

CLIMATE CHANGE

Background

Climate change is widely regarded as humanity's greatest challenge¹. If left unchecked, global atmospheric temperature is forecast to rise by between 1°C and 6.4°C by the end of this century², bringing severe disruption to both the economic and ecological systems upon which humanity depends.

2010 was the warmest year on record³, as measured by certain temperature series⁴, and follows the warmest decade recorded. The year saw limited progress on the international response; the UN summit in Cancun, Mexico, formalised a series of commitments made at the Copenhagen summit a year earlier⁵.

Materiality and strategy

The Co-operative has a number of operations that emit significant quantities of greenhouse gases (GHGs), the most significant of which is the Food business.

The approach to climate change is influenced by the views of members and customers within ethical policy consultations. In the 2007 Co-operative Food Ethical Policy consultation, members endorsed a commitment to reduce the carbon footprint of The Co-operative Food's products. The Co-operative Bank's Ethical Policy states that customers' money will not be used to finance the extraction of fossil fuels and the distribution of fuels with a higher global warming impact; and The Co-operative Asset Management seeks to use its influence as an institutional investor to encourage investees to reduce their reliance on fossil fuels, switch to renewable energy, and promote energy efficiency.

Climate change is a major area of focus for the Ethical Operating Plan (page 13). The approach to climate change is five-fold, embracing: energy efficiency, support for renewable energy, carbon offsetting, the provision of finance and public policy lobbying.

Climate change

Waste and packaging

Water

🎯 Targets 2010	Progress	🎯 Targets 2011
Indicator: Direct greenhouse gas emissions (CO₂e)		
		EOP Reduce the gross greenhouse gas emissions from operations by 35% by 2017.
Conduct further product carbon footprinting work in The Co-operative Food.	✓ The carbon footprints of haddock, salmon and beef mince were investigated, and a study on strawberries continued (page 68).	
Indicator: Energy-usage and carbon dioxide emissions (CO₂e)		
Reduce energy consumption across The Co-operative by 20% by 2010 and 25% by 2012, based on 2006 levels.	✓ During 2010, energy consumption across The Co-operative decreased by 12% compared with 2009 and by 29% compared with 2006 (pages 62–64).	
Generate 15% of energy requirements from sustainable energy sources by 2012.	← Output from renewable energy installations in 2010 represented approximately 2.1% of energy requirements. At least one new wind farm is currently awaiting construction (page 64).	EOP Generate the equivalent of 25% of electricity needs from renewable sources by 2017.
Attain a post-construction BREEAM 'outstanding' rating for the new head office complex.	= The design of the building was accredited to the BREEAM 'outstanding' rating in 2009 (page 63).	EOP Construct a head office by 2012 that will set new standards in sustainable design, construction and operation in the UK.
Indicator: Cooling systems: emissions from leakage (Performance benchmark page 65)		
Reduce greenhouse gas emissions from refrigerant leakages in The Co-operative Food's stores by 50% by 2013, based on 2006 levels.	✓ In 2010, emissions from refrigerant gas leaks from The Co-operative Food's stores and distribution centres reduced significantly: by 35% compared with 2009, and by 58% compared to 2006 (page 64).	
Indicator: Transport: mileage and emissions (CO₂e)		
Maintain transport CO ₂ emissions from The Co-operative Food's distribution fleet at 15% below 2005 levels.	✓ In 2010, The Co-operative Food's distribution mileage and associated CO ₂ e emissions decreased by 21% (24.4 million miles) and by 20% (30,909 tonnes of CO ₂ e) respectively, compared with 2005 (page 65).	

Biodiversity

Chemicals

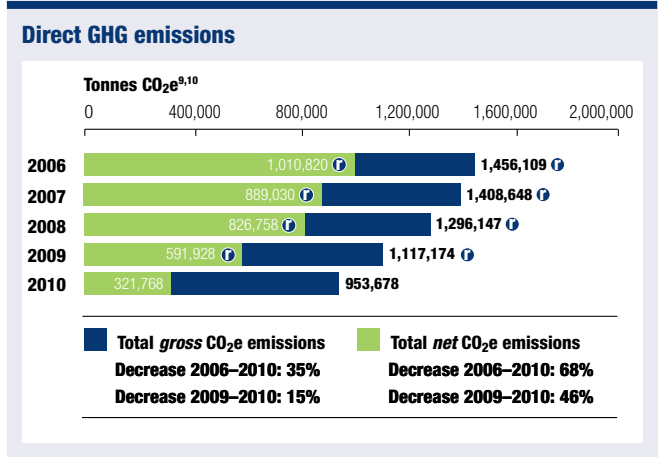
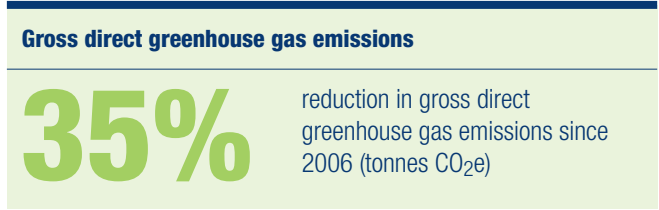
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Targets 2010	Progress	Targets 2011
Indicator: Carbon offset: products and operations		
		EOP Render operations carbon neutral by 2012, with carbon offset solutions provided by a programme of international co-operative projects.
Indicator: Climate change initiatives		
		EOP Broaden the campaign against unconventional fossil fuels to encompass solutions such as community energy.

Direct greenhouse gas (GHG) emissions⁶

GHG emissions are reported in two ways: *gross* emissions (that treat electricity from renewables in the same way as 'brown' electricity)⁷, and *net* emissions (that treat electricity from renewables as zero carbon and allow for operational offsets). Emission factors used to calculate GHG emissions have been taken from the Department for Environment, Food and Rural Affairs (Defra) 2010 guidance⁸ unless otherwise stated.

