

**Module: Introduction****Page: Introduction**

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**CC0.1****Introduction**

Please give a general description and introduction to your organization.

AngloGold Ashanti is a global gold mining company with a geographically diverse, world-class portfolio of operations and projects. Headquartered in Johannesburg, South Africa, AngloGold Ashanti is the third largest gold mining company in the world, measured by production. AngloGold Ashanti produced 3.9 million ounces of gold in 2015 - an estimated 2.7% of global production - making it the third largest gold producer in the world. AngloGold Ashanti operates 15 gold-producing operations located in 8 countries on three continents, and a group of greenfield projects in Colombia is supported by a focused exploration programme. These comprise mid to long-life, relatively low-cost assets with differing ore body types located in key gold-producing regions. AngloGold Ashanti currently operates in South Africa, Argentina, Australia, Brazil, Ghana, the Republic of Guinea, Mali and Tanzania. Several of these assets are strongly leveraged to energy costs and currencies. In addition, AngloGold Ashanti holds a material interest in 2 non-managed mines which are operated by Randgold Resources. We work across the full spectrum of the mining value chain and are concerned with the impact of our activities on the varied and many communities and environments in which we operate. Our goal is to create sustainable value for our shareholders, employees, and social partners through safe and responsible mining practices and capital discipline. Headquartered in Johannesburg, South Africa, AngloGold Ashanti's primary listing is on the Johannesburg Stock Exchange (ANG). It is also listed on the following securities exchanges: New York (AU), Australia (AGG) and Ghana (AGA).

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**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

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### 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
Argentina
Australia
Brazil
Ghana
Guinea
Mali
South Africa
Tanzania
United States of America

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### 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.

USD(\$)

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## 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](mailto: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>.

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## Further Information

**Module: Management**

**Page: CC1. Governance**

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## 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

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## CC1.1a

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

The Board Social, Ethics and Sustainability Committee has this responsibility. It has an overview of sustainability policy and strategy, including Climate Change.

The committee is one of five committees that assist the Board in discharging its responsibilities. The functioning of the committees is guided by their terms of reference which are approved by the Board and reviewed annually or as required. During 2015 all Board committees were chaired by independent non-executive directors.

## 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
Corporate executive team	Recognition (non-monetary)	Emissions reduction target Energy reduction target	The executive team is responsible for focusing strategic attention of all business units on improving energy efficiency and associated emissions performance.
Energy managers	Monetary reward	Energy reduction project Energy reduction target Efficiency project Efficiency target	Energy and Efficiency targets focus attention on emissions mitigation because our emissions are directly proportional to our energy consumption.
All employees	Monetary reward	Energy reduction project Efficiency project Efficiency target Environmental criteria included in purchases	Energy consumption accounts for a significant proportion of cost to the business at approximately 20% of direct costs. Although energy consumption, due to the associated cost impact, has been a constant focus area in the company's bonus systems across all organisational levels given the gold price collapse since 2013, this has been further emphasised. Procurement employees' rewards include the extent of application of standardised environmental

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
		Supply chain engagement Other: Performance bonus linked to achievement of cost targets.	criteria in purchase and service contracts. Supply chain engagement on the impact and minimisation of the South African Carbon Tax is a Key performance area for relevant commodity managers.

**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

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 operating countries: South Africa, Ghana, Australia, Brazil, Mali, Guinea, Tanzania and Argentina and for 2015 the United States of America.	> 6 years	The Board committee concerned is the Social, Ethics and Sustainability Committee.

### CC2.1b

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

The company's risk and opportunity system applies to all levels of the organisation, from individual operations and exploration sites to regions and the corporation as a whole. The risk management system uses a 6 x 6 matrix of consequence and likelihood factors to classify each risk and opportunity, resulting in a range of potential risk index ratings from 1 to 36. Once identified, risks are entered onto a software tool that spans the whole organisation. They are captured at the level at which they manifest and can be most effectively managed, including; individual mine, country/regional or at the group level. Pertinent information on progress with risks rated above an index of 31 are typically communicated to the relevant Board Subcommittees on a quarterly.

