

CDP 2009 Information Request

Respondent: Aviva

General introduction

Aviva is the world's fifth-largest insurance group, serving 50 million customers across Europe, North America and Asia Pacific. Our main business activities are long-term savings, fund management and general insurance. We are the largest insurance services provider in the UK and one of the leading providers of life and pension products in Europe. Our worldwide sales are £51,415 million and MCEV (market consistent embedded value) operating profit before tax is £3,358 million.

Risk and Opportunities

1. Regulatory Risks: (CDP6 1(a)(i))

1.1 Is your company exposed to regulatory risks related to climate change?

We consider our company to be exposed to regulatory risks.

Aviva's set of Group Policies, including the Group Environment Policy lists all material risks to the company. For the Group Environment Policy this includes inherent risks of non-compliance with all relevant environmental legislation and regulations at a local or regional level and possible failures to regularly update on pricing and capital allocation to reflect the latest scientific evidence in respect of the climate risk prevailing, in accordance with Financial Services Authority (FSA). We have assessed the potential financial and reputational impact of these risks and the probability of them occurring to provide us with a tolerance level of control.

From this work we have in place a series of controls to mitigate the chances of these risks occurring. We have a quarterly review system which assesses our compliance to Group Policy from a top-down and a bottom-up perspective. This system reviews any current risks and provides of businesses with an opportunity to highlight areas that need to be strengthened, and also any new risks that may be anticipated in a particular market or for the Group as a whole.

A simple example of this process in action is with regard to the Carbon Reduction Commitment regulation coming into force in the UK. It falls to be considered as an emerging inherent risk for the UK and as such the Executive have been advised and a CRC team (from Group Finance, Legal, Audit, Energy Management, Property Investment Portfolio, CR and subsidiaries) with Executive sponsorship as been put in place to consider what is required from the business to ensure compliance to the regulation.

Risks are reviewed quarterly by the Group Operational Risk Committee and annually by the Board.

Our views on the risks have further strengthened over the last twelve months as a way of ensuring further buy-in from the business and as an opportunity creation process.

Further information

<http://www.aviva.com/cr09/index.asp?pageid=25> - mentions the risk management process.

<http://www.aviva.com/corporate-responsibility/our-cr-policy/#environment> - Group Environment Policy

2. Physical Risks: (CDP6 1(a)(ii))

2.1 Is your company exposed to physical risks from climate change?

We consider our company to be exposed to physical risks.

Aviva is a worldwide company based in 27 countries with 54,000 employees and an owner of a large property portfolio.

Aviva Investors real estate business is the world's largest manager of European commercial and real estate assets (data as at December 2007). We also launched our Asia Pacific Property fund in 2008.

In the acquisition of any properties for our funds we consider general climate risks (such as windstorm and sea level rise) and local environmental risks (such as flooding) and many other factors such as length of time we wish to hold the property for as part of our overall assessment as to the value and growth potential of the particular property asset.

The other area of climate change risk is, of course, our general insurance area which accounts for 40% of our operating profit of our worldwide business; including UK, Northern Europe, Turkey and Canada. Our analysts are able to model weather events, which can directly or indirectly affect most classes of business, but primarily our domestic and commercial property business. For this business, in most cases, weather perils claims are experienced separately, in order to more accurately set the appropriate level of reserves for past accident months. Based on expected volumes of business, we will also project forward the expected claims experience up to 18 months into the future. It is longer than the length of general insurance contracts that we hold.

Aviva actively supports more accurate forecasting of weather events through our work with government agencies, including consultation with the Pitt Review's Interim Report and the Statement of Principles work. Aviva continues to meet a range of stakeholders to discuss our views on flood management going forward - this includes the Environment Agency, the Royal Institute of British Architects, and The Association of Drainage Authorities – all of which have a huge interest in this area.

For our own business operations we have a robust management and control process (mentioned in question 1) through which we are able to monitor, mitigate and adapt to our climate change risk. We have contingency plans in place to help us react quickly and continue operating regardless of the nature of the event.

Further information

3. Other Risks: (CDP6 1(a)(iii))

3.1 Is your company exposed to other risks as a result of climate change?

We consider our company to be exposed to other risks.

General climate change risks will affect all businesses and individuals. We have identified the risks as being associated with a lack of resources: for our business this will include electricity, gas and water.

As such we have a commitment to support the purchase electricity from renewable and zero emission sources where there is an option to do so, where it is recognised for what it is - a long term sustainable energy sources and customers are recognised for making that responsible choice. 65% (61%:2007) of our total worldwide electricity consumption is purchased from renewable and zero emission sources.

Lack of drinking water is of growing concern to Aviva, particularly in those countries we operate in which are beginning to feel the impact of water scarcity. Our Australia Head Office is based in Melbourne and we are aware that due to the ongoing drought by 2012 a third of all drinking water in the State of Victoria will come from desalination plants. We have therefore promoted water and energy rebates to employees to encourage sustainable environmental practices at home as well as work. Aviva matches the federal government/local state water efficiency and renewable energy rebates of up to AUS\$300.

In India, our Head Office building has installed a system so that grey water can be used for flushing toilet cisterns and garden watering.

Our focus on reduction in water consumption and conservation has increased over the last year and we have strengthened our targets for 2009.

We also need to consider investment risk and do this through the Corporate Governance and Voting Policy.

Responsible Investment Management Agreements

The first contract-based initiative means that Aviva Investors are setting a new threshold for global best practice by including UN Principles for Responsible Investment (UN PRI) in its contracts. Aviva Investors include a clause on responsible investment in all of the contractual Investment Management Agreements proposed to clients. Clients will be able to see the PRI assessment of our performance and they will be able to hold us to account for delivery on our responsible investment commitments.

Global AGM Voting

Aviva Investors is broadening its AGM voting remit. In 2001, Aviva Investors legacy company in the UK, Morley, was the first institutional investor to begin using its AGM vote on companies report and accounts to transmit its views on the quality of disclosure on material corporate responsibility information. This applied to FTSE 100 and has since been expanded to apply to the FTSE 350 and Eurofirst 300 holdings. Aviva Investors is now introducing a global approach for AGM voting on corporate responsibility and will apply this to all global holdings on the MSCI world index.

Further information

The work in Australia can be viewed at <http://www.aviva.com/cr09/index.asp?pageid=41> and India can be viewed at <http://www.aviva.com/cr09/index.asp?pageid=32>. Our % of renewable electricity can be viewed at <http://www.aviva.com/cr09/index.asp?pageid=33>

http://cdp.cdproject.net/attachedfiles/Responses/53384/10813/Aviva_Investors_SRI_initiatives_PR.doc

4. Regulatory Opportunities: (CDP6 1(b)(i))

4.1 Do regulatory requirements on climate change present opportunities for your company?

Regulatory requirements present opportunities for my company.

Companies of Aviva's size and carbon intensity are beginning included in country carbon trading schemes. Aviva is included in the Carbon Reduction Commitment (UK scheme) but not yet in the Australian Carbon Pollution Reduction scheme. We also waiting to hear more about the type of scheme that will be employed in the USA.

The UK scheme has further heightened awareness of the issue at an Executive Level, an Executive sponsor has been appointed to oversee the process and senior finance managers are developing a greater understanding more of the implications for the business. We are wanting to be in a positive position in the CRC league table and are working on the early action metrics in order to achieve this. We feel that one of the early action metrics - the installation of the AMRs will help reduce energy consumption in our smaller offices where they will be deployed by between 5%-10%. The business case for the purchase of the AMRs included the CRC £12 per tonne incentive to further strengthen the case for their purchase.

Further information

5. Physical Opportunities: (CDP6 1(b)(ii))

5.1 Do physical changes resulting from climate change present opportunities for your company?

Physical changes present opportunities for my company.