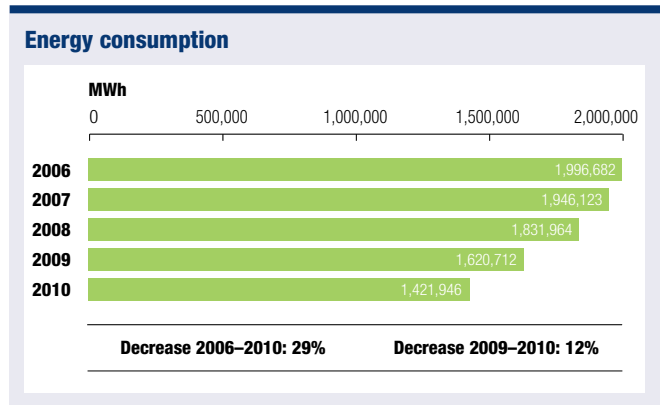
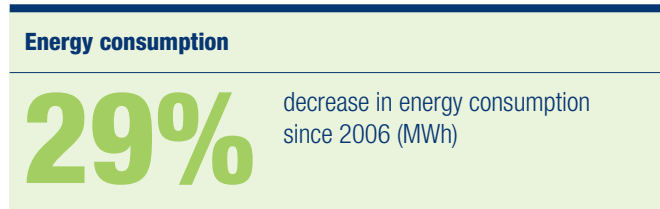
The Co-operative's *gross* greenhouse gas emissions have reduced by 15% in 2010 and by 35% since 2006. *Net* emissions have reduced by 46% in 2010 and by 68% since 2006. Like every other major retailer and financial services provider, The Co-operative does not currently have complete accounting systems in place for the great majority of its indirect emissions. It is recognised that these are likely to be significantly larger than its direct emissions, and work to progress accounting systems is detailed on page 67 and online [EOP](#).



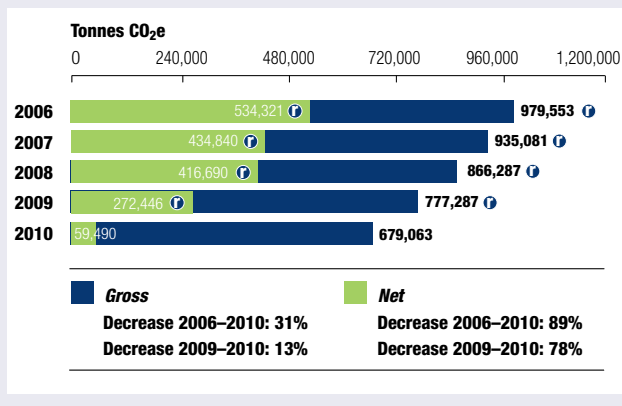
Energy

EOP During 2010, energy consumption across The Co-operative decreased by 12% compared with 2009 and by 29% compared with 2006, meeting and surpassing reduction targets two years ahead of schedule. There was a 13% decrease in electricity usage and a 9% decrease in gas usage in 2010¹¹.

Gross energy-related CO₂e emissions have decreased by 31% compared with 2006. As a result of the increased use of renewable electricity at former Somerfield premises, *net* energy-related CO₂ emissions have decreased by 89% over the same period.



Total emissions from energy consumption¹²



Energy programme

The Co-operative’s energy strategy focuses on The Co-operative Food’s stores and distribution, and The Co-operative’s head office operations, which comprise almost 90% of total energy use. The energy programme is directed by a Programme Board chaired by

the Managing Director of The Co-operative Estates. There are three areas of focus: the encouragement of staff behavioural change and better housekeeping; amendments to the standard ongoing refit programme; and a retrofit programme designed to reduce energy at the most energy-intensive stores. Further capital expenditure of £30m has been approved for the period 2011 to 2013 inclusive.

Initiatives delivered in 2010 included:

- roll-out of retrofit measures to a further 658 premises (2009: 736), including 169 energy management systems and 90 improved lighting systems; and
- maintaining energy efficiency features of the ongoing refits programme, such as the wider use of Light Emitting Diodes (LEDs), with 606 refits taking place.

Six dedicated Food regional energy managers oversaw the continued training of some 3,000 employee Energy Champions. Every Food store has an Energy Champion, supported by 239 area and 37 district Energy Champions. In 2010, the Champion programme was extended to acquired Somerfield stores.

New head office

The Co-operative is developing new headquarter premises in Manchester, to be completed in 2012. The design of the building has now been accredited to the BREEAM ‘outstanding’ rating¹³, and work will continue to ensure it achieves BREEAM outstanding for ‘in-use’. As part of the initial design process, a review was undertaken to investigate the impact of projected temperature rises from climate change upon the building’s cooling systems and energy consumption.

The building is currently under construction and has numerous resource-efficient features:

- an on-site combined heat and power (CHP) plant, fuelled by plant-oil grown by The Co-operative Farms,

providing the majority of the energy requirement for the new building;

- glass façades and building orientation to maximise natural lighting;
- a double-skin façade that controls heat loss and heat gain. This is combined with automated and efficient lighting and ventilation systems throughout to maximise energy efficiency;
- natural refrigerants throughout the building in place of hydrofluorocarbons (HFCs);
- the harvesting and re-use of grey water generated on site; and
- provision for storage of over 100 bicycles and showering facilities.



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Performance recognition

In 2010 and 2011, The Co-operative ranked fourth and third respectively in the Sunday Times 60 Best Green Companies list. In both years it was the highest ranked retail and financial services provider.



Green electricity procurement

During 2010, virtually all (over 98%) electricity (some 1,137GWh) was sourced from good-quality renewable sources – mainly wind and hydro technologies. This makes The Co-operative one of the largest purchasers of green electricity in the world. In addition, The Co-operative has negotiated equivalent green energy contracts (294 GWh) on behalf of 15 independent co-operative societies. In October 2009, a new five-year electricity contract was agreed to provide renewable electricity to over 5,500 sites.

The Co-operative Insurance was the first institutional property investor to transfer all contracts held for its investment property portfolio to green electricity (large-scale hydro and climate change levy-exempt sources) and believes it is still the only institutional property investor to have done this, sourcing some 9.3GWh in 2010 (2009: 9.2GWh).

On-site renewables generation

The Co-operative is progressing the development of its own renewables capacity. Output from renewable energy installations in 2010 was approximately 24,000MWh (2009: 28,815MWh), representing 2.1% of energy requirements.

A 16MW, eight-turbine wind farm has been operational since 2006 on Co-operative land at Coldham, Cambridgeshire, and all output is paired with The Co-operative's sites. Planning permission has been granted for a seven-turbine extension, to be constructed in 2011. Planning permission has also been granted for a second 28MW, 14-turbine wind farm on Co-operative land in Yorkshire, to be capable of supplying enough electricity to power more than 16,000

Wind turbines at Coldham, Cambridgeshire.



homes annually. In 2009, The Co-operative applied for planning permission for a third 20MW wind farm on third-party-owned land. However, this was refused in April 2011, and an appeal is currently being pursued.