Downside or upside risks are identified through a variety of processes that include: operational business improvement projects, regulatory compliance assessments, major project development processes and corporate governance reviews led by regional or group functional specialists. Risks in the system are further organised by function and subcategory such as regulatory, financial, reputational, community, environmental, business interruption and security of resource supply (which includes energy and water). E.g.; the 2009 work on assessing the business case for the company's response to climate change was captured and managed by the Environmental function at the corporate level. Opportunities arising from that initial study's findings, such as the compressed air project for underground mines, were then continued by the South African Region Energy managers and applied at the relevant operations. In another example, the financial risk of the Australian regulatory framework to develop a cap and trade system (Clean Energy Future legislation) that ended in June 2014 was lobbied through industry associations on behalf of the 2 in-country assets by the Australian Regional office.

### CC2.1c

#### How do you prioritize the risks and opportunities identified?

Climate change risks and opportunities, which can include influencing the direction of carbon tax legislation, mitigating the risk of increased flooding or drought or fuel switching projects aimed at improving energy efficiency (with the knock-on benefit of decarbonising energy supplies) are prioritised in the same manner as all the other risk types that the organisation identifies.

The risk management system uses a 6 x 6 matrix of consequence and likelihood factors to classify each risk and opportunity, resulting in a range of potential unmitigated risk index ratings from 1 to 36. The unmitigated risk index ratings are grouped into 4 tiers as a means of prioritising action and tracking responses to both threats and opportunities. The highest of these are those with an index of between 31 and 36, requiring immediate action and oversight by the highest levels in the organisation, including the Executive Committee and the Board. Those in the 2nd highest tier (index of 25-30) require proactive management and oversight by the Executive committee and senior operating officers whilst the 2 lowest tiers, 16-24 and 1-15, respectively require active or routine management by operational level risk owners and risk champions.

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#### 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
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#### CC2.2

**Is climate change integrated into your business strategy?**

Yes

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#### CC2.2a

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

The numbering below reflects the points listed in the guidance notes.

i. The company's business strategy is centred on 5 key business objectives. These are: (1) a focus on people, safety and sustainability; (2) ensure financial flexibility is maintained; (3) optimise overhead, costs and capital expenditure; (4) improving the portfolio quality and (5) maintaining long-term optionality of the portfolio of assets. Company and asset-level decisions in support of these key objectives are made annually during aligned cyclical business planning processes such as setting of the annual budget, reviewing life of mine plans for the operational asset portfolio or defining key capital projects which include the construction of new mines or major expansions of existing operations. In each of these decision making processes, short, medium and long term factors likely to impact on the ability to

deliver the projected earnings and business objectives are considered by technical and business specialists. These specialists use the knowledge and information at collected regarding actual or anticipated effects from climate change to determine their financial or reputational impact on the company and ultimately influence these strategic decisions-making processes.

ii. An earlier example was the decision in 2012 to reinvest in the uranium recovery and production business which was aided by the anticipated and sustained improvement in uranium price resulting from increased demand for low-carbon baseload electricity. A more recent example is that during the long term asset portfolio planning process for the South African operations, the financial impact of the imminent carbon taxes on Scope 1 and Scope 2 energy purchases has resulted in a sufficiently large impact on earnings as to trigger a formal prefeasibility study for assessing the viability of a large scale renewable energy supply installation for these operations. Additionally, the observation of anticipated climatic changes in different regions has caused hydrological specialists to re-asses their approach to designing water management infrastructure for new mines, such as making allowances for expanding the groundwater supply borefields at remote mines in Western Australia.

iii. The most important aspect of climate change influencing the short and long term business strategy to date, is the regulatory impact of increased energy prices through carbon taxes being, or likely to be adopted in multiple countries. Physical climate change risks are considered to a lesser extent and where possible during the design of major new mines or long term expansions and typically result in broadening the range of design tolerances to counter increased uncertainty; e.g. in determining the capacity of pollution containment infrastructure.

