

Greenpeace UK environmental performance in 2010

This is a report on the environmental performance of Greenpeace UK from January to December 2010. It aims to show the impact our organisation has on the environment, how we try to minimise it, and what we are doing to improve.

Given the urgency of climate change, we are currently prioritising our efforts around reducing our CO₂ emissions. In 2009 we set the following targets for reducing our CO₂ emissions relative to a 2009 baseline:

1. Reduce our total CO₂ emissions from all activity by 10% in 2010
2. Reduce our total CO₂ emissions by 42% by 2020 through year on year reductions

In the sections that follow, you will find information about our CO₂ performance in 2010 and our plans for 2011¹. There is also a short section on other aspects of our environmental performance.

Highlights

- In 2010, Greenpeace UK was directly responsible for 333 tonnes of CO₂ emissions, a 6.4% increase on 2009;
- We made significant improvements to our building, but most of them very late in the year. That, and the cold weather conditions in 2010 mean the results of our hard work will only become evident in 2011 emission figures;
- We found it more challenging than we expected to identify knowledgeable companies to work with on our heating and electrical projects;
- In future years we will adjust heating-related CO₂ targets to take account of weather conditions;
- We expect travel-related CO₂ emissions to grow in 2011, due to changes in our role in the global Greenpeace organisation, and increases in fundraising activity.

¹ **A note on scope:** Greenpeace UK directly employs 93 staff, all based at our office in London. Our office is also home to 22 staff from Greenpeace International. For the purposes of our CO₂ reporting all electricity, gas and all paper used in our office by these international staff is included in our figures, but their travel and external printing consumption is excluded. Instead, it is recorded and reported on by Greenpeace International in their annual CO₂ figures. This year, for the first time, Greenpeace International will produce consolidated CO₂ figures for all Greenpeace operations. In keeping with other Greenpeace offices throughout the world, our calculations of CO₂ emissions are based on Defra / DECC reporting guidelines.

What we achieved in 2010

Overall results

In 2009 we introduced monitoring and reporting systems for electricity, gas, travel and paper related CO₂ emissions. We used our 2009 figures as a baseline for the introduction of CO₂ budgeting in 2010, with CO₂ budgets mirroring our financial budgets.

In 2010, Greenpeace UK was directly responsible for 333 tonnes of CO₂ emissions. These were broken down as follows, with 2009 figures for comparison:

(kgCO ₂)	2010 actual	2009 actual	% change
Paper	73,550	87,000	-15.5%
Energy: gas	56,350	54,000	4.4%
Energy: electricity	83,121	67,000	24.1%
Travel: air	36,144	25,900	39.6%
Travel: surface	83,428	78,700	6.0%
Total	332,593	312,600	6.4%

These results are disappointing for us given our ambition for a 10% reduction. There are a variety of reasons why our significant investment of time and effort this year hasn't paid immediate dividends:

- Unusually cold weather in early and late 2010 affected heating requirements. This accounts for the increased *gas and electricity* consumption, because we decommissioned our Combined Heat and Power plant (which uses some gas to generate electricity) at the start of the year.
- Most of the building and electrical improvements we've made were only completed late in 2010, so their full impact will only be seen in 2011. One of our biggest learning points has been how difficult it is to find environmentally aware advisers and suppliers.
- We're working more and more on high-profile international campaigns, and building capacity for environmental activism in new countries. Unfortunately, some international travel is essential for achieving our goals. We think this is justified by the environmental benefits that our work will help to bring about

