CDP

Module: Introduction

Page: Introduction

CC0.1

Introduction
Please give a general description and introduction to your organization.

Aviva provides insurance, savings and investment products to 33 million customers across 16 countries in Europe, Asia and Canada including being the number one insurer in the United Kingdom.
We are one of four multinational composite insurance companies combining strong life insurance, general insurance, health and asset management businesses under one powerful brand. We are committed to serving our customers well in order to build a stronger, sustainable business, which makes a positive contribution to society, and for which our people are proud to work.
Our 29,600 people are focused on helping to free our customers from fear of uncertainty. Aviva helps people save for the future and manage the risks of everyday life; we paid out £30.7 billion in benefits and claims in 2015.

In April 2015 we acquired Friends Life. The information contained in this response will include the Friends Life part of the business from 1st January 2015.

By serving our customers well, we are building a business which is strong and sustainable, which our people are proud to work for, and which makes a positive contribution to society.
Long term insurance and savings business from continuing operations accounted for over 61% of our total business, based on worldwide sales for the year ending December 2015. General insurance and health insurance together accounted for 39% of Group net written premiums (NWP) from continuing operations - this is further broken down between commercial (40%) and personal lines (60%) .

Aviva Plc is in the top 10% of socially responsible companies globally in the Dow Jones Sustainability World Index, as well as ranked as one of the FTSE4Good top 5 companies in their index. In 2010 we became one of 50 companies to gain LEAD Global Compact status and last year we were the only insurer included in Global Compact 100 Index. We are a strong supporter of United Nations Principles of Responsible Investment from an asset management perspective and Aviva Staff Pensions Trustees signed the PRI as an asset owner in September 2013. The Asset Owners Disclosure project Climate Index in 2016 ranked Aviva as the second highest insurance company, and was ranked 58th in the NewsWeek Green ranking.

Involved in the working group to develop the United Nations Principles for Sustainable Insurance over a number of years, Aviva was pleased to become a founder

signatory company in June 2012 through the commitment of our Chairman, John McFarlane. Our 2015 ClimateWise response scored 79 and we were ranked as the second best responder. We are reporting against both these sets of principles again this year.

Aviva's asset management business, Aviva Investors, provides asset management services to both Aviva and external clients, and currently manages over £290 billion in assets.

We called for a robust climate deal in Paris.

CC0.2

Reporting Year

Please state the start and end date of the year for which you are reporting data.
The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.
We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.
Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Thu 01 Jan 2015 - Thu 31 Dec 2015

CC0.3

Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country
United Kingdom
Canada
Channel Islands
China
France
Hong Kong
India
Ireland
Italy
Lithuania
Poland
Singapore
Spain
Taiwan
Turkey
Indonesia

CC0.4

Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

GBP(£)

CC0.6

Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.

If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.
If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx.

Further Information

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC0.Introduction/Aviva-ARA-2015.pdf

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

The Board Governance Committee chaired by Scott Wheway NED
The Board Risk Committee chaired by Michael Hawker NED
Mark Wilson, Aviva plc CEO speaks externally about climate change and the impact Aviva's business model and customers
Maurice Tulloch, Aviva plc's General Insurance Chairman is the Chair of ClimateWise and has just joined the Steering Committee of the Insurance Development Forum Insurance Development Forum (IDF). This is a new external organisation whose overall objective is to extend the use of insurance-related facilities to protect developing countries against natural and man made disasters.
Steve Waygood represents Aviva on the Financial Stability Board (FSB) launched a Taskforce on Climate-related Financial Disclosures (TCFD) which is anticipated to issue recommendations for corporate and financial disclosures of climate-related financial risks (defined as physical, liability and transition risks). It is anticipated

that these recommendation will form the basis of a wider regime for carbon reporting for institutional investors and carbon disclosure.

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Facility managers	Monetary reward	Energy reduction project Energy reduction target Efficiency project Supply chain engagement	
Environment/Sustainability managers	Recognition (non-monetary)	Emissions reduction project Emissions reduction target Supply chain engagement	
All employees	Monetary reward	Emissions reduction target	The meeting of the global carbon reduction is one of 12 criteria for the triggering of of all employee bonus in Aviva France.

Further Information

Page: CC2. Strategy

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	All businesses conform to requirements of Group risk policies. Material existing/ emerging risks are identified and assessed. The Audit, Governance and Risk Committees report regularly to the Board on activities, makes recommendations and escalates significant risk exposures. The committee receives reports on key risk exposures, emerging and potential risks, and the drivers of risk across the Group, ensuring mitigating actions are taken when risks are, or are expected to move, out of appetite.	> 6 years	Detailed actuarial analysis is used to calculate the Group's extreme risk profile and then design cost and capital efficient reinsurance programmes to mitigate these risks to within agreed appetites. For businesses writing general insurance we analyse the natural catastrophe exposure using external probabilistic catastrophe models widely used by the rest of the (re)insurance industry. The Group cedes much of its worldwide catastrophe risk to third-party reinsurers but retains a pooled element for its own account gaining diversification benefit. The total Group potential loss from its most concentrated catastrophe exposure zone (Northern Europe) is approximately £150 million on a per occurrence basis, and £175 million on an annual aggregate basis.

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

Risk Management (RM) is at the heart of what we do. It's a source of value creation and a vital form of control. It helps maintain financial stability for customers, shareholders and other stakeholders.
i) Risks are grouped by type: market, credit, liquidity, GI, life insurance and operational. Risks may affect key metrics relating to financial strength, liquidity and profit, also the performance of the products, service to our customers and distributors, which could affect brand and reputation.
ii)We carry out stress and scenario tests to evaluate the impact on the business and the management actions available to respond to the conditions envisaged. These tests may be prescribed by supervisory authorities, but supplemented by scenarios from historical adverse periods, risk models and RM discussions.
iii) Business Unit (BU) management are accountable for risk taking, implementing the RM framework and embedding a risk culture. Each risk type is considered at a BUlevel in the company, but may vary in materiality in different businesses.
iv) Group level key risk identification and assessment is carried out monthly with Group and regional CRO and functional RD input. BUs regularly identify and review risk exposures. There is a semi annual sign off by each CE. Meeting 8 times in 2015, the Board Group Risk Committee provides leadership/direction/oversight of the Group 's management of risk.
v) Aviva has a RM framework which considers risk by type against risk appetite focusing on balance sheet strength and protection of the franchise value. Risks are measured considering the significance of the risk to the business and its stakeholders in the context of our strategy, objectives and risk appetite. Monitoring ensures that RM approaches are effective, and also seeks to identify risk-taking opportunities to improve the risk-adjusted performance of the Group.
vi) Risk assessment forms part of the formal plan submitted to the GEC and Board for discussion and approval.

CC2.1c

How do you prioritize the risks and opportunities identified?