iv. In the short term particularly, energy efficiency improvements have been targeted and achieved in South Africa in line with internal energy efficiency targets. We were amongst the first companies in the industry to focus on energy efficiency as a core business risk, long before energy efficiency came into vogue. As a result we were able to negotiate favourable terms with electricity utilities, including security of supply. The assessment of the impact of the South African carbon tax on our supply chain puts us in a strong negotiating position with our suppliers while also enabling us to anticipate potential alternative sources.

v. As part of its strategy to ensure that AngloGold Ashanti can continue to operate deep level mines, the company initiated several years ago a long-term research programme into safer and more efficient underground mining technologies which incorporates a significant reduction in energy consumption and thus GHG emissions as a primary requirement. These changes will not have commercial application for at least another 5 years, and probably more. They will affect how we operate in South Africa and potentially elsewhere for decades to come. The company has assessed long-term energy and water security risks and revises its response plans on an annual basis. These include assessing low-emissions energy options, including natural gas, biomass, biofuels, solar, wind and hydropower. We are also assessing local climate change adaptation risks

vi. As mentioned in (ii) above, perhaps the most substantial business decision has been to deepen investment in the uranium recovery business in anticipation of increased demand for low-carbon baseload electricity. The acquisition of the wholly owned subsidiary NUFCOR (Nuclear Fuels Corporation) in South Africa, which processes and packages uranium dioxide mined in South Africa for the European nuclear fuels market assures us an advantage over South African peers. Another key decision was to invest significant management time in determining the potential impact of a carbon price on our South African and Australian operations and then to alter our business plans going forward, including revising energy efficiency targets.

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## CC2.2b

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



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**CC2.2c**

**Does your company use an internal price of carbon?**

Yes

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**CC2.2d**

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

In South Africa, where a carbon tax is now expected to be applied from 2017, our business planning and major project evaluation processes incorporate the best information available on the level of the tax and how it will be applied, both as Scope 1 and Scope 2 taxes. Scope 2 electricity purchases have the most material impact on business planning and project evaluations. The South African National Treasury have indicated that the carbon tax will be cost neutral via electricity pricing until 2020, therefore in financial models, the company uses carbon pricing for planning in South Africa beyond 2020. At current exchange rates, the price used is approximately USD7.7/ton of CO<sub>2</sub>e.

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**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

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**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	AngloGold Ashanti's engagement with policy makers takes place in response to public participation requests, as well as on the initiative of the company.	We supported requirements in Australia for mandatory reporting, though the government has removed these. Requirements in South Africa are under development and we are engaging on the details to prevent duplication and an unnecessary reporting burden. Government has been receptive to our recommendations.
Carbon tax	Support with major exceptions	AngloGold Ashanti engages with government authorities at the relevant levels directly to understand government policies as they develop, and to communicate to regulators the company's views on impacts that carbon taxes may impose on companies. Our engagement focuses on addressing unknown factors and proposing constructive solutions.	We support in principle having a price on carbon. We are concerned that the carbon tax proposed in South Africa comes on the back of a period of sustained electricity price increases which have already resulted in decreased electricity consumption and therefore emissions. The country is ahead of its emissions targets. The electricity price already incorporates substantial funding for renewable energy as well as a levy on electricity produced from fossil fuels. Thus we argue that a carbon tax is already effectively in place.
Energy efficiency	Support	The company engaged in South Africa with the Department of Energy and Eskom specifically on concerns of energy security, and has demonstrated its commitment by implementing energy efficiency projects that have reduced the power consumption of its operations in the South Africa Region. In addition, AngloGold Ashanti became the 49th partner in Eskom's 49M electricity saving campaign in July 2012. Endorsed by government and business partners, this initiative is intended to include 49 million South Africans.	The 49M campaign aims to encourage individuals to embrace energy saving as a part of the national culture and to join the global journey towards a sustainable future. The call to action is for every citizen to "lift a finger" because "all it takes is to switch off a light". The purpose of the campaign is to realise a 10% energy saving in order to maintain security of electricity supply over the next five years while Eskom boosts energy infrastructure and capacity.