The lack of natural resources, and offices that are unable to cope with greater temperature variations has lead to increased consideration of the opportunities, particularly financial ones, which can be gained through efficiencies and the building of modern office buildings for our employees.

Building Consolidation and Construction

In Paris, Dublin, some locations in the UK and soon to be Des Moines we have considered our inefficient offices and determined that they are not fit for our purpose.

In the case of Paris 29 small office were closed and a new Head Office was constructed taking into consideration sustainable construction features and fittings.

In the case of Dublin, four offices where closed and a new Head Office was opened which included features such as a naturally lit atrium, greywater recycling.

In the case of Norwich, employees have been moved from old stock offices in Norwich to two new buildings completed in 2006 that have a BREEAM rating of very good. Also the General Insurance Head Office in Norwich as been refurbished to the BREEAM rating of very good.

The new Des Moines Head office will open next year and is being built to the LEED standard, this will result in the consolidation of four offices that are currently in operation.

Alternative provision to travel

Aviva has installed 8 telepresence suites since April 2008. Telepresence is the latest video conferencing technology and its aim is to reduce the amount of emissions,

financial cost and unproductive travel time for our employees. Its acceptance and take up by employees has been impressive and air travel related CO2 emissions reduced by 25% in the first 9 months for those employees using it from its launch. Such is the demand for the use of the telepresence system, we are adding two further suites in our UK business.

Energy Saving technologies

We have trialled and installed load balancers for our boilers to reduce our gas consumption, water saving devices such as flow straighteners, low water consumption urinals, reduced water consumption toilet cisterns, and e-cubes in refrigerators to reduce the consumption of electricity. All of which have a payback period of less than a year.

Transport fuel reductions

We have also started to address the fuel consumption of our RAC rescue fleet, firstly by trying to solve the customers car breakdown over the phone, secondly by fitting speed limiters to all the vehicles which has reduced fuel consumption by 7.5% and thirdly by trialling retrofitted hybrid drive systems into two vehicles we are anticipating that this will reduce fuel consumption, emissions and fuel cost by approximately 20% in the vehicle in which it is installed. The payback for this technology is estimated to be three years.

Further information

[More detail of opportunities](#)

<http://aviva.ir-group.com.akadns.net/cr09/index.asp?pageid=33>

6. Other Opportunities: (CDP6 1(b)(iii))

6.1 Does climate change present other opportunities for your company?

Climate change presents other opportunities for my company.

ClimateWise

Climate Change has also provided new opportunities for sharing and gaining good practices and working in collaboration with peer companies. The ClimateWise Principles is a collaboration of companies in the insurance sector that have come together to address and publicly report on how the insurance sector can help with the issue of climate change, from risk identification, public policy making, and embedding responses to climate change in the way we deal with and can encourage customers, suppliers and companies that we invest in.

Sequestration Research

The sequestration of carbon is a important area of research in climate change mitigation. Aviva is providing five years funding for an Earthwatch investigation into the sequestration potential of mangroves. it will demonstrate how much carbon can be stored in mangroves over time and may lead to the development of carbon finance generation. The project will also provide an economical model for avoiding deforestation and ensuring the sustainability of these natural flood defences.

SRI Funds and Voting

Aviva believes that companies adopting sustainable practices can gain competitive edge, reduce costs, increase their market share and boost shareholder value. Moreover, the growing demand for sustainable products such as renewable energy, organic food and healthcare has created new markets in which far sighted companies can reap rewards. We therefore seek to invest in sustainable and responsible companies that can provide solutions to issues such as climate change whilst avoiding companies that create or add to the problems. Using our proprietary methodology and tools, we screen a broad spectrum of medium to large capitalisation companies for best ideas. Our research team analyses how ideas identified are affected by major sustainable development trends in four areas including climate change. Our fund range covers a breadth of equity classes and investment opportunities from low carbon technologies to sustainable forestry.

We also use our influence as shareholder to promote good practices among those companies in which we invest, focusing on areas where we believe improved management of social environmental or governance issues will enhance or protect shareholder value.

We use the disclosure or otherwise of companies to the CDP process to engage companies of concern in the area of climate change.

Floodplanuk.org

Flood Plan UK has been developed in response to the recent floods, the Pitt Review and our expertise in the area. We are trying change the way people think about flood preparation - through community education and planning which leads to resilience - which in turn challenges both the trauma and cost of a flood. The idea came from us, started with a community consultation in North Yorkshire and is now a major resource for homeowners, communities and local authorities. The cabinet office and emergency planning college have asked to meet us and share findings as a result.

Sponsorship of Flood Resistant architecture

Floating homes, sunken pontoons and timber drawbridges are just some of the innovations presented by architects across the world in a bid to design a flood proof house for the future.

The competition launched by Norwich Union, with the support of the Royal Institute of British Architects (RIBA), aimed to see how architects would tackle the problem of building on flood plains in a liveable, workable and insurable way.

Accounting for Sustainability

Aviva is a member of Accounting for Sustainability which seeks to provide a framework for the integration of financial and non-financial data. We have used the framework in our 2007 and 2008 Annual Report and Accounts to provide a comprehensive picture of our impacts in respect of climate waste and resources.

Further information

[SRI Funds and Voting news http://www.aviva.com/media/news/4556/](http://www.aviva.com/media/news/4556/)

<http://www.aviva.co.uk/media-centre/story/17217/flood-houses-of-the-future-winners-announced>

[Accounting for sustainability framework](#)

<http://aviva.ir-group.com.akadns.net/cr09/index.asp?pageid=33>

<http://www.accountingforsustainability.org/home/>

Greenhouse Gas (GHG) Emissions Accounting, Emissions Intensity, Energy and Trading

7. Reporting Year (CDP6 Q2(a)(ii))

Information about how to respond to this section may be found in "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)" developed by the World Resources Institute and the World Business Council for Sustainable Development ("the GHG Protocol"), see <http://www.ghgprotocol.org/>. ISO 14064-1 is compatible with the GHG Protocol as are a number of regional/national programme protocols. For more information see <http://www.ghgprotocol.org/> and use the guidance button above.

Please provide CDP with responses to questions 7, 8, 9, 10.1, 10.2, 11.1 and 11.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last.

Questions 10.1, 10.2, 11.1, and 11.2 are on subsequent webpages and the dates that you give in answer to question 7 will be carried forwards to automatically populate those webpages.

7.1. Please state the start date and end date of the year for which you are reporting GHG emissions.

Start date: 01 January 2008

End date: 31 December 2008

Financial accounting year: 01 January 2008

8. Reporting Boundary: (CDP6 Q2(a)(i))

8.1. Please indicate the category that describes the company, entities, or group for which Scope 1 and Scope 2 GHG emissions are reported.

Companies over which financial control is exercised – per consolidated audited Financial Statements.

8.2. Please state whether any parts of your business or sources of GHG emissions are excluded from your reporting boundary.

There are two areas that are currently excluded from our reporting boundaries for the purposes of CDP. Energy consumption from property assets which are owned/managed by Aviva in respect of pension funds and other investment vehicles in the Aviva Investors Property Fund area and Solus Car repairers - the Aviva owned car accident repair bodyshops (20 locations in the UK). These will be included in the reporting boundaries for 2009 emissions.

9. Methodology: (CDP6 Q2(a)(iii))

9.1. Please describe the process used by your company to calculate Scope 1 and Scope 2 GHG emissions including the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 GHG emissions.

Please provide your answer in the text box. In addition to this description, if relevant, select a methodology from the list of published methodologies. This will aid automated analysis of the data.

We collect scope 1 and 2 GHG emissions on a quarterly basis from our business round the world through our online reporting system. The system contains the latest conversion factors from the relevant GHG Protocol calculators. In the interests of comparability, we restate the electricity emissions factors for each country we have operations in once every four years. We restated our 2007 emissions conversion factors basis on the 2005 country electricity conversion factors (GHG protocol-indirect CO2 emissions from Purchased Electricity, Heat or Steam 2.0 March 2008.) We convert any source of energy used into CO2 emissions only. Due to the nature of our business we do not collect fugitive emissions data as these are negligible.