All emerging risks are assessed for their proximity and significance to Aviva via our embedded market and group emerging risks processes. The “Increased incidence of extreme weather events” risk has been assessed as ‘less remote’ therefore requiring regular analysis and its potential impact is considered significant at an Aviva level, though not over the current planning horizon. Emerging risks are assessed over longer time periods than the current business plan to ensure all risks to both the medium and long term future of the company receive appropriate attention.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

Catastrophic events, which are often unpredictable by nature, could result in material losses and abruptly and significantly interrupt our business activities. Our business is exposed to volatile natural and man-made disasters such as pandemics, hurricanes, floods, windstorms, earthquakes, terrorism, riots, fires and explosions. Over the past several years, changing weather patterns and climatic conditions have added to the unpredictability and frequency of natural disasters in certain parts of the world and created additional uncertainty as to future trends and exposure. The extent of losses from a catastrophe is a function of both the total amount of insured exposure in the area affected by the event and the severity of the event. Most catastrophes are restricted to small geographic areas; however, pandemics, hurricanes, earthquakes and man-made catastrophes may produce significant damage in larger areas, especially those that are heavily populated. Catastrophic events could also harm the financial condition of our reinsurers and thereby increase the probability of default on reinsurance recoveries and could also reduce our ability to write new business. Furthermore, pandemics, natural disasters, terrorism and fires could disrupt our operations and result in significant loss of property, key personnel and information about our clients and our business if our business continuity plans fail to cope with the scale or nature of the catastrophe. Such events could adversely affect our business, results of operations, corporate reputation and financial condition for a substantial period of time. Furthermore, market conditions beyond our control determine the availability and cost of the reinsurance protection we purchase. Accordingly, we may be forced to incur additional expenses for reinsurance or may not be able to obtain sufficient reinsurance on acceptable terms, which could adversely affect our ability to write future business.
In 2014 we provided a response to the UK's Prudential regulatory Authority's Company survey in respect of climate risk http://www.aviva.com/media/upload/ClimateAdaptationLetter-Survey-Avivaplc.pdf . The PRA's report was published in September 2015. We welcomed this report at the time which said that whilst there the safety and soundness of insurance was not at current risk from climate change, there were three risks that insurers should consider - these were physical, transition, and liability risk. We have reviewed our liability risk exposure and believe that this is negligible for Aviva due to the limited exposure we have for Directors & Officers Liability Insurance and Pension Trustee Liability insurance. We continue to manage the physical risks and believe that we have more to do in respect of transition risks, particularly from an investor stance.

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price of carbon?

Yes

CC2.2d

Please provide details and examples of how your company uses an internal price of carbon

We use an internal price of carbon along with external carbon taxes, including them in Business case assessments of property & facilities assets and in TCO assessments of IT equipment.

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
Trade associations
Funding research organizations

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support	In September 2011 Aviva convened the Corporate Sustainability Reporting Coalition (CSRC.) The CSRC represents financial institutions, professional bodies, NGOs and investors with assets under management of approximately US$2 trillion.In 2012 at the Rio + 20 Earth Summit the CSRC led calls for nations to commit to developing an international framework on non-financial reporting. This culminated in the formal recognition of the importance of corporate sustainability reporting by the UN. (Paragraph 47)	The United Nations included Paragraph 47 in their summit outcomes document. It reads: "We acknowledge the importance of corporate sustainability reporting and encourage companies, where appropriate, especially publicly listed and large companies, to consider integrating sustainability information into their reporting cycle. We encourage industry, interested governments as well as relevant stakeholders with the support of the UN system, as appropriate, to develop models for best practice and facilitate action for the integration of sustainability reporting, taking into account the experiences of already existing frameworks, and paying particular attention to the needs of developing countries, including for capacity building."
Adaptation resiliency	Support	Signing the UNEP FI Principles for Sustainable Insurance statement -United for disaster resilience:The insurance industry's statement in support of disaster risk reduction prior to the UNISDR in Sendai in March 2015	Ongoing, but G7 committed to reach 4000 million additional people through climate insurance Develop and initiate adoption of standdard for risk evaluation that subjects portfolios and assets to a 1-in-100 year stress test and integrate these standards into financial instruments.
Other: Global climate deal in Paris	Support	Backing for cross party consensus on a strong deal in Paris - Feb 2015 Companies Letter to Prime Minister 10 June 2015 - seeking global deal, set an ambitious 5th carbon budget, establish a long term framework for investment in Low carbon economy	Ongoing - http://www.green-alliance.org.uk/leaders_joint_climate_change_agreement.php http://www.wwf.org.uk/wwf_articles.cfm?unewsid=7605
Climate finance	Support	In September 2014 we signed the Global Investor Statement on Climate Change presented to the UN Climate Summit.	Ongoing
Climate finance		Along with other investors we wrote to the G7 Finance Ministers supporting a long-term goal emissions reduction goal in Paris 2015.	Ongoing - http://www.iigcc.org/publications/publication/investor-ceo-letter-to-g7-finance-ministers
Other: Removal of fossil fuel subsidies	Support	In November 2015 we signed the Fossil Fuel subsidy Reform Communiqué. Our CEO said at the time "Climate change is arguably the world's most critical contemporary market failure. It has significant consequences for people, the planet and the profitability of a broad range of companies – including insurers. Fossil fuel subsidies fan the flames of this market failure. We believe the subsidies should be phased out as soon as possible. We are proud supporters of the Fossil Fuel Subsidy Reform Communiqué." Mark Wilson, Group Chief Executive Officer, Aviva 29 Nov 2015	In May 2016- the G7 Finance Ministers agreed to remove all 'inefficient' fossil fuel subsidies by 2025. We don't believe this is soon enough and intend to highlight this issue further.
Other: Capital	Support	In 2015 we commissioned a report from the Economic Intelligence Unit understanding the Value At Risk of Climate	We call for a review by the OECD of fiduciary duty to include taking account of ESG considerations including climate risk. Aviva is

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Markets reform		change on long term savings pensions and investmentshttp://www.aviva.com/media/upload/EIU-cost-of-inaction.pdf	represented on the Financial Services Board Taskforce on Climate-related Financial Disclosure.
Mandatory carbon reporting	Support	We supported the joint statement on Investor Expectations on Corporate Climate Lobbying which called for company lobbying on climate change related policy and regulation that is in line with the two degree global target. As part of a collaborative IIGCC engagement on corporate lobbying on EU climate and energy policy, we signed a letter to 75 companies seeking responsible and transparent lobbying on their own behalf and via trade associations.	Ongoing

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
UNEPFI	Consistent	UNEPFI recognises that sustainable development is the collective responsibility of governments, businesses and individuals. It is committed to working	As a founding signatory on the Insurers UN statement on the Environment in 1985 (General Accident). We have long supported UNEPFI and more recently commented and contributed, and provided a representative on the UN Principles of Sustainable Insurance Board. http://www.unepfi.org/psi/signatory-companies/ www.aviva.com/media/upload/Aviva_response_UNPSI_final1.pdfCached

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
		collectively toward common sustainability goals.	
ClimateWise	Consistent	Climate Wise is a group of insurers taking a leadership position on climate risk and research. Incorporating climate change issues into investments, resilience and insurance processes.	We are a founding member, and are a member of the ClimateWise steering committee. We have been involved in a number of the research projects, including claims, resilience, investment, health etc. http://www.climatewise.org.uk/collaborations/ We respond annually to the ClimateWise principles (see link) http://www.climatewise.org.uk/storage/_website-2012/member-reports-2013/Aviva.pdf Please also find attached our 2013 ClimateWise scorecard