In 2010, feasibility work was undertaken for further renewables projects, including a biofuel CHP system within the new head office (page 63); a biomass CHP project to be based in Manchester and fuelled using waste wood; and photovoltaic installations in south-west England.

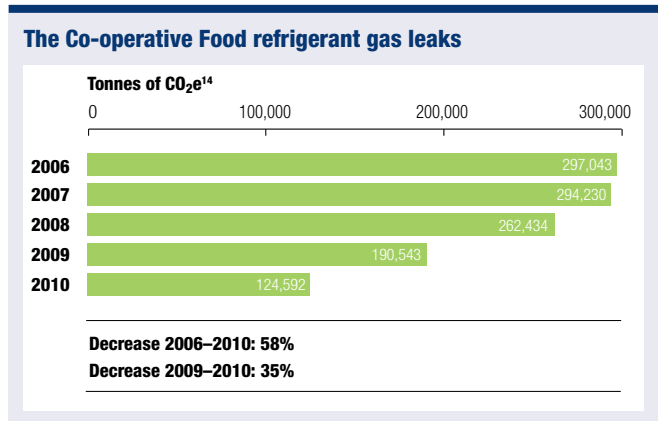
In New Mills, Derbyshire, The Co-operative purchases electricity via a private wire to its local Food store from a co-operatively owned micro-hydro project. A second micro-hydro scheme was commissioned in December 2009 in Settle, Yorkshire, where part of the electrical output will be taken through a long-term power purchase agreement.

The Co-operative has been an active supporter of micro-generation technologies, through its Green Energy for Schools programme which progressed 189 installations (page 57) and on its buildings. This commitment includes the Solar Tower project, the UK's largest solar power installation, with over 7,000 photovoltaic panels.

In 2011, The Co-operative Bank pledged to extend commercial lending on energy efficiency and renewables from £400m to £1bn (page 44).

Cooling systems

The Co-operative's refrigeration and air conditioning systems are a significant potential source of GHG emissions due to their use of hydrofluorocarbons (HFCs). The most significant source is refrigerant leakages from Food stores.



In 2010, emissions from refrigerant gas leaks from The Co-operative Food stores and distribution centres reduced significantly: by 35% compared with 2009, and by 58% since 2006, meeting and surpassing a 50% reduction target three years ahead of schedule. Data on total tonnes leaked can be found online .

Less than 5% of existing cooling equipment across The Co-operative Food stores (including former Somerfield stores) relies on hydrochlorofluorocarbons (HCFCs), which are classed as potent ozone depletors. Legislation requires that usage of these is phased out by December 2014 and a system of reclaim and recycle is now in place for this equipment.

In 2010, 524 stores were refitted with more energy-efficient HFC units, with a further 500 stores planned for refit in 2011. The continued installation of HFC systems was necessitated by the pressing need to progress the rebrand programme, and the current immaturity and expense of non-organochlorine alternatives. However, a 'free heat' refrigeration system, which uses the heat from the refrigeration system to provide space heating, was installed at a further 25 stores in 2010. In addition, standalone refrigeration units (chillers and freezers) utilising hydrocarbons were introduced in 290 stores.

Refit initiatives planned for 2011 include:

- switching the refrigerant gas from the HFC R404a (which has a global warming potential, GWP, of 3,750) to the HFC R407a (which has a GWP of 1,770) in all new refrigeration installations;
- all new standalone refrigeration units to run on hydrocarbons;
- the installation of three new carbon dioxide refrigeration systems; and
- the trialling of hydrocarbon air conditioning systems in two stores, which, if successful, when combined with new in-store refrigeration systems, will allow stores to be wholly or in part HFC-free.

It is intended that all new installations will be HFC-free from 2015, and all stores within the estate will be HFC-free by 2030.

Trials of doors on refrigeration initiated in 2010 will be expanded to another 10 stores in 2011, to fully assess benefits and customer acceptance.

Performance benchmark

In 2010, The Co-operative Food participated in the Environmental Investigation Agency's (EIA) survey of supermarket refrigeration technology. In total, 10 supermarkets were assessed on their use of refrigerants and future plans. The Co-operative Food was ranked fifth.

CFS air conditioning

As air conditioning systems are replaced across CFS, it is preferred that systems based on ammonia, lithium bromide or hydrocarbons are introduced. During 2010, 20 HCFC/HFC branch and office air conditioning units were replaced with hydrocarbon (HC) systems, leading to the removal of 75kg of HCFC/HFC gases with a GWP of 116 tonnes of CO₂e, and the introduction of 44kg of HC gases with a GWP of just 130kg of CO₂e.

Performance recognition

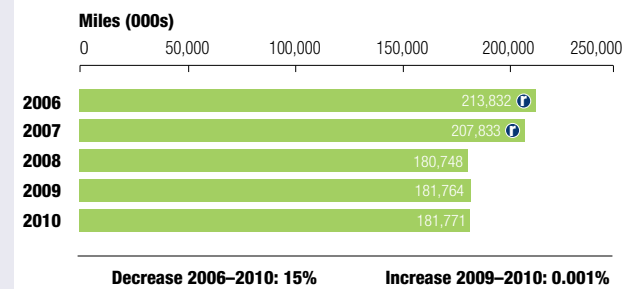
In 2010 and 2011 The Co-operative was named Green Retailer of the Year at the Grocer Gold Awards, in recognition of work undertaken to reduce environmental impact and change consumer behaviour.



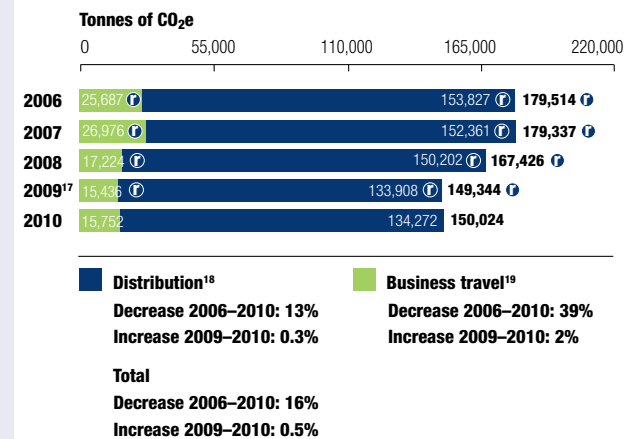
Transport

Distribution/business mileage and emissions

Total mileage¹⁵



Total transport emissions¹⁶



During 2010, reported mileage remained stable and transport-related CO₂e emissions increased marginally by 0.5%. This small increase is a result of changes to conversion factors in Defra's guidance for reporting²⁰. Since 2006, reported mileage and transport-related CO₂e emissions have reduced by 15% and 16% respectively.