Gas consumption

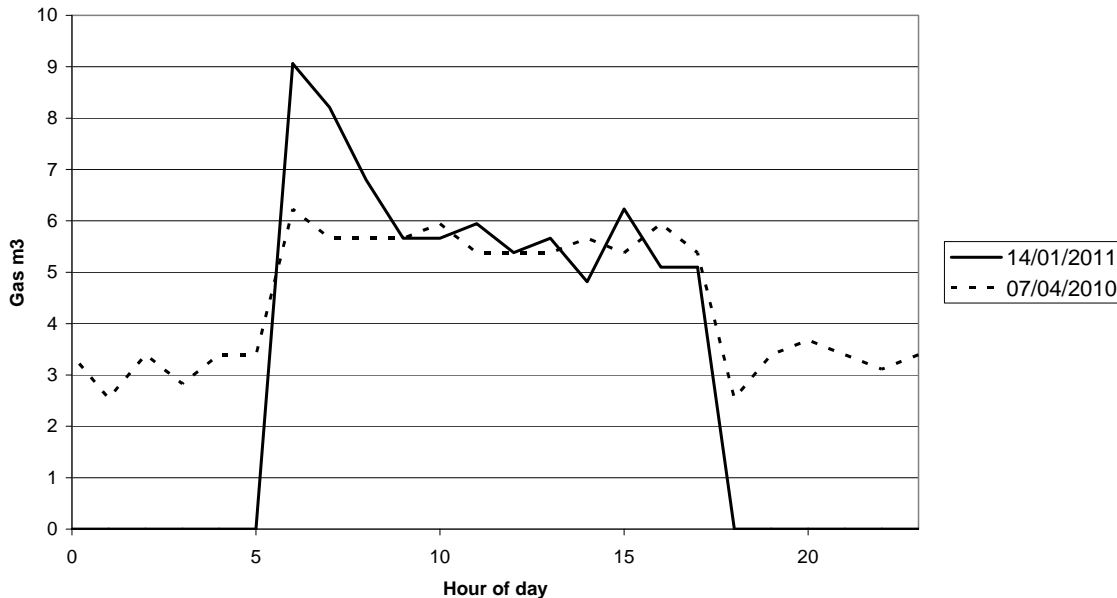
We have made significant progress in the following areas:

- **Improved heating controls.** The highest inefficiencies were found in connection with the heating control system and therefore we worked with a heating control engineer to carry out necessary repairs, replacements and to update the controller settings.
- **Improved building air-tightness.** Draught proofing repairs were carried out on window hinges, closing mechanisms and doors. The air-handling units were switched to a state that improved building air-tightness without affecting the overall heating control system.
- **Decommissioned CHP.** Results from our CHP system have been disappointing since it was installed in 1991. Most of the time our heating demand has simply not been high enough for it work efficiently.
- **Radiator panel removal.** Wooden radiator panels were removed on all floors to improve the air-circulation in the office and therefore increase the efficiency of the heating distribution system.
- **Reduction in office hours.** Our office is now closed on Sundays to reduce energy consumption.

Between them, we estimate that these improvements will reduce our CO2 emissions by about 20 tonnes a year, and save us around £4,000 per year. However, as the majority of these changes were completed very late in 2010, they are not reflected in the 2010 emissions figures and will only have their full impact in 2011 - see the graph below showing daily gas use for heating before and after improvements.

Appendix A explains more about the effects of temperature on our CO2 consumption, and the way we plan to take account of annual weather variations in our future CO2 targets.

Change in weekday gas profile



Electricity consumption

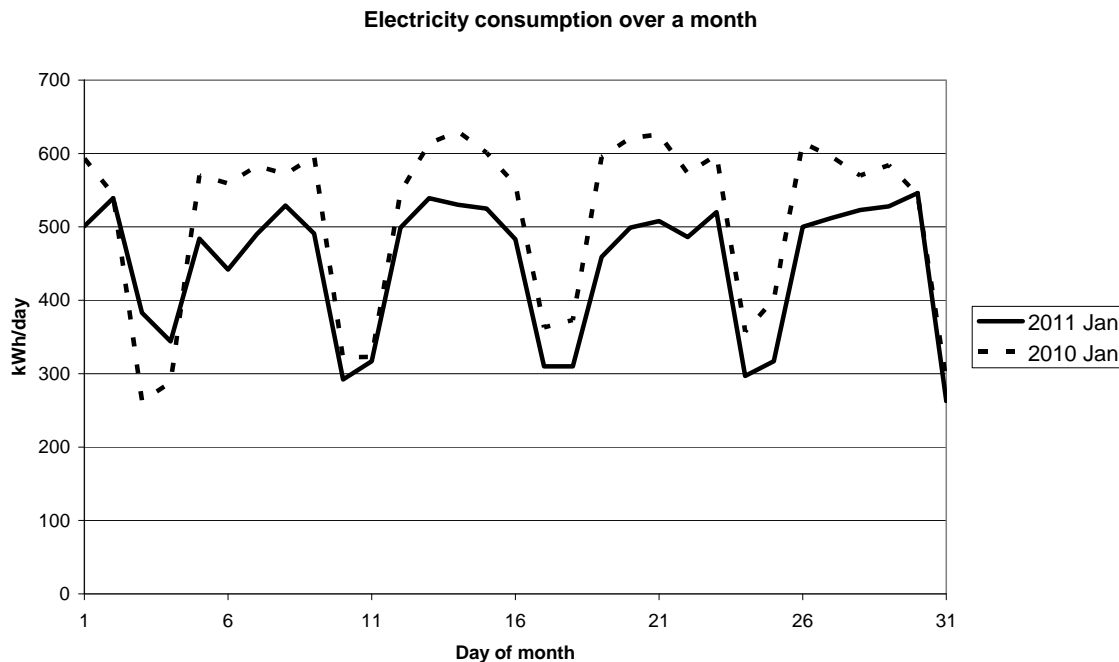
As in previous years, electricity is supplied by Good Energy on a renewable tariff, supplemented by 5.6kW of solar PV arrays. However, for the purposes of our CO₂ reporting, we have based our electricity related emissions in this report on an average Grid Emissions Factor for the whole of the UK.