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

Yes

CC2.3e

Please provide details of the other engagement activities that you undertake

CC2.3f

What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Our centre of expertise on climate change, renewable energy, energy efficiency, compliance to climate change regulations and carbon management are all at a Group level with responsibilities for each of the businesses to deliver against our business standard.
Kirsty Cooper, Aviva Group Legal Counsel and a member of the Executive team has responsibility for all areas of environment and climate change strategy. Climate

change is also included in the Governance Committee meetings. Our Group Public Policy Director is now also the Group Sustainability Director. Our Strategic Investment Response to Climate Change, published in July 2015, sets out the five pillars of our approach to incorporating climate change into our investment strategy. Our approach encompasses both capital allocation decisions and using our influence as investors.
With respect to integrating climate risk into investment considerations, we remain deeply committed to ensuring ESG issues are included in our investment analysis and decision making and are actively focusing on how we better integrate carbon and climate risk factors. Climate change is part of our House View, which outlines our view of the economic outlook– and we have held a number of briefing sessions with fund managers and analysts across asset classes.
In September, we signed up to the Montreal Carbon Pledge. At the time, we were one of the largest asset managers to support this initiative to measure and publically disclose the carbon footprint of our investment portfolios. We support the need for greater transparency on carbon risk and the development of tools, such as carbon foot-printing, which can support this. We are therefore pleased to share the results of our pilot carbon foot-printing on a sample of our equity portfolios
We also actively engage with companies to achieve climate-resilient business strategies. This includes in-depth engagement, in particular through the IIGCC Corporate Programme, which we chair. In 2015, we supported 90 per cent of climate change related shareholder resolutions and held 25 climate specific engagements. We actively supported the ‘Strategic Resilience for 2035 and Beyond’ shareholder resolutions proposed at the BP and Shell, and later Statoil, AGMs. We attended both the BP and Shell AGMs in support of the resolution and to question the Board. We have co-filed similar resolutions for the 2017 AGMs of Anglo American, Glencore and Rio Tinto.
We will divest from highly carbon-intensive companies where necessary and we consider they are not making sufficient progress towards the engagement goals set. This decision will not be taken lightly and only where we believe that divestment is a balanced and proportionate response.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC2.Strategy/EIU-cost-of-inaction (2).pdf
https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC2.Strategy/2363_1 Low Carbon Investment Report_PRINT_LOW_RES_v5.pdf
https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC2.Strategy/Investing_to_tackle_climate_risk_qCSWOWI (4).pdf

Page: CC3. Targets and Initiatives

CC3.1

Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?

Absolute target
Renewable energy consumption and/or production target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
Abs1	Scope 1+2 (location-based)+3 (upstream)	100%	40%	2010	146248	2020	Yes	Whilst there is still confusion in respect of how the SBT work both for FS companies and whether or not the SBT should use Market or Location Scope 2 methodology, we believe that our long term targets are aligned with the SBTs. We are just awaiting CDP to come back to us to confirm that it is. This target was revised in 2015 due to us exceeding the previous target, and the baseline was rebaselined due to the acquisition of Friends Life in April 2015. Please note we have not set separate targets for Scope 2 on market or location based.
Abs3	Scope 1+2 (location-based)+3 (upstream)	100%	50%	2010	146248	2030	Yes	Whilst there is still confusion in respect of how the SBT work both for FS companies and whether or not the SBT should use Market or Location Scope 2 methodology, we believe that our long term targets are aligned with the SBTs. We are just awaiting CDP to come back to us to confirm that it is. This target was revised in 2015 due to us exceeding the previous target, and the baseline was rebaselined due to the acquisition of Friends Life in April 2015. Please note we have not set separate targets for Scope 2 on market or location based.

CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment

CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment

CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
RE1	Electricity consumption				2025	100%	Last year, through RE100 we committed that 100% of the electricity consumed by our operations would come from renewable sources by 2025. We did not set a baseline MWh as we have been purchasing renewable electricity since 2004. When we committed to RE100 the proportion of electricity from renewable sources on a worldwide basis was already at 56%. We do not think it is correct that this should be measured in absolute terms as this conflicts with our over energy efficiency strategy to minimise the consumption of the electricity in the first place.

CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Abs1	50%	97.5%	we will look to revise this target again this year or seek solely to rely on science-based targets going forward, however we will have to wait (as with all other office based companies) since the full methodology is still under development.
Abs3	25%	78%	we will look to revise this target again this year or seek solely to rely on science-based targets going forward, however we will have to wait (as with all other office based companies) since the full methodology is still under development.
RE1		62%	Last year, through RE100 we committed that 100% of the electricity consumed by our operations would come from renewable sources by 2025.

CC3.1f

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

CC3.2

Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?

Yes

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Group of products	Investments in lower carbon infrastructure - target of £500 million annual investment in low-carbon infrastructure for the next five years. We will also target carbon returns alongside financial returns on our setting an associated carbon savings target for this investment of 100,000 tCO2 annually.	Low carbon product	Low Carbon Investment (LCI) Registry Taxonomy		Less than or equal to 10%	We are members of the Climate Bonds Initiative to make sure the Green

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
						Bond criteria are robust. This was the first year that this investment was put in place, so we will be able to report full year figures by the end of Q3 2016
Group of products	We have now added an ethical investment filter to the investment platform, so that customers can better choose what activities their investments support. http://www.fundslibrary.co.uk/FundsLibrary.BrandedTools/AvivaConsumer The Fundslibrary tags a fund to be included in the ethical filter for us by reviewing the fund prospectus and objectives. The relevant funds to appear when advisers sort by the Ethical filter. There is £8.2bn assets on the advised platform. Currently, there is £203m invested in a choice of 141 ‘ethical/SRI funds’	Low carbon product	Other: contents of the Key Investor Information Document		Less than or equal to 10%	This filtering does not strictly filter out carbon intensive holdings, but helps support customers make more appropriate choices for their investment

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
						support.
Product	In respect of our General Insurance Contents insurance product , when we have to replace fridges, freezers and washing machines in the UK, we generally provide customers with ones that have an energy efficiency rating of at least ‘A’. The exception is tumble driers/washer dryers, as 99% are already rated ‘A’ rated or better. Our preferred supplier delivers the replacement item, will install it, and removes the old appliance for recycling. This provision is standard to the policy and no additional premium is charged	Avoided emissions	Other: didacting energy efficiency rating of white goods		Less than or equal to 10%	
Group of products	We have now rolled out our new more sustainable claims management process so that all property claims are dealt with in a more sustainable way, with no change of policy wording or new policy. We are able to do this by working with our three main claims damage management suppliers on a collaborative basis. These improvements benefit of our customers, further improving our satisfaction results, whilst reducing the environmental impact. In April 2016 The Carbon Trust completed their research into the carbon reductions made in respect of systems thinking creating more sustainable claims processes. The Carbon Trust carried our a piece of research into the way our category 3 water claims and carpet claims are now dealt with following a systems thinking approach. The research indicates that we have saved 7,200 tonnes CO2e by changing how we process escape of water claims – a 43% reduction in carbon emissions per claim, and an estimated 400 tonnes CO2e by changing how we process carpet claims – a 35% reduction in carbon emissions per claim. In total, this is equivalent to 9% of Aviva’s direct annual emissions (84,000 tonnes CO2e). Whilst restricted by data availability, we believe that the figure given are on the conservative side. Going forward we are working on the provision of more comprehensive	Avoided emissions	Other: Carbon trust measurement		Less than or equal to 10%	The new process provides a win, win, win result - improved customer service, cost containment and of course carbon impact reduction.

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
	data, and a further improvement in sustainable claims processes.					

