhouse gas emissions. BT tested this standard; and we are now leading the development of network telecommunications service guidance. This supplement will provide ICT companies with common approaches and methodologies for calculating the carbon footprints of their products and services. For further information go to the GHG [Protocol website](#).

## Global e-Sustainability Initiative (GeSI)

BT is a founding member of [GeSI](#), an industry initiative which, together with the Climate Group, produced the SMART 2020 ([www.smart2020.org](http://www.smart2020.org)) report. This report found that ICT could potentially save 15% of global CO<sub>2</sub> emissions by 2020. In September 2010, GeSI unveiled a framework methodology for evaluating the carbon-reducing potential of new ICT initiatives. This methodology was prepared by the Boston Consulting Group (BCG) on behalf of GeSI, with help from the consultancy WSP Environment and Energy. It aims to provide businesses, policy makers and the ICT industry with a common yardstick for assessing emissions savings arising from ICT solutions. BT contributed a study on the carbon savings of telecommuting compared with office-based working. Download the assessment methodology and related resources on the [GeSI website](#).

## Developing smart technologies

In partnership with industry and local authorities, BT is exploring a number of large-scale applications for 'smart' digital technology, to help create low-carbon communities.

For example, smart meters give domestic and commercial customers real-time information about their gas, electricity and water use so they can see which activities consume the most resources, and manage their usage effectively. When this technology is applied to a whole electricity network, the resulting smart grid enables energy companies to gain greater control over electricity consumption, from generation to distribution, to the control of devices in the home. We are working closely with energy distributors and suppliers to provide solutions that will enable this.

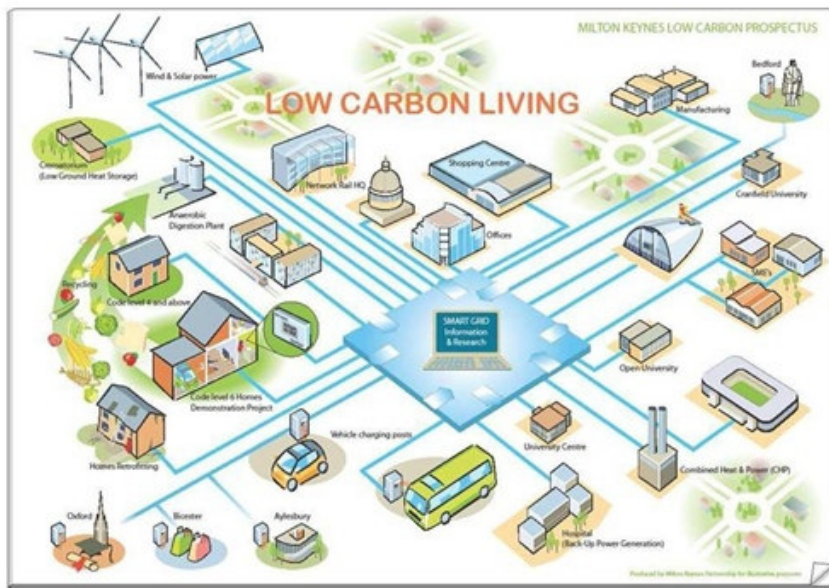
We are part of SmartReach, a consortium with Arqiva and Detica, created to support the government's commitment to bring smart meters to 28 million homes and small businesses in Great Britain by 2020. These will enable commercial and residential customers to monitor and reduce their gas and electricity use and help utility companies improve efficiency in their networks.

With SmartReach, smart meters installed by electricity, gas and water providers would be linked to a new, secure wireless network running on long range radio waves. This has advantages over smart meters that use mobile phone networks, since radio waves can provide nationwide coverage and more dependable reception indoors.

We are also a founding member of Smartgrid Ireland, a network of organisations in Northern Ireland and the Republic of Ireland working to find a solution to supplying smart utility meters in the region. In North America, our Smart Grid systems enable utility providers to implement the secure network infrastructure required to create, monitor and manage a smart grid.

## Smart cities

In the UK, our existing networks make BT ideally placed to help cities become smarter and reduce emissions from workplaces, homes and transport. We can provide wireless and fibre telecommunications, remote sensor and machine-to-machine technologies, 'cloud'-based services, conferencing and web technologies to transform the way people live, work, travel and use services. We can also share our experience of attracting investment and engaging with communities about infrastructure projects.



*This illustration, kindly provided by Milton Keynes Council, provides a view of how a connected, low carbon city looks.*

BT is already partnering with the Milton Keynes Low Carbon Living programme and the Sustainable Glasgow campaign to help them raise awareness of sustainability and encourage local businesses and residents to reduce emissions. We hope this work will provide a model for the development of sustainable cities, which we can roll out with other partners in future.