We have achieved significant improvements in the following areas:

- **Voltage optimization.** To reduce our electricity consumption caused by unregulated voltage, a voltage optimisation system was installed in the external electrics room.
- **Electrical circuit timers.** We found that a significant amount of parasitic power was being drawn during out-of-office hours by switched off workstations (which continue to draw around 14W of energy each) and other equipment on standby. To reduce the parasitic power overnight, the power is being switched off every day between 22:00 and 06:00 to most areas of the building.
- **Improved heating controls.** The heating control system now turns off all plant outside the required heating period to reduce electricity consumption.
- **Virtual IT infrastructure.** In common with many organisations, we currently use a Virtual Server Infrastructure to run our centralised computer systems. By implementing “sleep mode” options, up to 50% of our central servers are

automatically turned off when they are not needed (e.g. overnight and at weekends).

Between them, we estimate that these improvements will reduce our CO2 emissions by about 6 tonnes a year, and save us around £1,300 annually (see graph below). However, we also installed additional IS equipment and new air conditioning in the IT equipment room at the start of 2010, in order to improve security and reliability and to improve our mobile communications. Consequently, we expect the net impact of all of this change will be to simply reduce our electricity consumption at the start of 2011 back to 2009 levels.



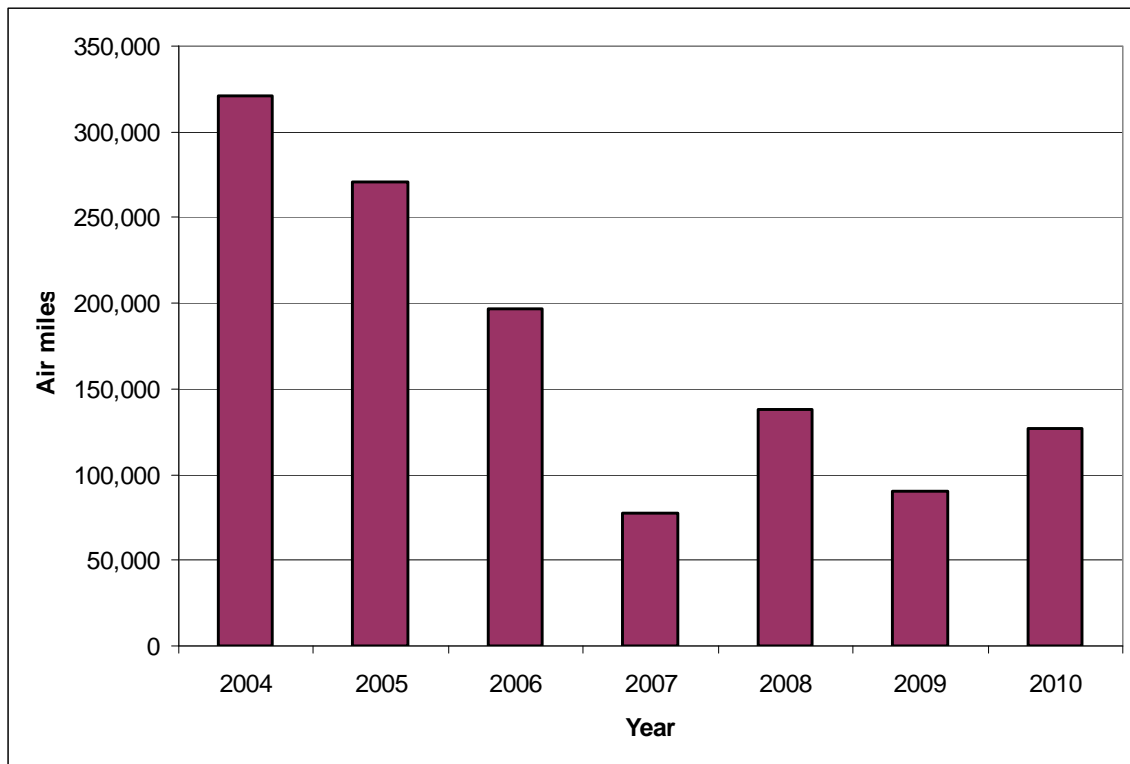
Travel

The key initiative for 2010 was the installation of improved video-conferencing equipment, in co-ordination with other Greenpeace offices around the world. This replaces the old, low-quality equipment originally purchased in 1999.

We continued to enforce our existing transport policies, which require all flights to be personally approved by our Executive Director. For the first time, we also gave teams a notional CO2 budget for travel for 2010, and reported against it throughout the year.

Disappointingly, our travel-related CO2 emissions increased over 2009 levels, as the result of changes to our campaign goals and the role the UK plays in the global Greenpeace organisation. These are explained in more detail in relation to our 2011

travel targets below. Nonetheless, our air travel is still well below levels of four or five years ago (see graph below).



Paper use

The largest single source of paper CO₂ emissions by far is the publication of Connect, which we send to all supporters to keep them in touch with our work. To minimise paper use we have further reduced the size of the magazine, as well as redesigning it to be easier to recycle. We have also reduced the circulation list by about 8%. These changes have resulted in a saving of nearly 4 tonnes of CO₂ per issue (11.4t CO₂ compared to 15.2 tCO₂).