CC3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*		
Implementation commenced*		
Implemented*		

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Not to be implemented		

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Low carbon energy installation	solar panel installation - Norwich	92	Scope 2 (market-based)	Voluntary	36000	205000	4-10 years	21-30 years	Generation began in December 2015. Generation capacity 183.7 kWp. The three solar arrays will generate 445,520 kWh annually.
Low carbon energy installation	solar panel installation - Perth	52	Scope 2 (market-based)	Voluntary	21000	140000	4-10 years	21-30 years	Generation began in December 2015. Generation capacity 114.4kWp.The three solar arrays will generate 445,520 kWh annually.
Low carbon energy installation	solar panel installation - Bristol	115	Scope 2 (location-based)	Voluntary	48500	272000	4-10 years	21-30 years	Generation began in February 2016. Generation capacity 243.7 kWp. The three solar arrays will generate 445,520 kWh annually.
Energy efficiency:	Dublin LED project		Scope 2 (location-	Voluntary	98647		1-3 years	6-10 years	Savings in electricity consumption for eoy 2015 compared to 2014. kWh reduction

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Building services			based)						633,428.
Behavioral change	Installation of energy information dashboards - Dublin	86	Scope 1 Scope 2 (market-based) Scope 3	Voluntary	16000	5000	<1 year	Ongoing	http://www.utilidex.com/portfolio_page/aviva-employees-compete-to-save-energy-with-utilidexs-intuitive-technology/. saving of 10-15% achieved.
Behavioral change	Installation of energy information dashboards - Wellington Row, York	60	Scope 1 Scope 2 (market-based) Scope 3		13000	3000	<1 year	Ongoing	
Low carbon energy installation	Installation of LED lighting - York		Scope 2 (location-based) Scope 3				1-3 years	6-10 years	
Low carbon energy installation	Installation of LED lighting - Perth	303	Scope 2 (location-based) Scope 3	Voluntary	78000	151000	1-3 years	6-10 years	
Behavioral change	Installation of energy information dashboard - Perth	140		Voluntary	34000	5000	<1 year	Ongoing	
Low	Installation		Scope 1	Voluntary			1-3	6-10 years	

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
carbon energy installation	of LED lighting - Sheffield		Scope 2 (location-based) Scope 3				years		
Low carbon energy installation	Installation of LED lighting - St Helens - London		Scope 2 (location-based)	Voluntary			1-3 years	6-10 years	
Low carbon energy installation	Installation of LED lighting - Bristol		Scope 2 (location-based)	Voluntary			1-3 years	6-10 years	
Behavioral change	Installation of energy information dashboard - Bristol	140	Scope 1 Scope 2 (location-based) Scope 3	Voluntary	3400	5000	<1 year	Ongoing	
Behavioral change	installation of energy information dashboard - Norwich		Scope 1 Scope 2 (location-based) Scope 3	Voluntary	3400	5000	<1 year	Ongoing	
Low carbon energy installation	Installation of LED lighting - Norwich		Scope 2 (location-based)	Voluntary			1-3 years	6-10 years	

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Internal price of carbon	We include the cost of avoidance of CCL, CRC and purchase of carbon credits from the voluntary carbon market
Employee engagement	We have a team of 150 environmental champion in the UK business, who suggest projects and initiate them, themselves were possible

CC3.3d

If you do not have any emissions reduction initiatives, please explain why not

Further Information

Page: CC4. Communication

CC4.1

Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Status	Page/Section reference	Attach the document	Comment

Publication	Status	Page/Section reference	Attach the document	Comment
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	page 3 Chairman's view, 9 - culture, 15 - The Horizon, 35 - ClimateWise Chairmanship, 52-55 Corporate Responsibility, 65 - Risk and Causal Factors, 312 - CR Indicators	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC4.1/Aviva-ARA-2015.pdf	groupwide
In voluntary communications	Complete	page 4	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC4.1/ESG_Data_Sheet_2015_O7UrP9x (1).pdf	groupwide
In voluntary communications	Complete	all	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC4.1/Aviva - ClimateWise response 2015.pdf.docx	groupwide
In voluntary communications	Complete	page 8	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC4.1/CR_summary_2015.pdf	groupwide
In voluntary communications	Complete	all	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC4.1/2363_1 Low Carbon Investment Report_PRINT_LOW_RES_v5.pdf	Asset management
In voluntary communications	Complete	all	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC4.1/Investing_to_tackle_climate_risk_qCSWOWI (4).pdf	Asset management
In other regulatory filings	Complete	pages 11 & 12	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC4.1/2015 Public Accountability Statement EN.pdf	This is Aviva Canada Public Accountability Report 2015
In voluntary communications	Complete	pages 20,21 and 23	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC4.1/AI Responsible Investment Review 2015.pdf	This is Aviva Investors annual review

Further Information

Attached is the feedback from PwC who reviewed Aviva's 2015 ClimateWise response

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC4.Communication/Aviva_Final Feedback 2015.pdf

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Risks driven by changes in physical climate parameters
Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management

CC5.1b

Please describe your inherent risks that are driven by changes in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Other physical climate drivers	Other physical climate drivers - weather related natural catastrophes. We have publicly stated that 'Left unchecked climate change and other issues arising from unsustainable development will affect the actuarial assumptions underpinning insurance products that our industry provides, potentially rendering significant proportions of the economy uninsurable and shrinking our addressable market. As a large insurer with GI provision in Northern Europe and Canada, Aviva's exposure to climate change related physical risks is mostly indirect through the risks we accept from our insurance clients. Weather related	Other: Increase in claims	Unknown	Indirect (Client)	Likely	High	The winter storms in 2015/16 in the UK had a £100 million (check) operating profit impact, although the impact of the UK storms was offset by leading edge risk technics and management better than expected weather earlier in the year.	Due to our effective risk management approach, in these cases we were able to pay customer claims, deliver great service and still make a profit in our insurance business. Such scenarios are included in our Risk Management Framework. Aviva pledges to our flooded household customers: • Aviva will always renew on a flood claim that has been repaired by us. • From the 4 April, Flood Re will provide access to affordable flood insurance. We expect most customers affected by flooding to benefit from this through the availability of reduced premiums within the insurance market. So high risk flood customers will	We continue to refine our understanding of risk and impacts. The Group cedes much of its worldwide catastrophe risk to third-party reinsurers but retains a pooled element for its own account gaining diversification benefit. The total Group potential loss from its most concentrated catastrophe exposure zone (Northern Europe) is approximately £150m on a per occurrence basis and £175 an annual aggregated basis.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	natural disasters such as storms, floods, wildfires and extreme temperatures directly affect our clients' assets (property, vehicles). When we provide insurance we inevitably receive more claims which impacts our profitability of our general insurance business. The implications of natural disasters are significant for us. If the premiums received do not cover the claims from unforeseen events over the lifetime of the policy we face losses. Change in profitability is measured by Claims Operating Ratio (COR). The floods in the UK, France and the wildfires in Canada are further evidence of the frequency and unpredictability that climate changes forebodes. For the							be able to shop around for the first time in many years for their household insurance. Aviva pledges to our flooded business customers: • Aviva will continue to renew our existing small business customers. • Ensure that our small business customers do not receive excessive increases to their current premium. • For customers with excesses above £350, we will not increase the flood excess at the first renewal following a claim. • Renewals for larger businesses will be assessed on an individual basis. Through our Risk Consultant teams we will also provide greater awareness on flood resilience, tangible flood risk management & flood prevention	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	general insurance liabilities we performed re-projections on selected classes of general insurance business in the United Kingdom. We continue to build on our digital floodmapping expertises which predicts the impacts of pluvial, as well as fluvial and coastal flooding individually and combined. We believe at a 4 degree rise, we would not be able to continue our present business model							solutions.	