Councillor Gordon Matheson, leader of Glasgow City Council and chair of Sustainable Glasgow, said:

*“Glasgow is working with partners from the public and private sectors to make our city one of the most liveable and sustainable cities in Europe. We are delighted that BT, a major Glasgow employer, has become a member of the Sustainable Glasgow team. I have no doubt that BT will play a major role in helping to shape a greener and more sustainable city and community for the good of all Glaswegians.”*

## Product stewardship

For BT, product stewardship involves making sure the products we buy, use and sell are safe and have the lowest possible impact on the environment when they are made, used and disposed of. We comply with regulations and legislation as a minimum and include product stewardship in our [environmental management system](#).

Product stewardship is not just good for the environment, it cuts costs by reducing the use of energy and other resources and waste disposal charges. This benefits BT, our suppliers and our customers.

Our approach to product stewardship complements our business priorities from product idea to launch, sales lead to confirmed business, and customer problem to resolution.

A dedicated team coordinates product stewardship, supported by a Product Stewardship Forum which brings together people from across the business and meets quarterly.

The design stage offers the greatest opportunities to improve a product’s environmental credentials. Good design helps manufacturers to use fewer raw materials, especially hazardous substances. Designers also determine how much energy a product will use during its life, and whether it can be easily reused, recycled or safely disposed of at the end of its life. We seek to influence the environmental impact of the products we sell by:

- Advising our technical designers and product managers on, for example, choice of materials and reducing energy consumption.
- Extending end-of-life take back beyond legislative requirements, assuming producer responsibility under the European Union Waste Electrical and Electronic Equipment regulations, and ensuring equipment is

reused and recycled where possible.

- Providing potential customers with details of our compliance with legal obligations and environmental standards, and advising current customers on the responsible product disposal.
- Ensuring that energy, materials and waste are considered in strategic product launches. This is described in more detail in [embedding sustainability](#).

Read about our efforts to design our products and services to make them accessible to as many people as possible, including older people and people with disabilities (see [inclusive design](#)).

## Product reuse and recycling

BT aims to reduce all forms of waste. We seek ways to extend the life of network infrastructure and equipment, and recycle equipment that cannot be reused.

### Reuse and Recycling

When electrical and electronic equipment is no longer needed for its current function, we look for ways to use it in another part of the business. For example, when we rationalise or close our telephone exchanges, redundant equipment is reused in exchanges elsewhere. Any components that cannot be reused are disposed of safely.

Our Global Customer Premises Equipment team works with the companies which supply and maintain equipment to increase reuse and recycling levels. BT-owned equipment used on customers' premises in nineteen European countries is now returned to a recycling facility in the Netherlands, where it is stripped down and the components reused. This saved BT around \$1.8 million in 2011, by avoiding the need to buy new equipment and parts.

We have extended this recycling initiative to the US, and between April 2010 and February 2011 saved \$2 million. We are exploring the feasibility of introducing similar initiatives in Australia and Singapore.

## Carbon footprinting

BT has demonstrated leadership in carrying out carbon footprinting of complex communications technology solutions. Carbon footprinting enables us to identify the components of a solution which are responsible for the highest carbon emissions. Where possible we consider both the 'use-phase' emissions from energy used while the equipment is operational, and the 'embodied' emissions associated with the manufacture, distribution and disposal of equipment. This enables us to understand the full carbon impact of our design decisions.

Using a methodology developed by BT, we have estimated the carbon footprint of the communications services that we are providing to the London 2012 Olympic and Paralympic Games (the Games). We are building on this methodology and also working on developing common global approaches and methodologies for carbon footprinting of ICT services.

### *London 2012 Olympic and Paralympic Games*

---

The London 2012 carbon footprinting methodology excludes embodied emissions associated with assets not owned by the London Organising Committee for the Olympic Games (LOCOG). However, for completeness, BT has considered the relative impact of both use-phase and embodied emissions associated with the following components of BT's communications solution:

- Equipment dedicated to London 2012



- BT people dedicated to the design, delivery and operation of the London 2012 solution
- The contribution of BT's existing shared network services which will carry Games traffic.

Approximately 58% of the emissions are expected to occur during the use-phase, while 28% result from the manufacture, distribution and disposal of equipment. It is important to note that 'use-phase' refers to the entire period during which the equipment is live, including the run-up to the Games – not just the period of the Games themselves. The remaining 15% of emissions are associated with the BT people involved in designing and delivering the communications services for the Games.