Road distribution emissions (excluding home deliveries) increased by 785 tonnes of CO₂e, a result of an increase of some 1.1 million miles compared with 2009. Home delivery mileage and associated CO₂e emissions reduced by 1.1 million miles travelled and 421 tonnes of CO₂e respectively. Business travel mileage shows a small increase in CO₂e emissions of 316 tonnes, with an increase in mileage of 23,344 miles during the same period.

The Co-operative Food is a signatory to the British Retail Consortium's 'A Better Retailing Climate' initiative, and committed to a 15% reduction in CO₂e emissions from its distribution activities by 2013, based on 2005 levels, including those of former Somerfield.

▶ In 2010, The Co-operative Food's distribution mileage and associated CO₂e emissions decreased by 24.4 million miles (21%) and by 30,909 tonnes of CO₂e (20%) compared with 2005 respectively.

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During 2010, CFS' business mileage decreased slightly by 1% compared with 2009, and has decreased by 52%, or 18.9 million miles, when compared with 2006. This is largely as a result of the reduction in Financial Advisers (FAs) employed by the business who travel to visit customers in their homes. Overall CO₂e emissions from transport at CFS decreased by 4% compared with 2009 and have reduced by 52%, or 5,191 tonnes, when compared with 2006.

CFS policy requires that the existing 200 job requirement cars must have CO₂e emissions of less than 150g/km and diesels must meet the Euro5 clean burn standard or have particulate filters. In 2010, this CO₂e emissions target was reduced to sub-145g/km for all new cars entering the scheme. It is intended that the CO₂e cap will be reduced to 140g/km in 2012. At Britannia, the vast majority of the 230 'essential use' cars already meet the 2012 target and have CO₂e emissions of less than 140g/km.

Biofuels

In recognition of the adverse environmental impacts that certain biofuel feedstocks can have, and the opaque nature of much of the transport biofuels supply chain (which makes selection of feedstocks that meet sustainability criteria all but impossible), biofuel use is not actively pursued in distribution activities. In 2009, The Co-operative Bank extended its Ethical Policy to decline business in connection with the distribution of biofuels that fail to achieve a 60% carbon dioxide saving; effectively ruling out investment in biofuels derived from feedstocks that cause tropical deforestation.

The Co-operative Farms has committed a significant area (2,322 hectares) to oilseed rape production, none of which is contracted for transport fuel production.

Food miles and 'considered carbon'

The term 'food miles' has been widely used in discussions about food sustainability, and is often assumed to be synonymous with total environmental impact, ie, low food miles equating to low environmental impact. However, a wide range of research²¹ has shown that, when the whole product lifecycle (cultivation, processing, transport, use, etc) is taken into account there can be counter-intuitive results. For example, foods grown in heated greenhouses in the UK often have a worse environmental impact than foods grown outdoors and flown in.

In addition, for some products, food miles can have ethical as well as environmental impacts. More than one million people in Africa rely on fruit and vegetable exports to British shops, with around £7m per day going to developing countries from supermarket sales. Not only do many of these air-freighted products have relatively low carbon footprints, the UK market for such exports represents a significant economic development opportunity for farmers in developing countries that have very low per capita CO₂ emissions²². The drive to reduce carbon emissions can, therefore, result in unintended consequences, which particularly work to the detriment of the

developing world. In response, The Co-operative has committed to reduce the carbon footprint of products, but never at the expense of the world's poorest. This will be achieved through the following measures:

- arguing against any unmerited focus being given to mode of travel (particularly air freight) or food miles – be it in terms of labelling or broad reduction targets;
- continuing to support significant local sourcing initiatives, whilst noting that these are driven not by a concern for food miles or carbon reduction, but the desire of some customers to support local UK products;
- only committing to operationalise carbon labelling at such a time as it is also possible to operationalise 'development labelling'; and
- in parallel with improving ability to account for, manage and reduce carbon within The Co-operative's supply chain, also aim to gain a better understanding and advancement of human development accounting and labelling.

Green Travel website

At the end of 2009, a Green Travel website²³ was launched, which encourages employees and visitors to utilise more sustainable travel options such as walking and public transport. The site also provides access to a car-sharing scheme.

In 2010, 388 interest-free loans with a value of £450,000 (2009: 229, with a value of £256,000), were taken up by employees for public

transport season tickets, and Manchester-based employees had the opportunity to take part in bicycle maintenance demonstrations, as well as national initiatives such as Walk to Work Week. In Manchester, The Co-operative has led the development of a Green Travel Employers Forum, which has brought together employers to discuss the transport issues within the city.

Other indirect emissions

Other GHG emissions arise from sources that can be described as 'indirect' (Greenhouse Gas Protocol Scope 3²⁴), including the production, use and disposal of products and services for sale in Food, Travel and Pharmacy stores, financial products, projects financed, the disposal of waste, employee travel to work, and business travel in vehicles not owned by The Co-operative²⁵. While the guidance for measurement and reporting of such emissions is still in its formative stages, measurement work has been initiated in 2010 in a number of areas.

The net estimated indirect emissions, currently measured, are 1.22m tonnes of CO₂e, and full details behind this calculation are available online [Co-op](#). It is acknowledged that total indirect emissions are likely to be far larger than this and accounting systems will continue to be developed.

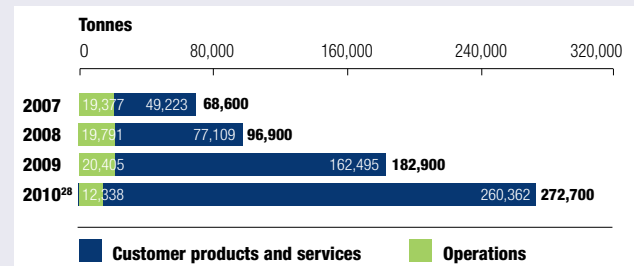
In addition, further initiatives that measure and address such emissions are underway, including the carbon footprinting of products sold in Food stores (page 68), combining a carbon offset with selected financial and Motor products (see below), influencing customers to reduce food waste (page 76), and only selling white goods that meet certain environmental criteria (page 69).