CC5.1c

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing	Aviva is not only a	Increased	1 to 3	Direct	Very likely	Medium-	Tangible effects of	Aviva Investors	It is impossible

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
consumer behaviour	risk manager and carrier, but also a large scale Institutional investor. Aviva Investors (AI) manages a global real estate portfolio, not only for the parent company but on behalf of investment clients, who have increasing expectations around the development, use, management, refurbishment and demolition of buildings, how materials are sourced, energy use and the contribution that buildings make to local communities. Tenants of properties also are becoming more demanding on the energy efficiency of properties, in order that opex can be managed over the long term. Sustainable	capital cost	years			high	sustainable properties to the property value have still to materialise across the world, however the US DoE building energy data book compiled results of six different RE studies. Energy efficiency labelled commercial buildings were seen to fetch a premium price for both rental (inc 16%) and sales (inc 31%)compared to non labelled similar buildings. Aviva Investors manages over £29bn (eoy 2015) of real estate assets located in the UK, Europe, Asia-Pacific and the Americas.	Real Estate regards the consideration of ESG issues and their impact on real estate investment as an essential part of our fiduciary duty to our clients. This philosophy is embedded within our business and decision-making processes, from initial acquisition through to disposal.We have an Environmental Management System to monitor, manage and reduce the environmental impacts of the assets we hold on behalf of our clients. This system enables us to identify areas in which we can actively improve our environmental performance, and meet both our annual and our longer term commitments. Similarly, for indirect investments	to quantify to single out a direct cost relationship within this process, as decisions are made on a variety of different requirements which contribute to the final decision.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	approaches to real estate can make a major contribution to combating climate change. In the UK, for example, buildings account for as much as 50% of energy consumption, making them a natural starting point for reducing carbon emissions – and a key focus for increasing government regulation. Most buildings stand for 30-50 years, so it is important to consider their long-term social, economic and environmental influence. Sustainable real estate therefore has far-reaching implications. We have had a Sustainable property strategy in place for a number of years and work with site managers							we actively engage with fund managers, requesting they participate in the GRESB survey. We subsequently engage with each fund manager on their results, identifying areas where we see both deficiencies and opportunities. We are putting 15 property funds through the GRESB survey in 2016 , and are put 17 through in 2016. For direct investments, we consider sustainability criteria when appointing third party suppliers such as our agents, valuers and contractors. We also require our Managing Agents to sign a Sustainability Charter. This facilitates regular and coordinated engagement and	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	and tenants to ensure we can deliver the properties and performance, otherwise we would run the risk of losing tenants or having properties vacant. We include sustainability considerations in all our investment decisions and also promote sustainability issues throughout the real estate industry.							helps drive improvements in our ESG performance. In addition to this, we look to engage and develop relationships with our occupiers, by including green clauses in all new and reversionary leases and also asking tenants to sign up to our Green Partnership initiative.	

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

In 2014 we provided a response to the UK's Prudential regulatory Authority's Company survey in respect of climate risk http://www.aviva.com/media/upload/ClimateAdaptationLetter-Survey-Avivaplc.pdf . The PRA's report was published in September 2015. We welcomed this report at the time. The report said that whilst there the safety and soundness of insurance was not at current risk from climate change, there were three risks that insurers should consider - these were physical, transition, and liability risk. We have reviewed our liability risk and believe that this is negligible for Aviva due to our very limited exposure to Directors & Officers Liability Insurance and Pension Trustee Liability insurance. We continue to manage the physical risks, as described above and welcome the role of Flood- RE as a risk transfer mechanism even though it is flawed from a individual's risk prevention and risk management point of view. Aviva began to cede business to Flood RE on 4th April 2016. This will be a gradual rollout to customers. Flood Re will be in place for 25 years and is designed to:

- Enable flood cover to be affordable for those households at highest risk of flooding.

- Increase availability and choice of insurers for customers.
- Allow government, local authorities, insurers & communities to be better prepared for flooding.
- Create a 'level playing field' for new entrants and existing insurers in the UK home insurance market.
- The scheme will improve the availability and accessibility of flood insurance to 350,000 more homes across the UK.

Aviva has been providing prices calculated on the basis of Flood Re since it was launched on 4th April. This means for the first time many homeowners in high risk areas are shopping around for their insurance as well as benefiting from lower excesses.

On average, we’ve seen savings of around £500 for new customers, with one customer saving over £1,000 on their premium and with a much lower excess.

We do believe that we have more to do in respect of transition risks particularly from an investor stance.

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in regulation
Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
General environmental regulations, including planning	In 2015 we commissioned the Economist Intelligence Unit research report on the Value at Risk of climate change to long term saving and investment. The value at risk to 2100 of unchecked climate change to the global stock of manageable assets to be up to $13.8 trillion for Investors and $43 trillion for governments on a permanent impairment	Investment opportunities	1 to 3 years	Direct	Very likely	High	We believe this would do much to mobilise the trillions of pounds required to transition to a low carbon economy.	In 2015 we called for the OECD to consider a Convention on Fiduciary Duty and Long Term Investing that defines the common interpretation of fiduciary duty focused on climate change and other long term considerations rather than purely short term outcomes.	n/a

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	basis, if temperatures rise by 6 degrees C. We have used this sobering report to set out our investment response to the challenge. Our five carbon pillars are built on the strong foundations of our existing long term approach to business and environment. The third pillar of the strategy focuses on supporting strong policy action on climate change - supporting policymakers in continuing to negotiate and strengthen policy to see a smooth transition to a lower carbon economy. The legal framework that informs								

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	investment decisions heavily influences the behaviour of entities in which these assets are invested.								
Other regulatory drivers	Global listed infrastructure is set for continued strong growth to 2020 and beyond. This is due to a combination of powerful global forces driving a need for increased infrastructure investment, namely: - a chronic under spend on critical infrastructure over the past 30 years - in virtually every nation; - the emerging middle class, especially in developing economies,	Investment opportunities	3 to 6 years	Direct	Virtually certain	Medium	We have targeted a £500 million annual investment in low carbon infrastructure for the next 5 years. We are also targeting associated carbon returns alongside financial ones of 100,000 tCO2 annually. From July 2015 to date we have invested £346 million.	Europe is committed to increasing renewable energy usage as part of the EU climate and energy package. By 2020, 20% of EU energy consumption will come from renewable sources. Historical default rates are very low and recovery rates high. This affords investors a high degree of confidence in future income flows. We focus on low-fixed investments that are well suited to provide	Investing in renewable energy projects requires specialist expertise. The team has garnered a great deal of experience in projects that span social infrastructure, utilities, power, renewable energy and the transport sector. However investing in energy projects does not pose any additional costs compared to similar asset classes.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	continues to demand more and better infrastructure; and - public sector fiscal positions remain fragile, thereby limiting the potential fiscal response available to governments. The Global Commission on the Economy and Climate identified infrastructure investment requirements of US $4trillion between 2015 and 2016. Aviva has sought to take advantage of the current regulatory environment as this can be a key driver of returns through defined future revenues generated through the likes							diversification to holdings in inflation linked and fixed income assets.	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	of feed-in-tariffs. AI is a recognised market leader in these new opportunities. Our conservative approach goes hand in hand with our strategic focus on delivering low risk, sustainable cashflows for investors through acquiring and managing lower-risk infrastructure assets. The team manages assets in the social infrastructure, renewable energy and energy efficiency sectors.								