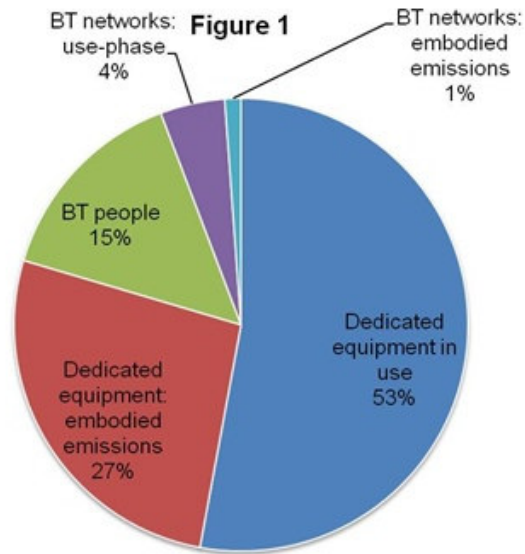


Figure 1: Breakdown of CO<sub>2</sub>e emissions associated with BT's London 2012 communications services.

The carbon footprint of BT's London 2012 communications solution is estimated to be less than 5% of the total LOCOG carbon footprint of 438,000 tonnes CO<sub>2</sub>e.

## Carbon abatement

---

We have evolved our carbon footprinting methodology to include consideration of the enabling (abatement) potential of ICT solutions. In doing so, we estimate the carbon dioxide equivalent (CO<sub>2</sub>e) emissions of our ICT solution and, if applicable, those of the system it will replace, to demonstrate the net benefit of our service.

We have used this methodology in calculating the carbon footprint associated with our TelePresence managed videoconferencing service. Our analysis demonstrated that TelePresence, when deployed on a global basis by a large multinational company, can have a significant impact on carbon emissions. The service was deployed at multiple locations across 18 countries and resulted in an estimated 89% net reduction in carbon emissions from the business as usual scenario in which employees typically flew to attend face-to-face meetings. The TelePresence system was used for an average of 2.3 hours per working day, so greater usage to replace more face-to-face meetings has the potential to reduce carbon emissions further.



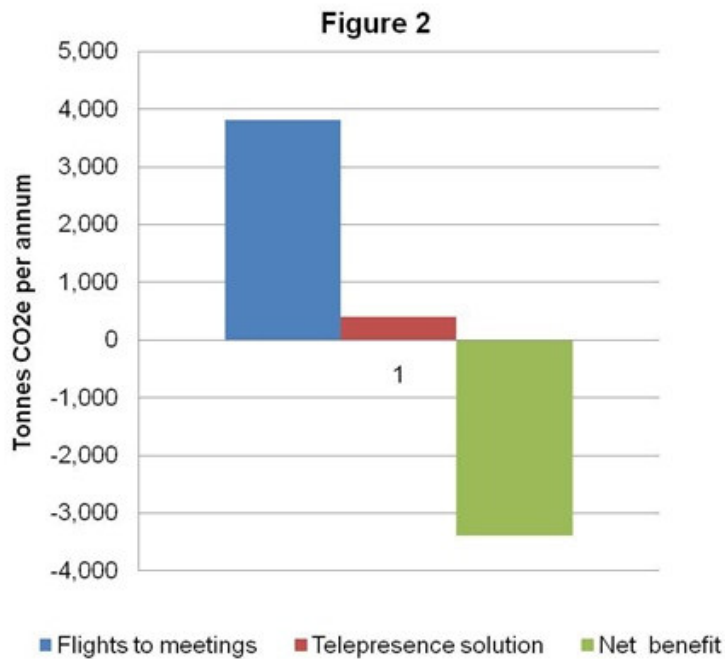


Figure 2: Net benefit (tonnes of CO<sub>2</sub>e per annum) resulting from deployment of a global Telepresence solution

### *Other carbon footprinting initiatives*

We have done further research into how to estimate the carbon emissions associated with our shared network services and platforms and measured the carbon footprints of some of our Broadband and Ethernet products. In addition, we are also exploring how we can avoid using power at times of peak national demand which could provide a net carbon reduction for the UK as a whole.

BT contributed to the joint World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSD) Greenhouse Gas Protocol initiative to develop a new standard for accounting and reporting product lifecycle greenhouse gas emissions. We continue to work with WRI and WBCSD to develop a supplement to provide ICT companies with common approaches and methodologies for calculating the carbon footprints of ICT products and services. See [supporting the low-carbon economy](#) for more details.