This change came into effect for the last issue of the year, so will have a larger impact in 2011 than it did in 2010.

Our plans for 2011

Overall target

Our overarching aim is to reduce our total emissions by 42% of 2009 levels by 2020. To achieve this starting from 2010 levels requires an annual reduction of 6% year on year. More information about our targets and the work we will be doing to meet them is provided in the sections that follow.

Gas

We have employed BioRegional sustainability consultants to review our heating and ventilation system and to advise on long-term options for energy reduction and on-site renewable energy production. Options we are assessing include solar thermal, server room heat recovery, roof insulation, ground source heat pumps and biomass boilers. Their report is due in April.

(kgCO ₂)	2010 actual	2011 target
Energy: gas	56,350	52,969

More accurately, our target is to improve our heating *efficiency* by 6%. The 2011 CO₂ target will be adjusted to allow for external temperature variation (see appendix A for details of “degree days” calculations).

Electricity

We will be refitting much of our office space lighting early in 2011, which we hope will more or less halve our lighting power consumption.

We will be replacing a sizeable proportion of our PCs and laptops this year, and will be looking to identify replacement models with best in class energy performance. We will also continue to virtualise our server infrastructure.

(kgCO ₂)	2010 actual	2011 target
Energy: electricity	83,121	78,134

Paper

We will continue with the reduced size format of Connect. In the long-term we would like to replace many of our regular paper publications with electronic alternatives, but we need to take advice on the impact this will have on our VAT status.

(kgCO ₂)	2010 actual	2011 target
Paper	73,550	69,137

Travel

We will continue to enforce our existing transport policies, which require all flights to be personally approved by our Executive Director based on a campaign-related justification. We will minimise travel-related CO2 through the use of video conferencing and by travelling by land where feasible

Unfortunately, we are expecting a significant increase in our travel in 2011, for two reasons. Firstly, the UK office will be playing a leadership role in several high-profile international campaigns and helping to build capacity for environmental activism in new countries. Some additional international travel is essential for achieving these goals, but we think this will be justified by the environmental benefits that our work will help to bring about².