Carbon offset

In 2010, carbon offset again expanded, with the largest increase in connection with The Co-operative Insurance, as carbon offsets became a standard feature of nearly all motor insurance policies offered. During 2010, a total of 272,700 tonnes of CO₂ offset was purchased (2009: 182,900) as follows:

- one tonne of CO₂ for every Co-operative Bank branded mortgage held;
- The Co-operative Insurance offset 20% of a typical car's CO₂ emissions for all standard motor insurance policies held, based on an average UK car travelling an average number of miles;
- The Co-operative Travel continued to sell carbon offsets at its branches. Offsets are sold in a series of bands, based on distance flown²⁶;
- CFS maintained its policy of going 'beyond carbon neutral' by offsetting all its remaining operational and business travel emissions, together with an extra 10% to cover legacy issues;
- The Co-operative Travel and The Co-operative Clothing maintained carbon neutral status by offsetting all their remaining operational and business travel emissions;
- emissions from all Co-operative business flights were offset for the fourth year running; and
- The Co-operative Motor Group launched an Emissions Control Service in 2010 and for each service undertaken half a tonne of CO₂ is offset²⁷.

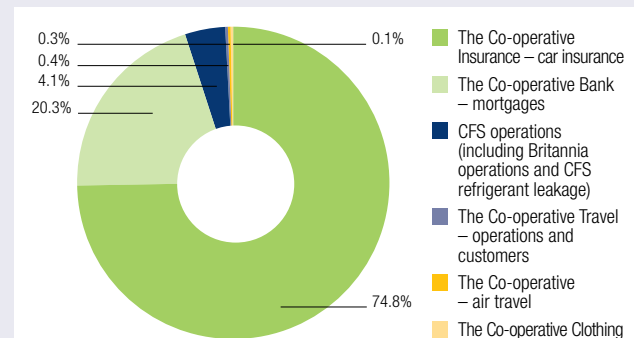
Carbon offset



Offset purchased 2010



Carbon offset – total: 272,700 tonnes of CO₂



The Co-operative places 80% of its offsetting portfolio into energy-efficiency and renewable energy projects. The remaining 20% is delivered through rainforest reforestation, such as that taking place in the Kibale Forest National Park, Uganda. This reflects the typical level of global greenhouse gas emissions attributable to deforestation²⁹.

In 2010, offsets were provided, via ClimateCare, from the following projects:

Treadle pumps in West Bengal and Uttar Pradesh, India

These manual pumps are used to irrigate fields outside the monsoon season. They provide a more sustainable and affordable alternative to expensive diesel-powered pumps, increasing productivity and bringing much needed additional income to farming families. In 2010, offset monies funded 10,482 treadle pumps, which will avoid emissions of 5,000 tonnes of CO₂ over one year.

Energy-efficient cooking stoves in Cambodia

Energy-efficient cooking stoves reduce the amount of wood needed for cooking, which means less CO₂ is released. The reduced demand for wood helps to protect Cambodia's forests. In 2010, offset monies helped to fund the construction and supply of approximately 55,400 stoves, and will avoid emissions of 83,100 tonnes of CO₂ over two years.

Climate change

Waste and packaging


Water

Biodiversity

Chemicals

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Product carbon footprinting

The Co-operative has developed a software tool in partnership with The University of Manchester that facilitates quicker and more accurate decision-making around the climate change impacts of products.  The tool has been used to analyse four product areas to date.

Strawberries

In a study that predates the software tool, in 2007 and 2008, The Co-operative worked with the Carbon Trust to understand the carbon embodied within two types of strawberries (400g punnets): 'Ava' strawberries from The Co-operative Farms' Blairgowrie farm, Scotland, and 'Sabrosa' strawberries from Spain. It was estimated that the carbon embodied was 850g and 600g of CO₂e for the Scottish and Spanish strawberries respectively. In 2009, the Blairgowrie farm trialled coir (coconut husk) as an alternative growing media to peat, which had been identified as the most significant element of the Scottish strawberries' higher carbon content. The trial was deemed successful and was extended into 2010. Results show that strawberries grown in coir have a 16% lower carbon footprint than peat-grown strawberries. A trial to re-use the coir will conclude in 2011. If successful, this will further increase emissions savings.



Chicken

Chickens reared under three different welfare standards were analysed. 'Embodied carbon emissions' in Elmwood (page 33), free-range and organic whole



chickens were estimated to be 4.6kg, 5.1kg and 6.4kg of CO₂e respectively, per kg of chicken meat. A significant proportion of emissions were found to be associated with feed and bedding. As a result, alternatives to carbon-intensive feed ingredients are now being investigated.

Haddock

The carbon footprints of Scottish and Norwegian haddock fillets from two different catch methods – trawled and line-caught – were investigated and found to be broadly similar, at 2.8kg and 3.1kg of CO₂e respectively, per kg end product. Whereas the most carbon-intensive stage of the trawled fish was the processing, for the line-caught fish it was emissions during catch.

Salmon

The carbon emissions embodied in a 240g packet of fresh salmon were estimated to be 2kg of CO₂e. However, during the investigation of the footprint the supplier relationship changed, meaning some data had to be estimated. Even so, it was clear that the dominant emissions source – approximately 60% of the total footprint – is the production of salmon feed. In 2011 the footprint will be revised with data from a new supplier, before considering any carbon reduction initiatives.

Beef mince

Carbon emissions embodied in a 454g packet of beef mince are estimated to be 10.2kg of CO₂e per kg end product, with a significant proportion associated with production of feed, both on-site (grass silage) and off-site (soya and wheat). In 2011 carbon reduction initiatives across the agricultural stage of beef production will be investigated.



Reforestation in the Kibale Forest National Park, Uganda

This project aims to re-establish rainforest within the Kibale Forest National Park, Uganda. The rainforest absorbs carbon dioxide during growth and effectively locks it up as biomass. In 2010, 26,200 tonnes of CO₂ were offset through this project. Since support began in 2000, The Co-operative has funded the planting of over 370 hectares of rainforest, equivalent to 519 football pitches. Further details of the Kibale project are provided on page 84.

Renewable energy in India

This project, a wind farm in the state of Tamil Nadu, southern India, supplies clean energy to India's national grid, which is currently dominated by carbon intensive coal power. In 2010, offset monies to this project will avoid 130,000 tonnes of CO₂ emissions over four years.