Select methodologies:

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Please also provide:

9.2 Details of any assumptions made.

The data collected covers 99.52% of Aviva by FTE. The majority of the data that is collected is based on actual data that is received from suppliers of the various energy sources or from the services provided to us. For the minority of data that is not actual data is extrapolated based on quarterly data that is available and on the rare occasion data may be estimated based on secondary source evidence.

9.3 The names of and links to any calculation tools used.

For the 2008 environmental data and the restated 2007 environmental data we have used the SOFi online data collection and reporting software. We have taken the methodology and conversion factors from the GHG protocol calculation tools below.

Select calculation tools:

GHG Protocol - CO2 emissions from business travel 1.2 August 2005

GHG Protocol - CO2 emissions from fuel use in facilities 3.0 March 2008

GHG Protocol - Indirect CO2 emissions from Purchased Electricity, Heat, or Steam 2.0 March 2008

9.4 The global warming potentials you have applied and their origin.

As stated in 9.1 we have simply collected and report on the CO2 emissions from the business and therefore it GWP is by definition 1.

9.5 The emission factors you have applied and their origin.

We have used the specific electricity country emissions factor for all our electricity consumption. We have used the standard natural gas emission factor per the GHG protocol. For fixed use of oil in our standby generators we have used the diesel oil figure again from the GHG protocol. For business travel we have used the litres conversion factor for diesel, petrol and LPG vehicles where available. In some areas the volume of fuel was not available and so the kms conversion factors were used for each fuel type. For air travel we have used the shorthaul and longhaul kms conversion factors again all from the GHG Protocol. We use GHG protocol for rail kms as well.

Further information

10. Scope 1 Direct GHG Emissions: (CDP6 Q2(b)(i))

Instructions for question 10 and question 11 (following page)

When providing answers to questions 10 and 11, please do not deduct offset credits, Renewable Energy Certificates etc, or net off any estimated avoided emissions from the export of renewable energy, carbon sequestration (including enhanced oil recovery) or from the use of goods and services. Opportunities to provide details of activities that reduce or avoid emissions are provided elsewhere in the information request.

Carbon dioxide emissions from biologically sequestered carbon e.g. carbon dioxide from burning biomass/biofuels should be reported separately from emissions Scopes 1, 2 and 3. If relevant, please report these emissions in question 15. However, please do include any nitrous oxide or methane emissions from biomass/biofuel combustion in your emissions under the three scopes.

Please answer the following questions using Table 1.

Please provide:

10.1. Total gross global Scope 1 GHG emissions in metric tonnes of CO₂-e

Please break down your total gross global Scope 1 emissions by:

10.2. Country or region

Please provide CDP with responses to questions 10.1 and 10.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last. Table 1 (below) and table 5 (Q11.1 and 11.2) will be automatically populated with the dates that you give in answer to 7.1.

Electric utilities should report emissions by country/region using the table in question EU3.

Table 1 - Please use whole numbers only. Use the "Other" option in the drop down menu to enter the name of a region.

Reporting year Q7.1 Start date	01/01/2008
Reporting year Q7.1 End date	31/12/2008
10.1 Total gross global Scope 1 GHG emissions in metric tonnes CO ₂ -e	61886
10.2 Gross Scope 1 emissions in metric tonnes CO₂-e by country or region	
Australia	110
Belgium	4400
Canada	4028
Czech Republic	178
France	224
Germany	987
Hungary	0
Ireland	577
Italy	0
Lithuania	3
Netherlands	1886
Romania	11
United Kingdom	48414
USA	864
Turkey	204
Spain	0
Malaysia	0
Sri Lanka	0

Your answer to question 10.1 will be automatically carried forward to tables 2 and 3 below if you add a country or region in answer to 10.2 or press "Save" at the end of the page.

Please tick the box if your total gross global Scope 1 figure (Q10.1) includes emissions that you have transferred outside your reporting boundary (as given in answer to 8.1). Please report these transfers under 13.5.

[Total gross global Scope 1 figure includes emissions that you have transferred outside your reporting boundary](#)

Where it will facilitate a better understanding of your business, please also break down your total global Scope 1 emissions by:

10.3. Business division

and/or

10.4. Facility

10.3. Business division (only data for the current reporting year requested)

Table 2 - Please use whole numbers only.

Business Divisions - Enter names below	Scope 1 Metric tonnes CO2-e
Total gross global Scope 1 GHG emissions in metric tonnes CO₂-e - answer to question Q10.1	61886

10.4. Facility (only data for the current reporting year requested)

Table 3 - Please use whole numbers only.

Facilities - Enter names below	Scope 1 Metric tonnes CO2-e
Total gross global Scope 1 GHG emissions in metric tonnes CO₂-e - answer to question Q10.1	61886

10.5. Please break down your total global Scope 1 GHG emissions in metric tonnes of the gas and metric tonnes of CO₂-e by GHG type. (Only data for the current reporting year requested.)

Table 4 - Please use whole numbers only.

Scope 1 GHG Type	Unit	Quantity
CO ₂	Metric tonnes	25466
CH4	Metric tonnes	
CH4	Metric tonnes CO ₂ -e	
N2O	Metric tonnes	
N2O	Metric tonnes CO ₂ -e	
HFCs	Metric tonnes	
HFCs	Metric tonnes CO ₂ -e	
PFCs	Metric tonnes	
PFCs	Metric tonnes CO ₂ -e	
SF6	Metric tonnes	
SF6	Metric tonnes CO ₂ -e	

10.6. If you have not provided any information about Scope 1 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 1 GHG emissions information in future.

Further information

[Our scope 1 emissions includes fixed gas and diesel oil for our backup generators. It also includes the diesel used to run the two transports fleets in the UK - Auto Windscreens and RAC. This equates to 13,847,964 litres of fuel. The AutoWindscreens business was sold in 2008 and therefore will not be included in the 2009 data.](#)

11. Scope 2 Indirect GHG Emissions: (CDP6 Q2(b)(i))

Important note about emission factors where zero or low carbon electricity is purchased:

The emissions factor you should use for calculating Scope 2 emissions depends upon whether the electricity you purchase is counted in calculating the grid average emissions factor or not – see below. You can find this out from your supplier.

Electricity that IS counted in calculating the grid average emissions factor:

Where electricity is sourced from the grid and that electricity has been counted in calculating the grid average emissions factor, Scope 2 emissions must be calculated using the grid average emissions factor, even if your company purchases electricity under a zero or low carbon electricity tariff.

Electricity that is NOT counted in calculating the grid average emissions factor:

Where zero or low carbon electricity is sourced from the grid or otherwise transmitted to the company and that electricity is not counted in calculating the grid average, the emissions factor specific to that method of generation can be used, provided that any certificates quantifying GHG-related environmental benefits claimed for the electricity are not sold or passed on separately from the electricity purchased.

[Click here](#) to see the instructions from the previous page on answering question 11.

Please answer the following questions using Table 5.

Please provide:

11.1. Total gross global Scope 2 GHG emissions in metric tonnes of CO₂-e.

Please break down your total gross global Scope 2 emissions by:

11.2. Country or region

Please provide CDP with responses to questions 11.1 and 11.2 for the three years prior to the current reporting year if you have not done so before or if this is the first time you have answered a CDP information request. Please work backwards from the current reporting year, so that you enter data for your oldest reporting period last. Table 5 will be automatically populated with the dates that you gave in answer to 7.1.

Table 5 - Please use whole numbers only. Use the "Other" option in the drop down menu to enter the name of a region.