CC6.1b

Please describe the inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management

CC6.1c

Please describe the inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Other drivers	There is demand for support from insurance products in respect of transportation, installation and continuing operations for the generation of renewable energy. In February 2015 Aviva Canada announced that they would be first-to-market in the provision of an Overland Water Coverage Option for home insurance, to provide water damage coverage	New products/business services	Up to 1 year	Direct	Virtually certain	Low-medium	The demand for this endorsement has been strong.	We have rolled it out to the various provinces and applied a risk based premium.	Since it's launch there has not been a major event for the cover to come into play. The cost of day to day management of the endorsement itself is negligible as it just forms an additional part of the policy. The cost incurred will be when an event occurs which causes the endorsement to be employed.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	for certain categories of claims not previously covered by the industry. The product launched in May2015								

CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

Physical climate change parameters do not offer material opportunities in respect of our operations, expenditure or revenues at this time. Whilst weather patterns may have an impact on our carbon footprint e.g. warmer winters reducing the need for heating, the savings are not material on a groupwide basis. Our spend on energy is comparatively low - less than 5% of our overall expenditure. In addition, whilst there is demand from our customers for products and services that minimise climate risk and impact of activities and property insured, the makeup of our business e.g. long term insurance and savings business accounting for 69% of our total business and GI and health insurance together accounted for 31% further reduces the materiality of the environmentally responsible products and services we do offer on the GI side. Having said that we do offer products on the commercial side such as the Environmental Goods & Services cover, GreenAssure endorsements that provide more environmentally efficiency reinstatements on the personal lines insurance, , and last year overland flood cover for residential properties in Canada (the first private insurer to provide such cover) bespoke electric car insurance and sustainable claims processes which is in place across all

areas of GI claims fulfilment in the UK http://www.aviva.com/corporate-responsibility/tackling-climate-change/sustainable-claims-processes/
In the future, we anticipate that the physical climate parameters will provide greater opportunities and risks for Aviva. At the beginning of 2012 we began to include ESG risks and opportunity considerations across all our mainstream investments funds i.e. £246bn funds under management. This has now reached 90% coverage. We continue to increase our understanding of risks that might limit opportunities and as such commissioned the EIU research report on VAR of unchecked climate change on investment, long term savings and pensions.

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Attached is the Aviva-commissioned EIU research report on the value at risk of climate change to investments, long term savings and pensions. Also attached Aviva's Strategic response to climate change.

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC6.ClimateChangeOpportunities/2363_1 Low Carbon Investment Report_PRINT_LOW_RES_v5.pdf
https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC6.ClimateChangeOpportunities/EIU-cost-of-inaction.pdf

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Thu 01 Jan 2015 - Thu 31 Dec 2015	19112
Scope 2 (location-based)	Thu 01 Jan 2015 - Thu 31 Dec 2015	49594
Scope 2 (market-based)	Thu 01 Jan 2015 - Thu 31 Dec 2015	49594

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
Defra Voluntary Reporting Guidelines

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
Other: various	Other: DEFRA 2015 emission factors
CO_2	IPCC Second Assessment Report (SAR - 100 year)
HFCs	IPCC Third Assessment Report (TAR - 50 year)

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Other: various	0	Other: various	Please see attached sheet "CDP emission factor sheet 2016_fuels"

Further Information

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/CDP emission factor sheet 2016_fuels.xls

Page: CC8. Emissions Data - (1 Jan 2015 - 31 Dec 2015)

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

19112

CC8.3

Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?

Yes

CC8.3a

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
49594		We are actively engaged with our suppliers to try and collate data and related contractual instruments, we aim to report using market and location based methodologies for 2016 data. We expect this will only be an accurate reflection for our European markets until there are more widely available residual factors for outside the EU. If there were contractual instruments available globally (which there are not) then Scope 2 emissions are estimated at 14,533 tonnes for 2016 versus the location based figures estimated at 51,923 tonnes

CC8.4

Are there are any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 2% but less than or equal to 5%	Data Gaps Assumptions Extrapolation	We collect data from 17 countries around the world covering different regions. Inevitably there some countries where data collection is more difficult so here we must extrapolate to cover any gaps. To provide confidence in our estimates we compare data per FTE or m2 dependant on the most suitable for the market, between the different business units. Information is collected as close to supplier/source as possible, whilst trying to fill in any data gaps year on year. Our auditors PWC also examine our approach to addressing these as part of their audit process noting progress in the last year on the review and accuracy of the data.
Scope 2 (location-based)	More than 2% but less than or equal to 5%	Data Gaps Assumptions Extrapolation	We collect data from 17 countries around the world covering different regions. Inevitably there some countries where data collection is more difficult so here we must extrapolate to cover any gaps. To provide confidence in our estimates we compare data per FTE or m2 dependant on the most suitable for the market, between the different business units. Information is collected as close to supplier/source as possible, whilst trying to fill in any data gaps year on year. Our auditors PWC also examine our approach to addressing these as part of their audit process noting progress in the last year on the review and accuracy of the data.
Scope 2 (market-based)	More than 60% but less than or equal to 70%	Other: Lack of global residual emission factors and supplier action	We are currently only aware of residual emission factors for EU markets, further, not all suppliers within these markets are able to provide valid contractual instrument, particularly where the supply contract is small. Currently renewable consumption within EU markets account for 62% of our group wide total electricity consumption. We aim to start reporting on a group wide basis using market methodology for 2016 data.

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

Third party verification or assurance process in place

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC8.6a/aviva-full-annual-report-2015-corporate-responsibility-assurance-statement.pdf	all	ISAE 3410	100

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

Third party verification or assurance process in place

CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Location-based	Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC8.7a/aviva-full-annual-report-2015-corporate-responsibility-assurance-statement.pdf		ISAE 3410	

CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
Progress against emission reduction target	Progress in reduction of carbon emissions against our 2010 (Scope 1, 2 & 3) baseline is verified by PWC, our 2020 target is 40%, and 2030 target is 50%. By 2015 we achieved a 39% reduction. This is covered by the same assurance statement as for Q8.6a and 8.7a. Please note that these figures include the integration of reporting for h-fl.
Other: Year on year relative CO2e reduction	We aim to achieve a 5% (Scope 1, 2 & 3) reduction year on year excluding material divestments or acquisitions or other structural changes. In 2015 we started to report on the FriendsLife acquisition for the full and first year, excluding this acquisition we achieved a relative reduction of 13%. This is covered by the same assurance statement as for Q8.6a and 8.7a.
Other: Year on year absolute CO2e reduction	We compare (scope 1, 2 & 3) emissions year on year on an absolute basis, for 2015 versus 2106 this was an increase of 6% due to the inclusion of FriendsLife reporting. This is covered by the same assurance statement as for Q8.6a and 8.7a.

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

Further Information

Please note that this is the first year of reporting to include our FriendsLife acquisition - this was completed a year earlier than required by our reporting standards.