Reducing Emissions from Deforestation and Degradation (REDD) in Kenya

The increase in offset volumes in 2010 required an additional forestry-related project. The Kasigau Corridor REDD project in Kenya involves protecting an area of forest from deforestation. This is achieved through providing education and employment in conservation to local communities, as opposed to the current practice of slash and burn for agriculture. Alternative sources of forest products such as fruit trees and charcoal are produced in nearby nurseries, and in the long term these activities should reduce the pressure to deforest in the area. The area protected is also a wildlife corridor between two national parks, supporting many species including lion, cheetah, African elephants and the endangered Grevy's Zebra. In 2010, 28,300 tonnes of CO₂ were offset through this project.

Other products and services

Energy-inefficient goods

Since 2007, and three years ahead of legislative requirements³⁰, The Co-operative Food has only stocked white goods (eg, fridges, freezers and washing machines) that are energy rated 'A' or above, or Energy Savings Trust Recommended.

In 2007, The Co-operative Food committed to phase out the sale of tungsten incandescent light bulbs by 2010. This was achieved by the end of 2009, two years ahead of legislative requirements³¹. During 2010, the range of energy-efficient light bulbs sold in The Co-operative Food stores increased from 31 to 102 products, with 455,000 bulbs sold.

Ethical finance

Bank screening of finance

During 2010, 45 (2009: 55) finance opportunities were referred to the Ethical Policy Unit in relation to climate change, of which nine were declined (2009: 12) at a cost of £711,000 in terms of estimated income foregone.

Climate change-related business declines 2010

	Estimated income foregone 2010
Engineering and support services (four instances) £10m syndicated loan facility and £350,000 lending for businesses supplying equipment considered intrinsic to oil and gas extraction. Banking facilities for a business engaged in the manufacture of specialist software in support of fossil fuel extraction. Deposit facilities for a business supplying furnace equipment for oil refinery.	£349,000
Fossil fuel extraction and production (three instances) £100m interbank deposit facility for a global oil and gas business engaged in exploration, extraction and production. Deposit facility for a business engaged in oil exploration and production in Africa, the Middle East and Russia. Deposit facility for the issuer of licences for UK coal extraction.	£102,000
Higher global warming impact fuels £30m deposit facility for a business providing engineering, project management and construction services to tar sands extraction projects in Canada.	£210,000
Power station £50m interbank deposit facility for a large coal-fired power station. Unacceptable level of carbon dioxide emissions considered incompatible with support for ecological sustainability.	£50,000

The Co-operative Asset Management (TCAM) engagement

• **Tar sands** In 2010, TCAM co-filed shareholder resolutions at two oil company AGMs calling for greater disclosure on the impacts of tar sands developments. See page 71 for details of these engagements.

• **TCAM overseas shareholder resolutions** In 2010, TCAM was presented with 56 overseas shareholder resolutions relating to climate change, of which 51 were supported. Three resolutions from proponents hostile to combating climate change were opposed.

Company	Resolution	Vote registered
17 companies ³²	To introduce/extend sustainability reporting	Supported
Mirant Corp; Dynegy Inc; Smithfield Foods Inc; Exxon Mobil Corp; Southern Co; ConocoPhillips	To adopt targets for greenhouse gas emissions reduction.	Supported
Chesapeake Energy Corp; Ultra Petroleum Corp; Exxon Mobil Corp; The Williams Companies	To report on potential environmental damage from hydraulic fracturing for natural gas extraction and consider policies to reduce or eliminate such damage.	Supported
Cisco Systems Inc; Microsoft Corp; Oracle Corp	To establish a board committee on sustainability.	Supported
Chevron Corp; Freeport-McMoRan Copper & Gold inc	To appoint an independent director with environmental expertise.	Supported
Southern Co; MDU Resources Group Inc	To report on efforts to reduce environmental and health hazards associated with coal combustion waste.	Supported
Chevron Corp; ConocoPhillips	To report on financial risks resulting from climate change.	Supported
ConocoPhillips; Exxon Mobil Corp	To report environmental, social and economic risks associated with tar sands extraction.	Supported
CVS Caremark Corp; Safeway Inc	To adopt principles for tackling global warming.	Supported
Apple Inc	To establish a board committee on sustainability.	Supported
Dominion Resources	To establish a goal for 20% renewable electricity energy generation by 2022.	Supported
Exxon Mobil Corp	To report on scenarios for developing leadership in sustainable energy technologies.	Supported
Exxon Mobil Corp	To consider in strategic planning the risk of significantly lower fossil fuel demand than forecast.	Supported
Fairfax Financial Holdings	To respond to requests for information from the Carbon Disclosure Project.	Supported
Kansai Electric Power Co (five resolutions)	To adopt policies mandating carbon reduction standards; environmental protection; renewable energy; and energy waste reduction.	Supported

Climate change

Waste and packaging

Water

Biodiversity

Chemicals

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Company	Resolution	Vote registered
Kyushu Electric Power Co	To introduce a 'smart grid' system for managing renewable energy supply.	Supported
Tokyo Electric Power Co	To introduce a 'smart grid' system for managing renewable energy supply.	Abstained ³³
Tohoku Electric Power	To appoint an independent director with environmental expertise.	Abstained ³⁴
Duke Energy	To report on global warming-related lobbying activities.	Opposed ³⁵
Ford Motor Co	To disregard any emissions reduction projects unless they meet Return on Investment criteria.	Opposed
Goldman Sachs Group	To report on costs/benefits of climate change policy and science of global warming.	Opposed ³⁶

Community involvement

Green Energy for Schools

The Co-operative's Green Energy for Schools (GEFS) programme has enabled 189 schools across the UK to install solar panels at no cost and supported the subsidised installation of small wind turbines, biomass boilers and ground source heat pumps. For further details, see page 57.

Walking Buses

Walking Buses have now been established in 326 locations, helping children to walk to school together in safety. For further details, see page 57.

Students at the Howden Junior School travel to school in a Walking Bus.



Influence and action

Green Investment Bank

The Co-operative supports the proposal to establish an independent, permanent and self-financing UK Green Investment Bank as a means to accelerate the UK's transition to a low carbon economy and, in particular, has highlighted the importance of funding for community-scale renewables to deliver a diversified energy supply.

The Co-operative has added its name to public statements issued by Transform UK, the umbrella group of NGOs and businesses campaigning for a Green Investment Bank. In December 2010, The Co-operative Bank Social Banking Unit (page 44) submitted oral evidence to the Environment Audit Committee. In February 2011, CFS joined seven other institutional investors as co-signatory to a letter to the Prime Minister that expressed a willingness to consider purchase of bonds issued by the Green Investment Bank in line with conventional investment criteria.