Reporting year Q7.1 Start date	01/01/2008
Reporting year Q7.1 End date	31/12/2008
11.1 Total gross global Scope 2 GHG emissions in metric tonnes CO ₂ -e	204521
11.2 Gross Scope 2 emissions in metric tonnes CO₂-e by country or region	
Australia	2369
Belgium	1227
Canada	2692
Czech Republic	308
France	617
Hungary	113
Germany	1733
Ireland	6579
Italy	529
Lithuania	176
Netherlands	6426
Poland	421
Romania	181
Russia	180
Spain	172
United Kingdom	59601
USA	10145
India	3490
Turkey	1695
Malaysia	1170
Hong Kong	77
Taiwan	236
Singapore	1345
China	3397
Sri Lanka	642

Your answer to 11.1 will be automatically carried forward to tables 6 and 7 below if you add a country or region in answer to 11.2 or press "Save" at the end of the page.

Where it will facilitate a better understanding of your business, please also break down your total global Scope 2 emissions by:

11.3. Business division

and/or

11.4. Facility

11.3. Business division (only data for the current reporting year requested)

Table 6 - Please use whole numbers only.

Business Divisions - Enter names below	Scope 2 Metric tonnes CO2-e
Total gross global Scope 2 GHG emissions in metric tonnes CO ₂ -e - answer to question Q11.1	204521

11.4. Facility (only data for the current reporting year requested)

Table 7 - Please use whole numbers only.

Facilities - Enter names below	Scope 2 Metric tonnes CO2-e
Total gross global Scope 2 GHG emissions in metric tonnes CO ₂ -e - answer to question Q11.1	204521

11.5. If you have not provided any information about Scope 2 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 2 GHG emissions information in future.

Further information

12. Contractual Arrangements Supporting Particular Types of Electricity Generation: (CDP6 Q2(b)(i)- Guidance)

12.1. If you consider that the grid average factor used to report Scope 2 emissions in question 11 does not reflect the contractual arrangements you have with electricity suppliers, (for example, because you purchase electricity using a zero or low carbon electricity tariff), you may calculate and report a contractual Scope 2 figure in response to this question, showing the origin of the alternative emission factor and information about the tariff.

151289 MWh of electricity is purchased by Aviva on renewable /zero emission tariffs this equates to 65% of our total electricity consumption on a worldwide basis and increasing from 61% in 2007 and 55% in 2006. The electricity is sourced from wind, solar, micro hydro, biomass and good quality CHP. In the UK the 100% electricity we purchase is exempt from the climate change levy.

12.2. If you retire any certificates (eg: Renewable Energy Certificates) associated with zero or low carbon electricity, please provide details.

Further information

13. Scope 3 Other Indirect GHG Emissions: (CDP6 Q2(c))

For each of the following categories, please:

- Describe the main sources of emissions,
- Report emissions in metric tonnes of CO₂-e,
- state the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

Notes about question 13

When providing answers to question 13, please do not deduct offset credits, Renewable Energy Certificates etc, or net off any estimated avoided emissions from the export of renewable energy, carbon sequestration (including enhanced oil recovery) or from the use of goods and services. Opportunities to provide details of activities that reduce or avoid emissions are provided elsewhere in the information request.

Carbon dioxide emissions from biologically sequestered carbon e.g. carbon dioxide from burning biomass/biofuels should be reported separately from emissions Scopes 1, 2 and 3. If relevant, please report these emissions in question 15. However, please do include any nitrous oxide or methane emissions from biomass/biofuel combustion in your emissions under the three scopes.

13.1 Employee business travel
Describe the main sources of emissions

The main source of our emissions under scope 3 is business travel - business kms travelled in company and private cars, air travel, rail travel and where possible to collect taxi travel. The car business kms come from the company expenses systems that record the kms travelled and claimed for. The air travel kms is provided to us by our company travel agencies as is the rail data and where we have a company account with a taxi company they also provide us with a kms report. The data is collected and collated from all the 27 businesses through our online data reporting system, embedded in this system is the GHG Protocol methodology and conversion factors for calculating the respective emissions generated.

In April 2008 we installed 6 Teleris Telepresence suites at major sites. CO2 emissions from those employees who started using it immediately reduced by 25%.

Our UK company car policy has a cap of 200g/kms in respect of the type of vehicle available. We are working to further reduce this cap to 160g/kms. We also provide the choice of alternative fuel vehicles.

We are seriously considering the use of RAC electric vans for city centre areas.

Emissions in metric tonnes CO₂-e.

Air travel - 12,991 tonnes CO₂
Car Business travel (taxi is included in car business travel) - 13,143 tonnes CO₂
Rail - 275 tonnes CO₂
TOTAL - 26,409 tonnes CO₂

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

The data is collected and collated from all the 27 businesses through our online data reporting system, embedded in this system is the GHG Protocol methodology and conversion factors for calculating the respective emissions generated.

For air travel we use just the long haul and shorthaul conversion factors; the medium haul factor has not been included by our travel agent in the reporting process. Data is accurately presented where possible directly from the suppliers, on occasion a small proportion is extrapolated from previous and subsequent quarter year data, or in isolated cases based on information that is associated with the data such as number of flights, most popular routings and cost to calculate a representative figure if necessary.

The vehicle mileage is calculated based on conversion factors for the individual fuel type - diesel, unleaded LPG and hybrid vehicle - 2.0 litre engine size is used for calculation of emission per mile where volume of fuel is not available.

13.2. External distribution/logistics Describe the main sources of emissions

Our distribution/ logistics area is provided by Williams Lea.

Emissions in metric tonnes CO₂-e.

Not included within our boundaries.

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

N/a

13.3 Use/disposal of company's products and services

For auto manufacture and auto component companies – please refer to the additional questions for these sectors before completing question 13.3.
Describe the main sources of emissions

We are currently not able to quantify the emissions (other than our operational emissions) in respect of the use/disposal of Aviva's products and services. We feel it is our responsibility to use our influence with our 50 million customers to encourage them to consider the environmental impact indirectly associated with our products.

Emissions in metric tonnes CO₂-e.

N/a

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

N/a

13.4 Company supply chain Describe the main sources of emissions

We currently have no measure of the carbon emissions within our supply chain. We feel it is our responsibility to encourage our suppliers to manage the carbon footprint of the products and services they provide to us. As such all our suppliers are required to sign and Corporate Responsibility Code of Conduct. We have included requirements around environmental impacts in contract and in the outsourcing of our UK data centres. We included a 'green' Service Level agreement covering areas such as sourcing of renewable energy and agreement to sign up to the EU Environmental Code of Conduct for Data Centres.

Emissions in metric tonnes CO₂-e.

N/a

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

N/a

13.5 Other

If you are reporting emissions that do not fall into the categories above, please categorise them into transferred emissions and non-transferred emissions (please see guidance for an explanation of these terms).

Please report transfers in the first three input fields and non-transfers in the last three input fields.

Transfers

Describe the main sources of emissions

Nothing else to add.

Transfers

Report emissions in metric tonnes of CO₂-e.

N/a

Transfers

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

N/a

Non-transfers

Describe the main sources of emissions

Nothing else to add

Non-transfers

Report emissions in metric tonnes of CO₂-e.

N/a

Non-transfers

State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

N/a

13.6 If you have not provided information about one or more of the categories of Scope 3 GHG emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 3 indirect emissions information in future.

N/a

Further information

Details of our green SLA with one of our suppliers <http://www.eds.com/news/features/5479/>

14. Emissions Avoided Through Use Of Goods And Services (New for CDP 2009)

14.1. If your goods and/or services enable GHG emissions to be avoided by a third party, please provide details including the estimated avoided emissions, the anticipated timescale over which the emissions are avoided and the methodology, assumptions, emission factors (including sources), and global warming potentials (including sources) used for your estimations.