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**CC2.3b**

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

Yes

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**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?
International Council of Mining and Metals (ICMM)	Consistent	<p>In 2010, ICMM members established a program of policy principles, leading practice and company commitments to contribute to working towards a low carbon economy: 1) an integrated set of seven principles for climate change policy design that build on those contained in the 2009 policy: •provide clear policies for a predictable, measured transition to a long term price on greenhouse gas emissions •apply climate change related revenues to manage a transition to a low carbon future •facilitate trade competitiveness across sectors •seek broad-based application •be predictable and gradual •be simple and effective •support low-emission base-load generation technology development. 2) three focus areas which address the climate change issues which are important to mining and metals companies: •national climate policies and competitiveness •land use and adaption to the impacts of climate change •measurement, reporting and verification of net greenhouse gas activities. 3) a set of ICMM member company commitments. As a minimum, ICMM members accept their responsibility to: •develop greenhouse gas emission reduction strategies and implement economic emissions reductions opportunities •ensure efficient use of natural resources •support research and development of low greenhouse gas emission technologies that are appropriate to the industry •measure progress and report results.</p>	<p>AngloGold Ashanti argued for the need to have a proactive position on climate change and made extensive input into its design. This was done at Council and technical levels. We have supported moves to update the association's position in 2015 and continuing to address climate change proactively.</p>
Business Leadership South Africa (BLSA)	Consistent	<p>BLSA does not have a formal position on climate change but engages with the South African government on all issues that impact business, including climate change legislation and policy positions.</p>	<p>The company is a member of the BLSA Board and participates actively in Board meetings and BLSA engagements with government.</p>
Industry Task Team on Climate Change (ITTCC)	Consistent	<p>Principles of climate policy: •Predictable and gradual: Be set out well in advance and the pace and progress of introduction of policies and abatement targets should be clearly laid out to reduce investment uncertainty and maximise the effectiveness of each policy by allowing businesses to transition efficiently to a low carbon economy. •Development focused: Be part of a coherent set of policies covering energy policy, industrial policy, economic growth policy and social welfare policies that reinforce South African development priorities: creating decent work, economic and social transformation and</p>	<p>AngloGold Ashanti was a founder member of the organisation and is an active member of the ITTCC Council. We argued successfully for a position consistent with the ICMM position.</p>

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?
		<p>maintaining sustainable energy supply. •Broad based: Include a diverse selection of policy levers to effectively target the multiple, complex market failures within climate change thereby lowering the overall cost of emissions reduction. •Sending a clear price signal: Ensure that any carbon price signal is consistent, transparent and designed in a manner so that it influences producers and consumers, such that emissions and carbon consumption is reduced and the incentive to develop low carbon technologies is increased. •Revenue neutral: Focus on changing behaviour, not raising revenues – it must be a priority of government to return revenues raised by a carbon price to households and businesses through lump sum payments or tax reductions to reduce the negative impacts of climate change policies. •Trade competitive: Ensure local industries retain their international competitiveness in the absence of a global response to maintain environmental integrity, avoid carbon leakage, loss of competitiveness and adverse economic and welfare impacts. •Simple and effective: Include measures which effectively reduce emissions and are simple to implement and administer. Simple policies increase transparency; reducing opportunities to exploit loopholes and reducing administration costs. •Supportive of technology: Encourage investment in low carbon choices directly (e.g. with innovation incentives), to accelerate the development of new technologies, reducing the cost of abatement and promoting the growth of a 'green' sector. •Climate ready: Include adaptation measures to mitigate the adverse physical impacts of climate change such as severe weather, drought and floods and rising sea levels.</p>	
Minerals Council of Australia	Consistent	<p>The minerals industry acknowledges that sustained global action is required to reduce the scale of human induced climate change. A measured transition to a low emissions global economy will require the alignment of three key policy pillars: • a global agreement for greenhouse gas emission abatement that includes emissions reduction commitments from all major emitting nations; • market-based policy measures that promote the abatement of greenhouse gas emissions at the lowest cost, while minimising adverse social and</p>	The company is a member of the association's board.

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?
		economic impacts, including on the competitiveness of the internationally traded sector; • substantial investment in a broad range of low emissions technologies and adaptation measures. In the absence of a global agreement in the near term, the imperative for all nations is to sustainably reduce the production and consumption of greenhouse gas emissions without compromising international competitiveness, energy security and economic growth, improved living standards and poverty alleviation.	