Secondly, we are increasing our fundraising programme considerably in 2011, in order to bring in new supporters and ensure our long-term financial health. This inevitably results in more travel and increased CO2 emissions, even though our recruitment teams always use public transport where possible. Rather than setting an unachievable carbon budget, we will set the fundraising team a 6% reduction target on the amount of travel-related CO2 *per new supporter*. In 2010 we expended 2.3 kgCO2 per supporter recruited; in 2011 our target is 2.17 kgCO2 per new supporter.

(kgCO2)	2010 actual	2011 target
Travel: campaigns	85,720	see text
Travel: fundraising	26,082	38,618
Travel: other areas	4,869	4,577

Other initiatives

In 2011, we will continue to refine the way we record, report and manage our CO2 emissions. We expect to streamline and better integrate CO2 accounting into our core money accounting processes, which will reduce the time we spend on it and improve the quality and timeliness of CO2 information throughout the year.

² It is possible that higher levels of travel by UK staff will be compensated for by less travel from other Greenpeace offices. Greenpeace International will publish consolidated CO2 emissions data for all Greenpeace offices this year, so it should be possible to track these overall trends in future.

Other aspects of environmental performance

Given the urgency of climate change, we are currently prioritising our efforts around reducing our carbon emissions. However, we endeavour to maintain and improve on all aspects our environmental practice, and to act consistently with our campaign policies. This section provides a brief overview of our current approach towards reducing our environmental impact in a range of other areas.

Waste and recycling

We currently recycle all paper, card, glass, cans and tins, and most types of plastic. We make recycling easy by providing multiple recycling bins in each unit work area, but only one residual waste bin. Vegetable waste is composted and garden waste is composted or recycled.

We examine our own needs so as to minimise our consumption, and we favour suppliers who minimise packaging and other waste. End-of-life computer equipment is currently re-used or recycled within the UK.

We currently dispose of 1.5 paladins (large bins provided by the council) a week, down from 3 paladins a week when we moved here in 1991.

Purchasing

We are committed to promoting good environmental practice through our purchasing policies. For example:

- We only buy timber that has been certified by the Forest Stewardship Council.
- Because of the absence of an agreed certification scheme for fish, we don't buy fish or serve fish at Greenpeace events. Neither do we buy or serve meat.
- Our vegetarian staff canteen uses GM-free, organic, seasonal, locally produced food wherever possible. Tea, coffee and milk provided for staff are organic and fair-trade.
- We always use water-based inks in our printing, and these will be vegetable-based for litho printing.

Water Use

We have dual-flush low level cisterns in toilets, and mixer taps on all sinks and wash hand basins. We collect and use rainwater from our warehouse roof to water our garden.

Appendix A: degree days and gas consumption

Heating energy consumption depends in part on external temperature. To account for the variability in annual weather patterns, we will use degree days to produce heating budgets and determine overall trends in energy performance. The methods we will use are recommended by the Carbon Trust, and more information can be found at <http://www.carbontrust.co.uk/publications/pages/publicationdetail.aspx?id=CTG004>.

Degree days are a measure of the severity and duration of cold weather. The colder the weather in a given month, the larger the degree-day value for that month. They are a summation over time of the difference between a “base” temperature (15.5 degrees C is usually used in the UK) and the actual outside temperature each day. We will use degree day data recorded by our Energy Monitoring System.

We have degree day and gas consumption figures going back to June 2008. but it would be misleading to compare performance in 2010 to earlier years because we used to operate a Combined Heat and Power unit.

However, we can set a baseline for future years using the 2010 figures. The trend line on the graph below shows the relationship between monthly degree days and gas consumption based on performance in 2010. We can use it to calculate our “expected” gas consumption in 2011 based on the degree day data we will collect throughout the year. In 2011, we will be aiming to achieve at least a 6% improvement (reduction) against this “expected” figure.

Monthly gas emissions vs degree days, January – December 2010