We can not think of any products and services that we provide that enable GHG emissions to be avoided by a third party due to the nature of our business. However, we do reward our customers for good environmental behaviour such as reduction in premiums for having energy efficient homes (Aviva France), reduction in premiums for hybrid cars (Aviva Canada and Delta Lloyd), Offsetting of emissions created by driving as part of the norm for motor insurance policy (Delta Lloyd), free energy survey carried out by Bureau Veritas as part of our property owners insurance (UK), Insurance premiums related to the number of miles driven (Aviva Canada, France and Turkey). Inclusion on buy list for companies that have a low carbon footprint and are demonstrating progress for our SRI funds.

Further information

15. Carbon Dioxide Emissions from Biologically Sequestered Carbon: (New for CDP 2009)

An example would be carbon dioxide from burning biomass/biofuels.

15.1. Please provide the total global carbon dioxide emissions in metric tonnes CO₂ from biologically sequestered carbon.

Emissions in metric tonnes CO₂ - Please use whole numbers only

0

Further information

We do not have any emissions from biologically sequestered carbon

16. Emissions Intensity: (CDP6 Q3(b))

16.1. Please supply a financial emissions intensity measurement for the reporting year for your combined Scope 1 and 2 emissions.

Please describe the measurement.

We do not normally normalise our environment data against financial emissions intensity measures. We prefer to publish our total data and provide all forms of normalisation available so that the reader can cut the information in any way they wish. We feel that use of output is flawed due to the huge range of products and services we provide. Financial measures are also difficult as insurance companies cannot provide a turnover figure and instead the majority use worldwide sales. We do not have a figure for EBITA and the closest we can come to it is EBT (Aviva made a loss in respect of this and therefore can not use this figure for normalisation) For this section of the response, therefore we will be using worldwide sales. Our total worldwide sales for 2008 were US\$95,118m.

16.1.1. Give the units. For example, the units could be metric tonnes of CO₂-e per million Yen of turnover, metric tonnes of CO₂-e per US\$ of profit, metric tonnes of CO₂-e per thousand Euros of turnover.

The units therefore will be metric tonnes CO₂-e per million US\$ of worldwide sales.

combined scope 1 & 2 266407/95118000000 = 0.23 tonnes CO₂-e per USD million of worldwide sales

16.1.2. The resulting figure.

Use a decimal point if necessary. Please use a "." rather than a ",", i.e. please write 15.6 rather than 15,6

0.23

16.2. Please supply an activity related intensity measurement for the reporting year for your combined Scope 1 and 2 emissions.

Please describe the measurement.

We do not measure against the number of policies we issue as some are long term and some are very short term, we also include the RAC business which is different from the rest of our office based services. We could quantify our emissions in terms of number of customers (50 million worldwide). Internally, we compare our different business, excluding RAC, based on FTE and Sqm. As the guidance does not suggest a preferred measure for our sector, we have chosen to compare against FTE. We have 54,000 FTE.

16.2.1. Give the units e.g. metric tonnes of CO₂-e per metric tonne of output or for service sector businesses per unit of service provided.

CO₂-e per FTE

266407/54000= 4.9 tonnes CO₂-e per FTE

16.2.2. The resulting figure.

Use a decimal point if necessary. Please use a "." rather than a ",", i.e. please write 15.6 rather than 15,6

4.9

Further information

17. Emissions History: (CDP6 Q2(f))

17.1. Do emissions for the reporting year vary significantly compared to previous years?

Yes

Our emissions in respect of scope 1 has reduced due to plant timing matching operation timing more closely, also energy saving technologies such as boiler load balancers in the UK.

Our emissions in respect of Scope 2 through a combination of using the most up to date GHG electricity conversion factors, they have also reduced in the context of our contractual arrangements i.e. use of renewable electricity has increase from 61% to 65% worldwide over the last year. Consumption of electricity overall has reduced by 11,000 MWh due to behavioural change campaigns.

On an absolute data basis (after restatement of 2007 figures) our emissions have reduced by 3.3%, on a like for like business basis our emissions have reduce by 6.6%.

If the answer to 17.1 is Yes:

17.1.1. Estimate the percentage by which emissions vary compared with the previous reporting year.

This box will accept numerical answers containing a decimal point. Please use "." not "," i.e. write 10.6, not 10,6.

6.6 %

Have the emissions increased or decreased?

Decreased

Further information

18. External Verification/Assurance: (CDP6 Q2(d))

18.1. Has any of the information reported in response to questions 10 – 15 been externally verified/assured in whole or in part?

Yes, it has been externally verified/assured in whole or in part. (Please continue with questions 18.2 to 18.5)

It would aid automated analysis of responses if you could select responses from the tick boxes below. However, please use the text box provided if the tick boxes menu options are not appropriate.

18.2. State the scope/boundary of emissions included within the verification/assurance exercise.

[Scope 1 Q10.1](#)

[Scope 2 Q11.1](#)

[Contractual Scope 2 Q12.1](#)

[Scope 3 employee business travel Q13.1](#)

Please use the text box below to describe the scope/boundary of emissions included within the verification/assurance exercise if the tick box menu options above are not applicable.

18.3. State what level of assurance (eg: reasonable or limited) has been given.

The level of assurance received for reporting our carbon emissions was in respect of the data collection process for carbon emissions including a review of data trends, investigation into any large/unusual movements and an appraisal of the appropriateness of any assumptions/estimates used in the data calculations.

18.4. Provide a copy of the verification/assurance statement.

Please attach a copy/copies.

18.5. Specify the standard against which the information has been verified/assured.

[Here are the copies of the Assurance Statement](#)

<http://aviva.ir-group.com.akadns.net/cr09/index.asp?pageid=20>

AA1000

18.6. If none of the information provided in response to questions 10-15 has been verified in whole or in part, please state whether you have plans for GHG emissions accounting information to be externally verified/assured in future.

Further information

19. Data Accuracy: (CDP6 Q2(e) – New wording for CDP 2009)

19.1. What are the main sources of uncertainty in your data gathering, handling and calculations e.g.: data gaps, assumptions, extrapolation, metering/measurement inaccuracies etc?

If you do not gather emissions data, please select emissions data is NOT gathered and proceed to question 20.

Emission data is gathered.

Data, where possible is gather from suppliers of the services to our businesses. The majority of our energy consumption (UK) is checked through an energy bureau as well as against internal processes.

Some of the contracts we have in place with suppliers include the reporting of energy and emissions reporting.

On a small number of occasions where accurate data is not available, a buisness unit may have to rely on extrapolation over a particular quarter. This is adjusted when accurate data is subsequently available. There may be an odd occasion where direct data is not available and so secondary data has to be used, which may include for air travel for example - number of journeys made, most common routings and cost.

19.2. How do these uncertainties affect the accuracy of the reported data in percentage terms or an estimated standard deviation?

These are negligible and our Assurance provider advises that there is less than a 5% deviation due to extrapolation or estimation.

19.3. Does your company report GHG emissions under any mandatory or voluntary scheme (other than CDP) that requires an accuracy assessment?

Yes (Please answer the following questions - 19.3.1, 19.3.2).

19.3.1 Please provide the name of the scheme.

Other

We publish our carbon footprint in our Annual Report and Account and Annual CR Report. We include our data in investor and other survey and responses such as the DJSI, FTSE4Good, BITC, The ClimateWise Principles and the Global Compact COP.

19.3.2. Please provide the accuracy assessment for GHG emissions reported under that scheme for the last report delivered.

These are negligible and our Assurance provider advises that there is less than a 5% deviation due to extrapolation or estimation.

Further information

20. Energy and Fuel Requirements and Costs: (New for CDP 2009)

Please provide the following information for the reporting year:

Cost of purchased energy

20.1. The total cost of electricity, heat, steam and cooling purchased by your company.

15248005

Select currency

British pound

20.1.1. Please break down the costs by individual energy type.

Table 8 - The "Cost" column will not accept text. Please use whole numbers only.