**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?**

The company climate change strategy was developed collaboratively, involving all parts of the business and all regions, ensuring their buy-in. It was approved by what is now the Board Social, Ethics and Sustainability Committee. There is regular communication between climate change lead people at the national and corporate levels to ensure that there is a common understanding of new developments and approaches to them. The primary forum is the Environmental Steering Committee (ESC). Corporate and regional sustainability leaders, including those tasked with climate change, meet at a biennial Sustainability Workshop, at which

common challenges, including climate change are discussed and action plans agreed.

Most of the national mining associations of which AGA is a member are members of the International Council on Mining and Metals (ICMM) and support its Climate Change Principles, which helps to ensure coherence between country positions. AGA has advocated inclusion of the Principles into national legislation, further supporting policy coherence.

The company's position on key policy issues, such as the South African carbon tax, has been endorsed by the Board Social, Ethics and Sustainability Committee and communicated to employees who interact with government and trade associations.

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### CC2.3g

Please explain why you do not engage with policy makers

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### Further Information

**Page: CC3. Targets and Initiatives**

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### 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?**

Intensity target

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### 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
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**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
Int1	Scope 1+2 (location-based)	100%	30%	Metric tonnes CO2e per ounce of gold	2007	0.77	2022	No, but we anticipate setting one in the next 2 years	The company's formal emission intensity reduction target was set in 2008 on the notion that gold production ounces would remain a suitable proxy for mining production activity levels. However, fluctuating gold grades in the ore mined since setting this target has shown this assumption to be questionable. The company is currently reviewing how it frames its GHG emission efficiency ambitions. In principle, the previously declared base year, target year and percentage reduction will likely be maintained but the denominator, currently gold production ounces, will be replaced in favour of a more relevant proxy for mining production levels. For example, over several years already, AngloGold Ashanti has also tracked and publically reported its Energy consumption and GHG Emissions per tonne of ore treated. A 5-year summary which appears in our 2015 Sustainability Report's Environmental data tables at <a href="http://www.aga-reports.com/15/sdr/topics/sdr/data-table-environment">http://www.aga-reports.com/15/sdr/topics/sdr/data-table-environment</a> shows a 20% improvement over that time period. The primary drivers of energy consumption (and GHG

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
									emissions) in AngloGold Ashanti operations is the volume of rock mined, trammed and hoisted, distances trucked and milled in processing plants. In addition, our underground mines commonly use significant amounts of energy to ventilate and cool the underground workings.

**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
Int1	Decrease	30	No change	0	The variation in emissions is calculated using publicly available production forecasts. The target set is only for Scope 1 & 2 emissions.

**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
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**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
Int1	53%	4%	Despite concerted energy efficiency initiatives, the company's GHG emissions per ounce of gold produced increased between 2007 and 2012 and have since been marginally decreasing. This is the result of varying gold grades. See comment provided in CC3.1b on potentially re-stating the emission reduction target using a denominator that better reflects the level of mining activity that drive energy consumption. Using the company's GHG emissions per tonne of ore treated, the performance since 2007 reflects a 22 percent reduction (improvement) emissions intensity.

**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
Product	AngloGold Ashanti produces uranium oxide as a by-product which is sold to nuclear energy producers in developed countries. By producing electricity using uranium rather than fossil fuels such as coal, GHG emissions are avoided. Applying the World Nuclear Association methodology for calculating the CO <sub>2</sub> e emissions saved using uranium rather than coal one calculates that AngloGold Ashanti's 2015 uranium oxide sales into the nuclear energy industry avoided 15.8 Mt of CO <sub>2</sub> e emissions. This is 3.5 times the company's combined scope 1 and 2	Avoided emissions	Other:	0.8%	Less than or equal to 10%	In 2015, AGA produced 0.9 Mlb of uranium oxide concentrate (U <sub>3</sub> O <sub>8</sub> ). 0.9 Mlb = 408 t of uranium oxide concentrate. 408 t uranium oxide concentrate comprises 408*0.848 = 346 t uranium. 346 t uranium saves 346/22 = 15.7 Mt CO <sub>2</sub> generated from coal. The assumptions used are provided on The World Nuclear Association at: <a href="http://www.world-nuclear.org/info/Energy-and-Environment/Uranium,-Electricity-and-Climate-Change/">http://www.world-nuclear.org/info/Energy-and-Environment/Uranium,-Electricity-and-Climate-Change/</a> . In summary, A 1,000 megawatt electrical (MWe) coal-fired power station burning coal has a typical fuel requirement of almost 3.2 million tonnes* of black coal a year, assuming coal yielding 24 MJ/kg and plant operating at 80% capacity. A nuclear power