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC8.EmissionsData(1Jan2015-31Dec2015)/Reporting Criteria_2015 - final.doc

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

Yes

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e
China	179.29
Hong Kong	0.26
India	0
Indonesia	16.94
Singapore	0
Taiwan	18.22
Luxembourg	2.78
Turkey	1165.42
Lithuania	21.81
Poland	469.65
France	805.04
Italy	92.05
Spain	200.02
United Arab Emirates	0
Isle of Man	2.97
United Kingdom	12362.39
Ireland	622.10
Canada	3153.06

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By business division
By GHG type
By activity

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)
Aviva (Life & Pensions, General Insurance & Health)	17450
Aviva Investors	3
Solus	1659

CC9.2b

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

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude

CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)

GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	18528
HFCs	584

CC9.2d

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

Activity	Scope 1 emissions (metric tonnes CO2e)
Offices	17453
Accident repair centres	1659

Further Information

Our full data can be found here http://www.aviva.com/media/upload/ESG_Data_Sheet_2015_O7UrP9x.pdf and assurance statement covering the above figures here http://www.aviva.com/library/2015ar/pdf/sections/performance/parts/aviva-full-annual-report-2015-corporate-responsibility-assurance-statement.pdf

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC9.Scope1EmissionsBreakdown(1Jan2015-31Dec2015)/aviva-full-annual-report-2015-corporate-responsibility-assurance-statement.pdf
https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC9.Scope1EmissionsBreakdown(1Jan2015-31Dec2015)/ESG_Data_Sheet_2015_O7UrP9x.pdf

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

Yes

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
China	4193.26		5572.81	
Hong Kong	133.96		245.03	
India	5265.76		6051.42	
Indonesia	38.90		51.30	
Singapore	709.51		1404.70	
Taiwan	182.52		309.23	
Luxembourg	0		29.43	
Canada	2828.49		17242.67	
Turkey	919.58		1980.01	
Lithuania	98.78		393.45	
Poland	979.36		2383.90	
France	606.32		12104.05	
Italy	343.50		860.93	
Spain	291.95		1721.14	
United Arab Emirates	156.60		232.43	
Isle of Man	126.14		272.91	

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United Kingdom	32719.37		70797.13	
Ireland	0		4327.89	

CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By business division
By activity

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Aviva (Life & Pensions, General Insurance & Health)	47414	
Aviva Investors	0	
Solus	2180	

CC10.2b

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

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)

CC10.2c

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

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Offices	47414	
Accident Repair	2180	

Further Information

Please note that globally our renewable energy consumption made up 62% of our total consumption equating to 77,274.55 MWh, however this has not yet been certified as per the requirements of the contractual instruments - we aim to do this for 2016 data. Some of this is due to markets and their suppliers, especially outside the EU, not yet ready to provide certificates/contractual instruments. Our full data can be found here http://www.aviva.com/media/upload/ESG_Data_Sheet_2015_O7UrP9x.pdf and assurance statement covering the above figures here http://www.aviva.com/library/2015ar/pdf/sections/performance/parts/aviva-full-annual-report-2015-corporate-responsibility-assurance-statement.pdf

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC10.Scope2EmissionsBreakdown(1Jan2015-31Dec2015)/ESG_Data_Sheet_2015_O7UrP9x (1).pdf
https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC10.Scope2EmissionsBreakdown(1Jan2015-

31Dec2015)/aviva-full-annual-report-2015-corporate-responsibility-assurance-statement.pdf

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

CC11.2

Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	Energy purchased and consumed (MWh)
Heat	
Steam	1535
Cooling	

CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

195122

CC11.3a

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Natural gas	68753
Diesel/Gas oil	1035

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment
Contract with suppliers or utilities, with a supplier-specific emission rate, not backed by electricity attribute certificates	55301	We purchase renewable electricity from sources certified by relevant standards in each country/market. Some of the consumption is metered and some is not depending on the market, large proportion in our largest market (the UK) accounting for over 84% of global low carbon consumption, for example, is metered. Worldwise our renewable electricity consumption stands at 62% of total consumption, up from 56% in 2014.

CC11.5

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
124599	124599	0	0	0	Since the beginning of 2016 we now have 3 UK locations with on site solar PV arrays – Perth, Horizon and Bristol with a generating capacity of 542kWp. The total amount of renewable energy generated is consumed by at the location by the company. We will be able to report fully on this next year.

Further Information

Please note that in April 2015 Aviva plc acquired Friends Life. The consumption and carbon dioxide data reported in this response includes both Aviva and Friends Life data and is complete for the whole of the year - 2015

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC11.Energy/ESG_Data_Sheet_2015_O7UrP9x (1).pdf

Page: CC12. Emissions Performance

CC12.1

How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Increased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	13	Decrease	Based on Aviva's total carbon emissions in 2014 = 83,924 tCo2e compared to Aviva only carbon emissions in 2015 = 73,373 tCo2e
Divestment			
Acquisitions	17	Decrease	Combined 2014 emissions from legacy Aviva Plc and legacy Friends Life equal 83,924 + 23498 = 107425 compare to the combined emission from 2015 of 88,698 tCO2e
Mergers			
Change in output			
Change in methodology			
Change in boundary			
Change in physical operating conditions			
Unidentified			
Other			

CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.0000031	metric tonnes CO2e	21925000000	Location-based	0	No change	

CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
1.6853169	metric tonnes CO2e	full time equivalent (FTE) employee	40768	Location-based	12	Decrease	increased energy efficiency

Further Information

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC12.EmissionsPerformance/ESG_Data_Sheet_2015_O7UrP9x (1).pdf

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, and we do not currently anticipate doing so in the next 2 years

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership

CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

Yes

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
Credit purchase	Energy efficiency: households	LifeStraw - gravity fed water filters negating the need to use fuel to boil water for cleaning - Kenya	Gold Standard	36000		Yes	Voluntary Offsetting
Credit purchase	Other: household biogas	biogas from animal waste used for household cooking	Gold Standard	5000		Yes	Voluntary Offsetting
Credit purchase	Other: irrigation through human power replacing diesel pumps	Treadle pump project in India which uses human power for field irrigation replacing diesel generators	VCS (Verified Carbon Standard)	5000		Yes	Voluntary Offsetting
Credit purchase	Energy efficiency: households	Household energy efficient stoves - Kenya	CDM (Clean Development Mechanism)	2000		Yes	Voluntary Offsetting
Credit purchase	Energy efficiency: households	Household energy efficient stoves - India - Breathing Space	Gold Standard	10000		Yes	Voluntary Offsetting
Credit purchase	Wind	India wind turbine project VASPETT II AND III, MAHARASHTRA, INDIA	VCS (Verified Carbon Standard)	22000			Voluntary Offsetting

Further Information

The amount of carbon credits purchase equals 100% of our operational carbon emissions for 2015. We have committed to the UNFCCC's Climate Neutral Now programme. We have been carbon neutral for the last 10 years. the first insurer to do so on a worldwide basis. We have purchased and retired over 1.25 million tonnes of carbon credits over that time and improved the lives of over 800,000 people since we began measuring in 2011.

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	789000	We are one of The Carbon Trust's pathfinder companies for the new Supply Chain Standard. Based on their methodology using EIO industry conversion factors we estimate the carbon emissions (not only for our own purchasing for our operations but also for our customer claims settlement) approximately 780,900 tonnes CO2e.	100.00%	The emissions are based on our total spend and evaluated on a actual basis of 95% with a 5% extrapolation.
Capital goods	Relevant, not yet calculated		Our spend on capital goods in 2015 was £61m (2014:8m) in respect of property and equipment. (ARA page 232)		
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	4781	This is the scope 3 element of electricity (Transmission and distribution)in accordance with the DEFRA conversion methodology. We use the latest factors that are annually revised for our emission factors: http://www.ukconversionfactorscarbonsmart.co.uk/	100.00%	We purchase carbon credit from the voluntary carbon market to account for this impact.
Upstream transportation and distribution	Not relevant, explanation provided				Aviva reports on its environmental footprint in accordance with operational organisational boundaries, more details are included in the attached reporting criteria. As an insurance company we believe that upstream transportation and distribution is not relevant for financial services.
Waste generated in operations	Relevant, calculated	230	This is calculated in accordance with the Defra conversion methodology. We use the latest factors that are annually revised for our emissions factors:	100.00%	This is in respect of emissions in respect generated waste to landfill and waste to energy. We purchase carbon credit from