Heathrow third runway

As part of its Ethical Strategy, first published in 2008 (page 13), The Co-operative Travel opposes the development of a third runway at Heathrow Airport, and, in principle, all other new runway developments in the UK, unless there is a clear sustainability case. The Co-operative Travel wrote to the Secretary of State for Transport in 2009 questioning the need for a third runway and highlighting its environmental impact. In May 2010, the Government announced that it was scrapping plans for the new runway, a position that was confirmed later in the same month by the airport's owners.

Feed-in Tariffs for renewables and Renewable Heat Incentive

The Co-operative is a member of Friends of the Earth (FOE) and the Renewable Energy Association's (REA) Feed-in Tariffs (FITs) coalition. The coalition successfully campaigned for the introduction of FITs, which began in April 2010. In May 2010, a letter was written to the new Secretary of State for Energy and Climate Change expressing support for FITs and the principle of the Renewable Heat Incentive (RHI). The Co-operative also participated within the FOE and REA-led RHI campaign coalition, co-signing a letter to the Prime Minister in September 2010 calling for the introduction of the RHI and contributing £2,500 to a parliamentary lobby event in October 2010, attended by MPs of all main parties.

International climate change talks

In November 2010, The Co-operative signed the 'Cancun Communiqué on Climate Change' which urged political leaders at the United Nations Climate Change Conference in Cancun, Mexico, to press for: robust financial and policy support for energy-efficiency measures, strong policy support and fast-track funding for low-carbon energy systems, greater financial and policy support for emissions capture and storage, increased effort on tackling other GHG emissions and addressing the carbon emissions impact of urban planning, land use management and land use change.

Toxic Fuels

The Toxic Fuels campaign was launched in 2009, to highlight the environmental and financial risks associated with unconventional fossil fuels such as tar sands and shale gas, and call for a halt to expansion plans. The campaign has four main elements: support for the Beaver Lake Cree Nation; engagement with companies involved in tar sands development; calls to introduce mandatory GHG reporting and low-carbon fuel standards; and public awareness raising.

Beaver Lake Cree Nation

The Beaver Lake Cree Nation is a small indigenous community in Alberta, Canada, whose reserve home and ancestral lands are threatened by tar sand developments. They have constitutionally protected treaty rights, and have begun a legal challenge to enforce recognition of these rights and a halt to new developments. Donations by The Co-operative, and its customers and members, have raised over £200,000 in support of this action.



In 2010, The Co-operative assisted First Nations to seek a judicial review to protect the threatened woodland caribou, and published the report 'Save the caribou – stop the tar sands'.

Mandatory GHG reporting and disclosure

The Government has a legal obligation under the Climate Change Act to ensure mandatory GHG reporting by 2012, or to explain why it has not been introduced. In July 2010, The Co-operative and WWF published a report 'Toxic Fuels – Toxic Investments: why we need mandatory greenhouse gas reporting', which it sent to ministers at Defra and BIS. In October 2010, The Co-operative and WWF worked with MPs to table 'Early Day Motion 799 – corporate reporting of carbon emissions', and customers, members and supporters were mobilised to ask their MP to sign the EDM. In November 2010, The Co-operative, WWF and The Aldersgate Group organised an open letter to the Government (co-signed by 30 other businesses and civil society groups) calling for the introduction of reporting by 2012.



TCAM tar sands engagements and influence

In early 2010, TCAM, with other investors, filed shareholder resolutions at the AGMs of BP plc and Royal Dutch Shell plc, calling on them to report on the risks associated with tar sands projects and their plans to address them. The Shell resolution was co-tabled by 141 investors, including fund managers, pension funds, foundations and faith groups, and represented the largest-ever mobilisation of investors in support of an independent resolution in the UK. The resolutions attracted significant support with 15% and 11% of shareholders voting for, or abstaining on, the BP and Shell resolutions respectively.

Low carbon fuel standard

The Fuel Quality Directive – Europe's Low Carbon Fuel Standard – sets a mandatory 6% reduction target for the GHG gas emissions of EU transport fuels by 2020. However, by treating tar sands oil the same as conventional oil, the increased emissions from tar sands will potentially negate claimed emissions reductions.

Public awareness raising

In 2010, The Co-operative supported the UK release of the films Dirty Oil, H2Oil and Petropolis, and hosted the world premiere of Dirty Oil, which was screened live via satellite to 25 cinemas around the UK, reaching an audience of thousands. The Co-operative also launched the touring street gallery Tarnished Earth, showing photographs of the devastation caused by tar sands developments. This was displayed on London's Southbank in September. It will tour the UK during 2011.



In response, a coalition was formed with WWF and other NGOs to campaign to 'keep tar sands out of Europe'. Extensive engagement has taken place³⁷, including work with MEPs to table questions to the Commission, and a meeting with the UK Minister for Transport to advise of the inadequacy of current proposals. A petition to 'keep tar sands out of Europe' was incorporated into the Tarnished Earth street gallery, which was presented to the European Parliament in spring 2011. The Commission's final proposals are expected to be presented to Parliament for agreement in summer 2011.