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
	emissions for 2015. Calculations and further references are provided in the comments section.					reactor of the same capacity (after its initial fuel loading of uranium) has an annual requirement of around 27 tonnes of fuel. Producing this amount of uranium fuel requires the mining of 45-70,000 tonnes of typical Australian uranium ore. This yields about 200 tonnes of uranium oxide concentrate. The uranium oxide is enriched to yield the 27 tonnes of actual fuel. Each year the 1000 MWe coal-fired power station produces about 7 million tonnes of carbon dioxide. Every 22 tonnes of uranium used avoids the emission of one million tonnes of carbon dioxide, relative to coal.

**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	21	169825
To be implemented*	23	226861
Implementation commenced*	38	285342
Implemented*	5	20160
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
Energy efficiency: Processes	TauTona Mine - In 2015 there was focus placed on Tautona air consumption and air production efficiency. Significant reductions were achieved by reducing wastage and improving control in low	3648	Scope 2 (location-based) Scope 3	Voluntary	177333	20000	<1 year	Ongoing	The SA region has a dedicated energy team focussing on energy monitoring, target setting and site support to implement projects. This project

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
	demand periods. These savings came into effect from June 2015.								shows the good work performed by the department in supporting the business unit to achieve reduction goals.
Energy efficiency: Processes	Mponeng Mine - In 2015 there was a lot of focus placed on Mponeng air consumption and air production efficiency. Significant reductions were achieved by reducing wastage and improving control in low demand periods. These savings came into effect from Sep 2015.	2496	Scope 2 (location-based)	Voluntary	121333	10000	<1 year	Ongoing	The SA region has a dedicated energy team focussing on energy monitoring, target setting and site support to implement projects. This project shows the good work performed by the department in supporting the business unit to achieve reduction goals.
Energy efficiency: Processes	Mponeng Mine - In the last couple of years it was always debated whether Mponeng need to run their third main fan as it adds very little of its designed capacity to the flow achieved. In 2015 the Ventilation department determined that the effect of stopping one main fan is	9600	Scope 2 (location-based)	Voluntary	326666	1000	<1 year	Ongoing	The SA region has a dedicated energy team focussing on energy monitoring, target setting and site support to implement projects. This project shows the good work performed by the department in

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
	insignificant and in mid January 2015 it was stopped.								supporting the business unit to achieve reduction goals.
Energy efficiency: Processes	Mponeng Mine - Mponeng has placed great focus and effort in reducing the amount of water they put down the mine to reduce pumping kWh. Significant savings have been achieved by reducing wastage and ensuring all cooling cars are on a closed loop. Improving hard ice plants availability and utilising soft ice optimally means less water is needed for cooling underground dams. Savings came into effect from mid-year and the magnitude can be determined by comparing this year's actuals to last year's actuals.	4032	Scope 2 (location-based)	Voluntary	196000	50000	<1 year	Ongoing	The SA region has a dedicated energy team focussing on energy monitoring, target setting and site support to implement projects. This project shows the good work performed by the department in supporting the business unit to achieve reduction goals.
Energy efficiency: Processes	Vaal River Compressed Air Ring - Stoppage of Kopanang Compressor and 76 Air Pipeline between GNM and Moab Khotsong As the air consumption has reduced in recent years, the 15MW compressor has become too	384	Scope 2 (location-based)	Voluntary	18667	20000	1-3 years	Ongoing	The SA region has a dedicated energy team focussing on energy monitoring, target setting and site support to implement projects. This project shows the good work