Energy type	Cost	Currency
Electricity	15239226	British pound
Heat	0	British pound
Steam	8739	British pound
Cooling	0	British pound

Cost of purchased fuel

20.2. The total cost of fuel purchased by your company for mobile and stationary combustion.

2942360

Select currency

British pound

20.2.1. Please breakdown the costs by individual fuel type.

Table 9 - The cost column will not accept text. Please use whole numbers only.

Mobile combustion fuels	Cost	Currency
Stationary combustion fuels	Cost	Currency
Natural gas	2886794	British pound
Distillate fuel oil No.1	55566	British pound

Energy and fuel inputs

The following questions are designed to establish your company's requirements for energy and fuel (inputs). Please note that MWh is our preferred unit for answers as this helps with comparability and analysis. Although it is usually associated with electricity, it can equally be used to represent the energy content of fuels (see CDP 2009 Reporting Guidance for further information on conversions to MWh).

Purchased energy input

20.3 Your company's total consumption of purchased energy in MWh.

Please use whole numbers only.

231004 MWh

Purchased and self produced fuel input

20.4. Your company's total consumption in MWh of fuels for stationary combustion only. This includes purchased fuels, as well as biomass and self-produced fuels where relevant.

Please use whole numbers only.

168635 MWh

In answering this question and the one below, you will have used either Higher Heating Values (also known as Gross Calorific Values) or Lower Heating Values (also known as Net Calorific Values).

Please state which you have used in calculating your answers.

The Gross Calorific value has been used.

20.4.1. Please break down the total consumption of fuels reported in answer to question 20.4 by individual fuel type in MWh.

Table 10 - Please use whole numbers only

Stationary combustion fuels	MWh
-----------------------------	-----

Natural gas	166445
Distillate fuel oil No.1	2190

Energy output

In this question we ask for information about the energy in MWh generated by your company from the fuel that it uses. Comparing the energy contained in the fuel before combustion (question 20.4) with the energy available for use after combustion will give an indication of the efficiency of your combustion processes, taking your industry sector into account.

20.5. What is the total amount of energy generated in MWh from the fuels reported in question 20.4?

Please use whole numbers only.

168635 MWh

20.6. What is the total amount in MWh of renewable energy, excluding biomass, that is self-generated by your company?

Please use whole numbers only.

0 MWh

Energy exports

This question is for companies that export energy that is surplus to their requirements. For example, a company may use electricity from a combined heat and power plant but export the heat to another organisation.

20.7. What percentage of the energy reported in response to question 20.5 is exported/sold by your company to the grid or to third parties?

Please use whole numbers only.

0 %

20.8. What percentage of the renewable energy reported in response to question 20.6 is exported/sold by your company to the grid or to third parties?

Please use whole numbers only.

0 %

Further information

re. question 20.2.1 Table 9 - we do not collect the cost of mobile fuel on a worldwide basis and therefore we have not included them.

21. EU Emissions Trading Scheme: (CDP6 Q2(g)(i) – New wording for CDP 2009)

Electric utilities should report allowances and emissions using the table in question EU5.

21.1. Does your company operate or have ownership of facilities covered by the EU Emissions Trading Scheme (EU ETS)?

No (Please go to question 22.)

Please give details of:

21.2. The allowances allocated for free for each year of Phase II for facilities which you operate or own. (Even if you do not wholly own facilities, please give the full number of allowances).

Table 11 - Please use whole numbers only.

	2008	2009	2010	2011	2012
Free allowances metric tonnes CO2					

21.3. The total allowances purchased through national auctioning processes for the period 1 January 2008 to 31 December 2008 for facilities that you operate or own. (Even if you do not wholly own facilities, please give the total allowances purchased through auctions by the facilities for this period).

Total allowances purchased through auction

21.4. The total CO₂ emissions for 1 January 2008 to 31 December 2008 for facilities which you operate or own. (Even if you do not wholly own facilities, please give the

total emissions for this period.)

Total emissions in metric tonnes

Further information

22. Emissions Trading: (CDP6 Q2(g)(ii) - New wording for CDP 2009)

Electric utilities should read EU6 before answering these questions.

22.1. Please provide details of any emissions trading schemes, other than the EU ETS, in which your company already participates or is likely to participate within the next two years.

[We participate or anticipate participating in trading schemes other than the EU ETS in the next two years.](#)

[We anticipate that Aviva will be taking part in the UK Carbon Reduction Commitment scheme from April 2010.](#)

22.2. What is your overall strategy for complying with any schemes in which you are required or have elected to participate, including the EU ETS?

[We are revising our carbon management strategy to build in the requirements of the CRC, whilst maintaining our stance on reduction of emissions through behavioural change and employment of energy saving technologies, purchase of renewable electricity where credit for this is attributed to the company and offsetting our remaining unavoidable carbon emissions on a voluntary basis through the purchase of voluntary carbon credits.](#)

[We have created a team to manage the implementation of the CRC and have Executive sponsorship to oversee the process. We are implementing the early action measures that will benefit our position in the overall CRC league table in the first year.](#)

Further information

22. Carbon credits

22.3. Have you purchased any project-based carbon credits?

[Yes. \(Please answer the following questions\)](#)

Please indicate whether the credits are to meet one or more of the following commitments:

[Primarily for voluntary offsetting of your own emissions](#)

Please also:

22.4 Provide details including the type of unit, volume and vintage purchased and the standard/scheme against which the credits have been verified, issued and retired (where applicable).

[Project Country Standard amount vintage year of attribution](#)
[Treadle Pumps India VCS 20000 2006 -10 2006](#)
[Green Cement Ireland & Netherlands VCS 30000 2006 2006](#)
[Biogas Sri Lanka Gold 3000 2006-07 2006](#)
[Wind China VCS 38000 2005 -07 2006](#)
[Wind India VCS 32000 2007-08 2006](#)
[Fuel efficient stoves Ghana Gold 20000 2007-08 2006](#)
[Bagasse India VCS 25635 2007 2007](#)
[Rice Husks India VCS 24000 2007 2007](#)
[hydro China VCS 70600 2006 - 07 2007](#)
[Fuel efficient stoves Kenya Gold 11500 2007-09 2007](#)
[solar India Gold 5000 2007 2007](#)
[Treadle Pumps India VCS 8124 2007 2008](#)
[hydro China VCS 10846 2007 2008](#)
[Wind China Gold 85000 2008 2008](#)

22.5. Have you been involved in the origination of project-based carbon credits?

[Yes. \(Please answer the following question\)](#)

22.6. Please provide details including:

- Your role in the project(s),
- The locations and technologies involved,

- The standard/scheme under which the projects are being/have been developed,
- Whether emissions reductions have been validated or verified,
- The annual volumes of generated/projected carbon credits,
- Retirement method if used for own compliance or offsetting.

For the majority of the projects we have simply purchased the credits through carbon brokers or directly from the project originators.

In respect of the solar project - we were approached directly by the company with the project as they wanted to raise carbon finance. We advised that we only purchased credits that had VCS or Gold Standard accreditation. We arranged a joint meeting between the project originator, a carbon broker and ourselves and we confirmed that we would purchase the first year's credits from the project if they worked with the carbon brokers and received VCS or Gold standard accreditation. 5000 tonnes was achieved in the first year and this will increase over the next few years.

African school stoves project - We were approached to consider carbon finance for a school efficient stove project in Africa which is being promoted by Aviva's former CEO. As part of a larger charity initiative we again have made introductions between the small scale areas of work and carbon brokers in order to develop a robust project which can then be used to generate carbon finance to support the project.

22.7. Are you involved in the trading of allowances under the EU ETS and/or project-based carbon credits as a separate business activity, or in direct support of a business activity such as investment fund management or the provision of offsetting services?

No. (Please go to question 23)

22.8. Please provide details of the role performed.

Further information

Whilst we are not involved in any trading of allowances, our investment arm - Aviva Investors do hold shares in carbon brokerages and project origination companies.