## Environmental legislation

We are affected by a number of European Union directives and regulations designed to reduce the environmental impacts of electrical and electronic equipment (EEE). These include:

- The Waste Electrical and Electronic Equipment (WEEE) directive
- The Restriction of the use of Certain Hazardous Substances (RoHS) directive
- Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation
- Batteries and Accumulators and Waste Batteries and Accumulators directive
- Eco-Design of Energy related Products (ErP).

We monitor and manage these legislative risks through the Product Stewardship Forum, which brings together people from across the business and meets quarterly. The forum reviews and reports on product-related

environmental legal risks, raises awareness of product stewardship issues among our employees, and monitors and improves our product stewardship processes.

We have comprehensive processes for managing and minimising risks from product-related environmental legislation:

- We make sure our buyers and product managers are aware of relevant legislation and regulations
- We train all our buyers in product stewardship, and offer computer-based product stewardship training for product managers
- We communicate regularly on product stewardship through our Portfolio Community, which all product managers belong to
- We provide our Product Stewardship Generic Standard 19 (GS19) to potential suppliers during our tender process ([www.selling2bt.bt.com](http://www.selling2bt.bt.com)). This has been updated to include questions about REACH and ErP compliance
- GS19 also includes a blacklist of banned materials and a grey list of materials giving cause for concern, and suppliers must confirm whether they use these substances. We continue to update the grey list to include substances on the REACH candidate list
- We have revised BT Retail's core specification for environmental requirements for products in the EU, to require that all bromine flame retardants and other substances of very high concern should be avoided and that suppliers commit to meeting ErP measures, where appropriate
- For the BT Retail products we already have supply contracts for, we have amended our processes to require suppliers to inform us if they intend to begin using substances of very high concern. We will reject these requests unless no acceptable alternatives are available.
- We continue to monitor reviews of EU legislation, such as the revision of the RoHS directive currently underway, and any implications for our products.

More information on our approach to Supply Chain standards can be found in the [Supply Chain](#) section.

## Informing regulation

We work with industry bodies such as the UK [Industry Council for Electronic Equipment Recycling \(ICER\)](#) and [the Information Technology, Telecommunications and Electronics Industries Association \(INTELLECT\)](#) to monitor and inform the development of new and existing regulation.

## Product design

We aim to demonstrate good product stewardship from the outset by considering environmental and social factors when designing our products. The [Embedding sustainability](#) page describes how we are making sure our product designers consider these factors.

Here we describe some examples of products and services designed to have reduced environmental impacts. We have redesigned products including our Home Hub, Vision box and home phones to use less power when in use and in standby mode, and to reduce the materials used to produce them.

### BT Home Hub

Using our [eight-point sustainability checklist](#), we designed the third generation of our Home Hub wireless internet router to be smaller and more efficient, reducing both materials and energy use.

The smaller Hub 3 features new power-saving functionality which automatically adjusts to the minimum power required to operate. This makes it 35% more energy efficient than its predecessor based on average



usage, saving 45kg of carbon dioxide over the product lifecycle.

In addition, we refurbished over 43,500 of the previous version of the Home Hub in 2011, extending their useful life.

## BT Vision+ box

We launched the first BT Vision+ digital TV box in 2007. In 2009, we introduced software updates that improve the box's energy efficiency, which we can apply to boxes in customers' homes without them experiencing any disruption. These updates shaved over 6 watts per hour off the box's energy use during standby.

At the end of 2009, we launched the second generation Vision+ box, redesigned to use 30% less energy than its predecessor based on typical daily usage of 4.1 hours, plus 19.9 hours in standby mode per day.



## Cordless phones

All our cordless home phones are now equipped with a switch-mode power supply, which is more energy efficient than older power units. This technology has increased energy efficiency in our cordless phone portfolio by approximately 60%. The new phones will save 367,000 tonnes of carbon dioxide during their lifetime.



# Thank you

---

for reading what we have to say – now we want to listen to you. Email us at [yourviews@bt.com](mailto:yourviews@bt.com) and tell us what you think of this review and sustainability at BT.

If you'd like more details about our corporate responsibility and sustainability activities and performance please visit our website where you can:

- Search our full sustainability report
- Download our free educational resources
- Check out our latest information
- Join in on our blogs

all at [www.bt.com/betterfuture](http://www.bt.com/betterfuture)



BT Group plc

Registered office: 81 Newgate Street, London EC1A 7AJ.  
Registered in England and Wales No. 4190816. Produced by BT Group.