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			http://www.ukconversionfactorscarbonsmart.co.uk/		the voluntary carbon market to account for this impact.
Business travel	Relevant, calculated	15411	Air (long haul and short haul), rail, grey fleet,taxi and hire car emissions calculated in accordance with the Defra conversion methodology. We use the latest factors that are annually revised for our emission factors. http://www.ukconversionfactorscarbonsmart.co.uk/	100.00%	A full explanation of what is reported is including in our reporting criteria which has been attached to the further information section. Employee commuting falls outside our reporting boundaries, however we work to support our employees commuting through arranging discounts for park * ride, providing cycling facilities at the offices, and arranging minibus transport for employees that work unsocial hours (specifically call centre operations in India).
Employee commuting	Not relevant, explanation provided				A full explanation of what is reported is including in our reporting criteria which has been attached to the further information section. Employee commuting falls outside our reporting boundaries, however we work to support our employees commuting through arranging discounts for park * ride, providing cycling facilities at the offices, and arranging minibus transport for employees that work unsocial hours (specifically call centre operations in India).
Upstream leased assets	Not relevant, explanation				Aviva reports on its environmental footprint in accordance with operational organisational boundaries, more details

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	provided				are included in the attached reporting criteria. As an insurance company we believe that emissions from upstream leased assets are not relevant for financial services.
Downstream transportation and distribution	Not relevant, explanation provided				Aviva reports on its environmental footprint in accordance with operational organisational boundaries, more details are included in the attached reporting criteria. As an insurance company we believe that emissions from downward transportation and distribution is not relevant for financial services.
Processing of sold products	Relevant, not yet calculated				Whilst we measure the amount of paper we use to promote, detail and confirm our insurance and investment products we have not applied a carbon value to the process at this time. We are seeking ways to provide e-documentation where this is acceptable to the intermediary and the end customer. The amount involved will vary depending on the product and the information requirements of the customer.
Use of sold products	Relevant, not yet calculated				Although we have considered this, the carbon impact in this area will vary greatly depending on the product (the difference between a single trip travel insurance and a pension) and even the product itself (an annual motor insurance policy where the

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					customer has not claimed versus a mulit-vehicle accident with vehicles beyond economic repair). We have begun work on the sustainable claims process which can be viewed here http://www.aviva.com/corporate-responsibility/tackling-climate-change/sustainable-claims-processes/
End of life treatment of sold products	Relevant, not yet calculated				Whilst the paper we use to detail and confirm our insurance products is recyclable, it would be impossible to provide accurate data re the end of life treatment. The end of life treatment of the products replaced through the GI claims supply chain process is also difficult to measure, but we are currently working with the Carbon Trust to look at changes we have made in thee claims process so that the difference can be evaluated in term of carbon emission reductions.
Downstream leased assets	Not relevant, explanation provided				Aviva reports on its environmental footprint in accordance with operational organisational boundaries, more details are included in the attached reporting criteria. As an insurance company we believe that emissions from downward leased assets is not relevant for financial services.
Franchises	Not				Aviva's business model is not based on a

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	relevant, explanation provided				franchise model and therefore it is not relevant.
Investments	Relevant, calculated	75712	We calculate the carbon impact of our investments limited to the energy consumption of the UK investment portfolio as a matter of compliance to the CRC regulations. the conversion factors used are from the CRC compliance process		Whilst we calculate and report them for CRC purposes, these emissions are not included in the boundaries of our operational carbon footprint.
Other (upstream)	Relevant, calculated	175	operational water consumption - water supply on a groupwide basis in accordance with the Defra conversion methodology. We use the latest factors that are annually revised for our emissions factors: http://www.ukconversionfactorscarbonsmart.co.uk/	80.00%	Whilst water is reported on a groupwide basis some water is estimated/extrapolated for some countries included.
Other (downstream)	Relevant, calculated	333	operational water consumption - water treatment on a groupwide basis in accordance with the Defra conversion methodology. We use the latest factors that are annually revised for our emissions factors: http://www.ukconversionfactorscarbonsmart.co.uk/	80.00%	Whilst water is reported on a groupwide basis some water is estimated/extrapolated for some countries included.

CC14.2

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

Third party verification or assurance process in place

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC14.2a/aviva-full-annual-report-2015-corporate-responsibility-assurance-statement.pdf	all as well as having relevant standard ASAE3000 the assurance is also to the standard of International Standard on Assurance Engagements 3410 ‘Assurance Engagements on Greenhouse Gas Statements’	ASAE3000	2
Biennial process	Complete	Limited assurance	https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/CC14.2a/Carbon Trust certificate.jpg	Carbon Trust Supply Chain standard	Verification as part of Carbon Trust standard certification	88

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Emissions reduction activities	9	Decrease	The reduction in electricity transmission and distribution is due to the change in the electricity mix in the UK, this is despite the acquisition of the Friends Life business in April 2016
Waste generated in operations	Emissions reduction activities	49	Decrease	The reduction in waste generated and going to landfill caused the reduction.
Business travel	Emissions reduction activities	17	Decrease	
Investments	Acquisitions	13	Increase	
Other (upstream)	Acquisitions	3	Increase	Due to the acquisition of the Friends Life business in April 2016
Other (downstream)	Acquisitions	3	Increase	Due to the acquisition of the Friends Life business in April 2016

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers
Yes, our customers
Yes, other partners in the value chain

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagement and measures of success

We seek to improve and measure the sustainability of the properties in our investment portfolio. Now in its sixth year, the Global Real Estate Sustainability Benchmark (GRESB) recently assessed the sustainability credentials of over 700 property companies and direct equity funds, representing 61,000 assets and USD 2.3 trillion in value. Of the 17 funds Aviva Investors submitted in 2015, 10 were awarded the coveted 'Green Star' and were in the top half or better of their respective peer groups.

We engage with our customers in many different ways. We used our annual retail investment statement this year to highlight the issue of climate risk to 110,000 of our Investment customers. see attached at the bottom of the page.

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Number of suppliers	% of total spend (direct and indirect)	Comment
285	95%	Last year we hotspotted our supply chain in respect of associated carbon emissions. We have been working with some of our restoration suppliers in our claims process. From research in the changes in our claims restoration, processes have reduced the impacts of claims by last year by a total emissions of 7,600 tCO2e. We are now working on a wider cut of that data and think that we will be able to report on an annual saving of approximately 47,000 tonnes CO2e, through changes to the process. We saw a 43% reduction in carbon emissions per claim for Cat 3 water claims and a 35% reduction in carbon emissions per claim for carpet claims. In total, this is equivalent to 9% of Aviva's direct annual emissions (84,000 tonnes CO2e).

CC14.4c

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data	Please give details
Identifying GHG sources to prioritize for reduction actions	We have been working with some of our restoration suppliers in our claims process. From the research the changes in process have reduced the impacts of claims by last year by a total emissions of 7,600 tCO2e. We are now working on a wider cut of that data and think that we will be able to report on an annual saving of approximately 47,000 tonnes CO2e, through changes to the process.

CC14.4d

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

In September 2015 we sign the Montreal Pledge committing to measure the carbon intensity of our funds. We measured 4 in the first year. The report is attached. The climate change piece from our retail statement to customers is also attached.

Attachments

https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC14.Scope3Emissions/FILLER 1 CORPORATE AND SOCIAL RESPONSBILITY_Jan16Statements_Final.pdf
https://www.cdp.net/sites/2016/68/1268/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC14.Scope3Emissions/Montreal_Pledge_Disclosure.pdf

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Sam White	Group Sustainability Director	Environment/Sustainability manager

Further Information

CDP 2016 Climate Change 2016 Information Request