Performance

23. Reduction plans & goals: (CDP6 Q3(a))

23.1. Does your company have a GHG emissions and/or energy reduction plan in place?

Yes. (Please go to question 23.3)

23.2. Please explain why.

It would aid automated analysis of responses if you could select a response from the options below as well as using the text box. However, please just use the text box provided if the options are not appropriate.

If the menu options above are not appropriate, please answer the question using the text box below:

Our GHG emissions/energy reduction plan are place as part of our Climate Change Strategy. They are also included at a business unit level as part of our UK Aviva Energy Management Policy.

Goal setting

23.3. Do you have an emissions and/or energy reduction target(s)?

Yes. (Please answer the following questions)

23.4 What is the baseline year for the target(s)?

We have two baselines - the first one is 2006 when we started reporting on the RAC business which was acquired in 2005. We have an annual reduction target of 5% carbon dioxide emissions. This is a Group target, a KPI and is included in the as a personal objective in the Group Chief Executive's and member of the Executive's team personal objectives.

23.5. What is the emissions and/or energy reduction target(s)?

Annual Group reduction target of 5% CO2 emissions per annum.

23.6. What are the sources or activities to which the target(s) applies?

Group wide emissions from stationary energy consumption and business travel.

23.7. Over what period/timescale does the target(s) extend?

Rolling - ongoing target of 5% per annum

Further information

23. GHG emissions and energy reduction activities

23.8. What activities are you undertaking or planning to undertake to reduce your emissions/energy use?

Alternative provision to travel

Aviva has installed 8 telepresence suites since April 2008. Telepresence is the latest video conferencing technology and its aim is to reduce the amount of emissions, financial cost and unproductive travel time for our employees. Its acceptance and take up by employees has been impressive and air travel related CO2 emissions reduced by 25% in the first 9 months for those employees using it from its launch. Additional telepresence suites are now being added to cope with the demand of employees using it instead of travelling.

Energy Saving technologies

We have trialled and installed load balancers for our boilers to reduce our gas consumption, water saving devices such as flow straighteners, low water consumption urinals, reduced water consumption toilet cisterns, and e-cubes in refrigerators to reduce the consumption of electricity. All of which have a payback period of less than a year.

We are also installing Automated Meter Readers in respect of electricity and gas to manage our smaller UK sites more effectively.

Transport fuel reductions

We have also started to address the fuel consumption of our RAC rescue fleet, firstly by trying to solve the customers car breakdown over the phone to negate the need for a roadside rescue vehicle to attend, secondly by fitting speed limiters to all the vehicles which has reduced fuel consumption by 7.5% and thirdly by trialling retrofitted hybrid drive systems into two vehicles we are anticipating that this will reduce fuel consumption, emissions and fuel cost by approximately 20% in the vehicle in which it is installed. The payback for this technology is estimated to be three years.

Employee Engagement

We have created a toolkit for Corporate Responsibility which contains ideas, documents and campaigns that can be used in our businesses to raise awareness and gain buy in from our employees. The FORGE climate change employee engagement document is widely used, as well as poster for local campaigns. We have a worldwide intranet which is currently regularly accessed by over 25,000 employees, we have forum discussions on the use of energy, climate change and environmental management. We have also just started an isave campaign which provides financial incentives for employees ideas on how to cut the impact of energy consumption and looks for smart solutions.

We have an annual employee survey in which we ask employees as to whether they agree to the statement that 'I think Aviva acts responsibly in respect of the environment'. Last year, 77% of employees who completed the survey were positive to the statement. This is greater than the Financial Services norm for this question.

We are a member of the UN Global Compact 'Caring for Climate' initiative.

Further information

23. Goal evaluation

23.9. What benchmarks or key performance indicators do you use to assess progress against the emissions/energy reduction goals you have set?

We report against all the UK Government's current core Environmental KPI for companies. We also respond to the ClimateWise principles and the UN Global Compact Caring for Climate initiative.

We also use our year on year score in the CDP as a benchmark for ourselves, but unfortunately we believe that the scoring system will change this year so we won't be able to benchmark against last year.

Further information

23. Goal achievement

23.10. What emissions reductions, energy savings and associated cost savings have been achieved to date as a result of the plan and/or the activities described above? Please state the methodology and data sources you have used for calculating these reductions and savings.

Our emissions have reduced year on year since the new baseline was put in place following the acquisition of the RAC business. 2008 saw a 3.3% reduction overall and 6.6% for like for like business.

The reductions have been achieved through the increase use of renewable electricity, use of the telepresence system although obviously this is difficult to quantify how much of the reduction in air travel CO2 emissions is due to the increased use of the telepresence system and how much is due to the economic downturn. We will gain a better understanding of this as the economy picks up again, if the use of the telepresence system remains constant or continues to increase.

Our gas consumption in the UK has reduced due to the employment of boiler loading balancing optimisation valve technology, this is despite a colder winter than the previous year - the case study is mentioned in the CBI Energy Efficiency Brief 'Less is more' - April 2009. This will save 1,389 tonnes CO2 per annum.

Timeclocks on vending machines will save 92 tonnes CO2 per annum

E-cubes in refrigerators will save 7 tonnes CO2 per annum

Speed limiters on vans will save 2,000 tonnes CO2 per annum

Retro fitted hybrid drive will reduce fuel consumption by 20%

Telepresence suites - for the group of employees that have been using the system since its installation air travel related emissions have reduced by 25%

23.11. What investment has been required to achieve the emissions reductions and energy savings targets or to carry out the activities listed in response to question 23.8 and over what period was that investment made?

Table 13 - The "Investment number" column will not accept text. Please use whole numbers only.

Emission reduction target/energy saving target or activity	Investment number	Investment currency	Timescale
boiler optimisation valves x 112	154762	British pound	38 weeks
timeclocks for vending machines x 320	1600	British pound	5 weeks
e-cubes in refrigerators x 94	47000	British pound	4 1/2 years
speed limiters on RAC vans	0	British pound	immediate
retro fitted hybrid drive systems (currently trialling 2)		British pound	5 years
telepresence suites	1000000	British pound	1 year
powerperfecter (about to install)	150000	British pound	2 1/2 years
AMR for electricity and gas	20000	British pound	better position in CRC league table so greater chance on surplus on recycling

Further information

23. Goal planning & investment

Electric utilities should read the table in question EU3 for giving details of forecasted emissions.

23.12. What investment will be required to achieve the future targets set out in your reduction plan or to carry out the activities listed in response to question 23.8 above and over what period do you expect payback of that investment?

Table 14 - The "Number" column will not accept text. Please use whole numbers only.

Plan or action	Investment number	Investment currency	Payback
use of powerperfecter technology	150000	British pound	2 1/2 years

23.13. Please estimate your company's future Scope 1 and Scope 2 emissions for the next five years for each of the main territories or regions in which you operate or provide a qualitative explanation for expected changes that could impact future GHG emissions.

If possible, please use table 15 below to structure your answer to the question or alternatively use the text box below.

In 2008 we sold Autowindcreens and Aviva Global Services, therefore Aviva's carbon footprint will reduce by 10,000 as a result of these. We outsourced our UK data centres in June 2009, this will reduce our electricity consumption by 3,300 MWh or 10,000 tonnes in 2009 and a further 10,000 in 2010.

Scope 1 forecasted emissions in Table 15 below are in the following units.

CO2-e

Scope 2 forecasted emissions in Table 15 below are in the following units.

CO2-e

Table 15 - The "Scope" columns will not accept text. Please use whole numbers only.

Type in the name of the territory or region for which you are giving data and then press "Add Territory/Region". If giving a global figure instead of separate figures for regions or territories, please write "global" in the box labelled "Enter name of territory or region".