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Accompanying notes

- 1 See for example: Stern, N. (2009), Blueprint for a Safer Planet – How We Can Save the World and Create Prosperity.
- 2 www.ipcc.ch/publications_and_data/publications_and_data_reports.htm
- 3 www.bbc.co.uk/news/science-environment-11903397
- 4 news.bbc.co.uk/1/hi/sci/tech/8400905.stm
- 5 unfccc.int/meetings/cop_16/items/5571.php
- 6 Figures for direct GHG emissions include those associated with air, rail and 'own-car' business travel, which are more commonly reported as 'indirect', or 'Scope 3' emissions.
- 7 With a conversion factor of 0.54284kg CO₂e per kWh, as per Defra guidance (2010).
- 8 2010 Guidelines to Defra GHG Conversion Factors for Company Reporting Archive: defra.gov.uk/environment/business/reporting/pdf/101006-guidelines-ghg-conversion-factors.pdf
- 9 Carbon dioxide equivalent (CO₂e) is used to compare the Global Warming Potential (GWP) of different greenhouse gases (methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆)) relative to CO₂. For example, CO₂ has a GWP of one, whilst N₂O has a GWP of 310.
- 10 Historic data (2006–2009) includes data for merged and acquired businesses (the former United Co-operatives, former Somerfield and Britannia), even at a time when these were not part of The Co-operative. Where historic data is unavailable, proxies have been used. Full information regarding the composition of figures can be found online [↗](#).
- 11 CFS energy consumption including Britannia: 2010: 74,930 MWh; 2009: 77,210 MWh; 2008: 79,041 MWh; 2007: 79,021 MWh; 2006: 83,219 MWh.
- 12 Figures apply a conversion factor of 0.5428kg CO₂e per kWh for fossil fuel and renewable electricity and 0.18523kg CO₂e per kWh for gas.
- 13 The BRE Environmental Assessment Method (BREEAM) assesses buildings against set criteria and provides an overall score that will fall within a band providing either: PASS, GOOD, VERY GOOD, EXCELLENT or OUTSTANDING rating, www.breem.org
- 14 Refrigerant data (2006–2010) includes The Co-operative, former United Co-operatives, and former Somerfield stores and distribution centres, even when these were not part of The Co-operative. CO₂e emissions factors are calculated by applying relevant Defra 2010 conversion factors.
- 15 The Co-operative Bank, The Co-operative Insurance and the Trading Group have reported on their transport impacts since at least 2003. Data for Britannia and former United Co-operatives' transport impacts is unavailable prior to 2006 and 2007 respectively, necessitating the need for proxies (2007 and 2008 respectively). Data for former Somerfield's transport impacts is unavailable prior to 2009 (with the exception of distribution mileage, which has the largest impact), necessitating the use of 2009 data as a proxy in previous years.
- 16 CO₂/CO₂e emissions are calculated by applying relevant Defra 2010 conversion factors for each mode of transport to the distance travelled.
- 17 In addition to business areas listed in footnote 18, data covers home deliveries for The Co-operative Food, The Co-operative Pharmacy, Sunwin Cash In Transit and former Somerfield.
- 18 Accounting systems connected with road distribution capture The Co-operative Food (including Somerfield), The Co-operative Funeralcare, The Co-operative Clothing and home deliveries across The Co-operative Food, The Co-operative Pharmacy and Sunwin Cash In Transit.
- 19 Data covers rail, air, company car, business mileage in employees' own cars and hire car journeys.
- 20 Ibid note 7.
- 21 Such research includes: Dr A Williams (2 February 2007) Comparative Study of Cut Roses for the British Market Produced in Kenya and the Netherlands, Précis Report for World Flowers, Cranfield University; C Saunders and A Barber (2007) Comparative Energy and Greenhouse Gas Emissions of New Zealand's and the UK's Dairy Industry, Research Report No. 297, Lincoln University, New Zealand; and P Tyedmers and N Pelletier (2007) Greenhouse gas emissions for selected seafood species supplied to the UK, Dalhousie University, Canada.
- 22 Melamed, C (2007) Sometimes it's ethical to buy air-freighted goods, *The Guardian*, 2 March 2007.
- 23 www.co-operative.coop/greentravel
- 24 www.ghgprotocol.org/calculation-tools/faq
The GHG Protocol categorises direct and indirect emissions into three broad scopes. Scope 1: All direct GHG emissions. Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam. Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T and D losses) not covered in Scope 2, outsourced activities, waste disposal, etc.
- 25 Emissions from business travel are currently recorded in Scope 1 and Scope 2 reporting. This is due to accounting systems for business travel being unable to disaggregate mileage from company and privately owned vehicles.
- 26 For all flights, distance travelled is calculated using the greater circle distance between airports. For long-haul flights (Bands 4 to 6), customers' CO₂ emissions are calculated using average fuel burn figures for a Boeing 747 and Airbus A340, whereas for short-haul flights (Bands 1 to 3), fuel burn figures for a Boeing 737 are used. These figures are divided by the typical number of seats in each case, deducting the average amount of freight when necessary. A metric of two is then applied to attempt to account for the enhanced impact of aviation upon the climate and give a CO₂ equivalent figure. For further information, please refer to www.jpmorganclimatecare.com
- 27 Due to reporting of this new product the tonnes required for 2010 sales will be offset in the portfolio of 2011. Going forward the offset will occur in the same year as sales.
- 28 The significant reduction in offset total between 2009 and 2010 is a result of conservative overestimates in previous data combined with improved accountancy in 2010.
- 29 Stern, N (2006) The Stern Review on the economics of Climate Change. Also see Global Canopy Programme (May 2007) Forests First in the Fight Against Climate Change – The Vivocarbon Initiative.
- 30 In April 2009, The European Commission announced new minimum performance standards for household appliances under the EU Eco-Design Directive. As a result, from July 2010, all fridges, freezers, washing machines and dishwashers that are energy rated less than 'A' must be removed from sale.
- 31 In March 2009, The European Commission confirmed the sale of incandescent light bulbs would be phased out between September 2009 and 2012.
- 32 Apple Inc; Boston Properties Inc; C R Bard Inc; Chesapeake Energy Corp; EQT Corp; Gentex Corp; Google Inc; Great-West Lifeco; Kroger Co; Las Vegas Sands; Lennar Corp; MGM Mirage; PPG Industries; St Jude Medical; Suntrust Banks Inc; Toll Bros Inc; Tyson Foods Inc.
- 33 The proponents' rationale was considered insufficient.
- 34 Ibid.
- 35 TCAM disagreed with the resolution's view of the company's climate change policy as 'based on unsettled science and pushed by outside pressure groups'.
- 36 Ibid.
- 37 The full extent of engagement included: in April 2010 writing jointly with WWF to the UK Minister of State for Transport and key MEPs to highlight the issue and ask that they put pressure on the EC to penalise tar sands fuels for their higher emissions; employing a consultant in Brussels to engage with MEPs, Parliament and the EC, and holding face-to-face briefings with key MEPs; working with MEPs on the European Parliament Environment Committee to table questions to the Commission; in July 2010, writing jointly with WWF and Greenpeace to the new Minister of State for Transport, and signing a letter to the EC with 10 other international environmental and civic society groups calling for the FOD to be strengthened; in September 2010, with WWF and Greenpeace, meeting the UK Minister of State for Transport to advise of the inadequacy of current EC proposals; working with a group of six Environment Committee MEPs to table questions to the Commission; in October 2010, with NGO coalition partners, briefing MEPs on the EU-Canada trade delegation visit to Alberta, and working with the delegation secretariat to include an official meeting with an environmental science organisation, as well as an unofficial meeting with First Nation representatives; in December 2010, briefing several MEPs ahead of meetings with the Climate Change and Trade Commissioners (organised to raise concerns about reports of Canadian pressure to remove the FOD tar sands review clause), and ahead of meetings with representatives of the Canadian Government. In April 2010, The Co-operative put its name to a full-page advert in the European Voice reinforcing its message to the Commission.