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
	<p>large and made control difficult and inefficient. The compressor however heated water for the shaft and residence change houses and thus alternative heating had to be installed before the compressor could be stopped. Heat Pumps were installed. This project was completed at the end of November 2015 and only effected December in 2015. In conjunction with the above the 76Level compressed air pipeline between GNM and Moab Khotsong was installed. This pipeline was installed to supplement Moab with air from GN to reduce the pressure drop in Moab's shaft column. This project was completed at the end of November 2015 and together with the Kopanang compressor stoppage produced the savings above.</p>								<p>performed by the department in supporting the business unit to achieve reduction goals.</p>

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

Method	Comment
Compliance with regulatory requirements/standards	All of AngloGold Ashanti's operating standards require regulatory compliance as a minimum. Regular internal and external reviews ensure that regulatory compliance is maintained.
Dedicated budget for energy efficiency	All of AngloGold Ashanti's operations have dedicated energy efficiency budgets. At our South African mines, which accounted for 36% of our total global energy consumption in 2013 but was responsible for 65% of our global carbon emissions, annual absolute and energy efficiency performance improvement targets are set and a dedicated budget provided.
Marginal abatement cost curve	In both Australia and South Africa, where carbon pricing is or was in place, we have constructed marginal abatement cost curves for each affected mine and use these curves to prioritise emissions reduction activities. These are updated annually.
Other	The Technology Innovation Consortium for our deep underground mines in South Africa is investigating opportunities for significantly improved energy efficiency, with a concomitant impact on GHG emissions.
Internal price of carbon	All planning at our South African operations uses the latest information on the proposed carbon tax.

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CC3.3d

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

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**Further Information**

**Page: CC4. Communication**

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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
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	3	<a href="https://www.cdp.net/sites/2016/79/779/Climate%20Change%202016/Shared%20Documents/Attachments/CC4.1/AFS2015.pdf">https://www.cdp.net/sites/2016/79/779/Climate Change 2016/Shared Documents/Attachments/CC4.1/AFS2015.pdf</a>	
In other regulatory filings	Complete	1, 28-29, 66, 77, 85, 91, 112-113	<a href="https://www.cdp.net/sites/2016/79/779/Climate%20Change%202016/Shared%20Documents/Attachments/CC4.1/IR2015.pdf">https://www.cdp.net/sites/2016/79/779/Climate Change 2016/Shared Documents/Attachments/CC4.1/IR2015.pdf</a>	
In other regulatory filings	Complete	18 (19), 27(28), 77(78), 78 (79)	<a href="https://www.cdp.net/sites/2016/79/779/Climate%20Change%202016/Shared%20Documents/Attachments/CC4.1/2015_Form20F.pdf">https://www.cdp.net/sites/2016/79/779/Climate Change 2016/Shared Documents/Attachments/CC4.1/2015_Form20F.pdf</a>	
In voluntary communications	Complete	40-42, 87-88,	<a href="https://www.cdp.net/sites/2016/79/779/Climate%20Change%202016/Shared%20Documents/Attachments/CC4.1/SDR2015.pdf">https://www.cdp.net/sites/2016/79/779/Climate Change 2016/Shared Documents/Attachments/CC4.1/SDR2015.pdf</a>	