[Click here to see a sample table.](#)

Future reporting years:										
End date for year end DD/MM/YYYY	31/12/2008		31/12/2009		31/12/2010					
Emission forecasts	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2	Scope 1	Scope 2
AGS	2980	2980	0							
Aviva UK	48414	65200	40000	55200	39500	45200				

23.14. Please estimate your company's future energy use for the next five years for each of the main territories or regions in which you operate or provide a qualitative explanation for expected changes that could impact future GHG emissions.

If possible, please use table 16 below to structure your answer to the question or alternatively use the text box below.

It is very difficult to estimate the energy consumption for Aviva for the next five years on a Groupwide basis. However, we expect to see the following variations in the regions of our business:-

UK - energy consumption will reduce 20% over the next five years - due to divestments, outsourcing, technologies and increased use of telepresence (this obviously impacts on Scope 3)

Asia Pac- energy consumption will increase by 10% over the next five years - our Asia business is expanding for example, we created a joint venture in South Korea in 2008; this business will be included in our reporting process for 2010.

North America - energy consumption will reduce by 20% over the next five years. The USA head office is currently in 4 buildings in 2010 they will move into one LEED accredited building. Also, telepresence will be rolled out across the Canadian and US businesses over the next couple of years (this obviously impacts on Scope 3)

Europe - We anticipate energy consumption to remain stable over the next five years. Again, Aviva is growing in the new European area i.e. Russia etc. and remaining stable reducing in the western European businesses.

Table 16 - Please use whole numbers only.

Type in the name of the territory or region for which you are giving data and a description of the data you are giving e.g. electricity consumption. Then press "Add Row". If giving a global figure instead of separate figures for regions or territories, please use the word "global". This table will also accept different types of units e.g. units of volume or mass.

[Click here to see a sample table.](#)

Future reporting years:										
End date for year end DD/MM/YYYY										
Energy use estimates for territory/region	Number	Units	Number	Units	Number	Units	Number	Units	Number	Units

23.15. Please explain the methodology used for your estimations and any assumptions made.

Our forecast above is based on a like for like business basis, but including the roll out of technologies tested in the UK and then used in other business regions.

We will continue to purchase renewable electricity where we credit for doing so and will continue of offset an remaining unavoidable emissions on a voluntary basis.

Further information

24. Planning: (CDP6 Q3(c))

24.1. How do you factor the cost of future emissions into capital expenditures and what impact have those estimated costs had on your investment decisions?

Although we have not been able to complete our internal polluter pays principle associated with our purchase of voluntary carbon credits due to the fact that we would have to charge additional VAT to various business units, we have advised our business unit as to the cost per business unit. Business units are beginning to include this in business case submission for energy saving technologies, TCO and revision to processes that will reduce the amount of energy consumed.

We have also begun to factor in the cost of £12 per tonne (CRC) into applicable business case submissions in the UK business.

Further information

Governance

25. Responsibility: (CDP6 Q4(a))

25.1. Does a Board Committee or other executive body have overall responsibility for climate change?

Yes. (Please answer question 25.3 and 25.4)

25.2 Please state how overall responsibility for climate change is managed and indicate the highest level within your company with responsibility for climate change.

The Executive Sponsor for Corporate Responsibility (which includes Climate change and Environmental Management) is Andrew Moss. The Executive Sponsor for the CRC programme and the Telepresence system is John Ainley. The Board Committee on Corporate Responsibility reviews, challenges and provides direction to the overall CR programme including the Climate Change/Environmental Programme and the Board Executive and Regional and Business CEOs have a 5% reduction target in their personal objectives and is reflected in the bonus structure.

25.3. Which Board Committee or executive body has overall responsibility for climate change?

The Board CR Committee has overall responsibility for climate change. The Executive Sponsor for Corporate Responsibility is Andrew Moss, Group Chief Executive and John Ainley is the Executive Sponsor for the CRC programme and the Telepresence system. The Corporate Responsibility Advisory Committee comprises of Senior Executives at a regional level and meets three times a year.

From the Annual Report & Accounts 2008

Our governance structure is designed for responsiveness to risk as well as opportunity. This enables us to identify issues, mitigate adverse impacts and maximise positive ones. Our CSR committee, chaired by non-executive directors Wim Dik in 2008 and Carole Piwnica from 1 January 2009, approves our CR strategy, policies and plans, and reports to the board at regular intervals during the year. View the committee's report. Our CR advisory group, reporting to the executive committee, is a forum for dialogue between our regions and our CR specialists at group level. It gathers and analyses perspectives from all around Aviva, helping to ensure that CR strategies are fully informed by insights from the broad spectrum of our business.

<http://www.aviva.com/library/reports/2008ar/page34.html>

<http://www.aviva.com/library/reports/2008ar/page45.html>

25.4. What is the mechanism by which the Board or other executive body reviews the company's progress and status regarding climate change?

The Board Committee CR meets 3 times per annum. They review progress of the businesses through the annual reporting process, the risk and compliance process and then each of the regions have to present updates on their programmes to the Committee on an annual basis. The Board CR Committee also receives the management letter from the Third Party Assurers which includes recommendations for improvements.

Further information

26. Individual Performance: (CDP6 Q4(b))

26.1. Do you provide incentives for individual management of climate change issues including attainment of GHG targets?

Yes. (Please go to question 26.2)

26.2. Are those incentives linked to monetary rewards?

Yes, the carbon dioxide reduction target is included

From the Annual Report & Accounts 2008

For 2009 we have set the following targets:

Reduce CO2 emissions by 5%

Reduce water use by 4%

Reduce waste by 4%

Increase percentage of recycled waste by 2% (until 80% recycled rate is achieved).

Our senior managers view our carbon target to be so significant that it is included in each regional chief executive's personal objectives.

<http://www.aviva.com/library/reports/2008ar/page34.html>

26.3. Who is entitled to benefit from those incentives?

Any member of staff that has the performance measure included in their personal objectives. It includes the Group's Executive Team, the CR Director and the Environment Manager.

Further information

27. Communications: (CDP6 Q4(c))

27.1. Do you publish information about the risks and opportunities presented to your company by climate change, details of your emissions and plans to reduce emissions?

Yes, we publish information about Aviva's response to climate change in our Annual Report & Accounts, our CR Report. We use the Accounting for Sustainability framework to present our key data to link it to our financial reporting. We also include it in benchmarking and investor surveys, the CDP survey of course. We also include it in our response to the ClimateWise Principles and in our Communication of Progress for the UN Global Compact.

If so, please indicate which of the following apply and provide details and/or a link to the documents or a copy of the relevant excerpt:

27.2. The company's Annual Report or other mainstream filings.

Yes

<http://www.aviva.com/library/reports/2008ar/page34.html>

<http://www.aviva.com/library/reports/2008ar/page35.html>

<http://aviva.ir-group.com.akadns.net/cr09/index.asp?pageid=32>

<http://aviva.ir-group.com.akadns.net/cr09/index.asp?pageid=33>

27.3. Voluntary communications (other than to CDP) such as Corporate Social Responsibility reporting.

Yes

COP for Global Compact

<http://www.aviva.com/corporate-responsibility/our-cr-partners/global-compact-cop/>

Response to ClimateWise Principles

<http://www.aviva.com/corporate-responsibility/our-cr-partners/climatewise-principles-report-2008/>

Further information

28. Public Policy: (CDP6 Q4(d))

28.1. Do you engage with policymakers on possible responses to climate change including taxation, regulation and carbon trading?

Yes

Yes, we lobby Government direct on all issues of climate change. We also are a member of CBI Climate Change Board, one of their roles is to be the voice of UK business on all aspects of climate change and we have also taken part in the consultation process in respect of the CRC. Our SRI Team ran a side event at Poznan and we look to play our role in influencing the negotiations at Copenhagen this year. We have recently sign the Geneva Association's Kyoto Stsament on Climate change and will look to sign the Corporate Leaders Group on Climate Change Copenhagen Communiqué.

Further information