#### Further Information

### 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 regulation
- 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
International agreements	AngloGold Ashanti (AGA) emits greenhouse gases (GHGs) directly by its operations, and indirectly via the external utilities from which it purchases power. Currently, a major international measure to address or limit GHG emissions, is the 2015 Paris Agreement. For the first time, developed and developing countries have promised to reduce their GHG Emissions in an effort to cap warming at 1.5 Degrees Celsius. The Agreement translates into nationally determined commitments which are to start	Increased operational cost	>6 years	Indirect (Supply chain)	Virtually certain	Medium-high	Indirect carbon taxes of up to USD22 million per annum from 2020 onwards.	Management is focused on 2 primary activities: reducing GHG emissions and engaging with the international negotiations through industry associations. In all countries in which it operates, the company is focussed on reducing its greenhouse gas emissions footprint as quickly as possible. Because more than 95% of the company's emissions are derived from fossil fuel use, reducing energy costs has an immediate and direct impact both on our bottom line and on our GHG emissions profile. Energy efficiency improvements of	Our expenditure to influence policy and regulation on a multinational scale approached US\$0.5M during 2015.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>in 2020 and signals the end of Business as Usual for the energy industry. As countries define and roll out their commitments in future, this could require AngloGold Ashanti to reduce its direct GHG emissions or energy use or to incur significant costs for GHG emissions permits or taxes or have these costs passed on by electricity utilities which supply the company.</p>							<p>over 15% have been achieved in our South African operations, which accounts for 65% of our GHG emissions and efforts are ongoing. The energy efficiency focus was initially in South Africa, but has in recent years spread to other jurisdictions in which we operate. AngloGold Ashanti engages with the international negotiations via government agencies and through international and national industry associations to advocate regulatory provisions that are not detrimental to business and the mining industry in particular. These associations also keep the company</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								updated on policy and regulatory trends.	
Cap and trade schemes	Australia had a regulatory framework that consisted of a reporting mechanism (National Greenhouse and Energy Reporting Act 2007, NGER, repealed in 2014) and a cap and trade system (Clean Energy Future legislation). At its core was a carbon pricing mechanism that started in July 2012 and was ended in June 2014. If this or a similar scheme or were to be revived in response to the Paris Agreement, it could pose a risk to AGA of increased operational costs.	Increased operational cost	1 to 3 years	Direct	About as likely as not	Medium	Because no proposals have been made it is impossible to estimate the potential costs.	Management is focused on 2 primary activities: reducing GHG emissions and engaging with the government through industry associations. AGA is focussed on reducing its greenhouse gas emissions footprint in Australia, although increasing the number of operations from one to two has resulted in increased absolute emissions. In part, this has been offset by fuel conversion from diesel to gas fired electricity generators in the Australian operations. Additionally, a gas	The gas pipeline project in Australia was constructed on a long term lease agreement. It has an approximate \$60m value in present value terms. Our expenditure to influence policy and regulation on a multinational scale approached US\$0.5M during 2015.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								<p>pipeline ± 950kmin length has significantly reduced the Scope 3 emissions created by fuel deliveries to site. Because more than 95% of the company's emissions are derived from fossil fuel use, reducing energy costs has an immediate and direct impact both on our bottom line and on our GHG emissions profile. AngloGold Ashanti engages with the state and federal governments via government agencies directly and through state and federal industry associations to advocate regulatory provisions that are not detrimental to business and the mining industry in particular. These</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								associations also keep the company updated on policy and regulatory trends.	
Carbon taxes	During November 2015, a draft Carbon Tax Bill was issued that confirmed a proposed tax rate of R120 per tonne of CO2 equivalent. The South African Finance Ministry has delayed the introduction of the expected Carbon Tax by one year to 1 January 2017. Through subsequent engagement via an industry association, the National Treasury has indicated that it intends to ensure the carbon tax through electricity pricing is cost neutral until 2020 (during Phase 1). This	Increased operational cost	3 to 6 years	Indirect (Supply chain)	Virtually certain	Medium-high	Indirect carbon taxes of up to USD22 million per annum through increased electricity and supply chain costs after full implementation of the Carbon Tax in its current form (post 2020). The potential increase in the cost of major consumables was assessed for our South African operations, based on the information available from the government. The impact of the proposed carbon tax on goods purchased in South Africa is estimated to be USD5 million during Phase 2.	Management is focused on 2 primary activities: reducing GHG emissions and engaging with the national-level negotiations through industry associations. In all countries in which it operates, the company is focussed on reducing its greenhouse gas emissions footprint as quickly as possible. Because more than 95% of the company's emissions are derived from fossil fuel use, reducing energy costs has an immediate and direct impact both on our bottom line and on our GHG	Our expenditure to influence policy and regulation on a multinational scale approached US\$0.5M during 2015.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p> muted effect will be achieved through a series of exemptions and removal of existing levies on the electricity price. The material impact of the Carbon tax through electricity pricing is therefore going to manifest after 2020, however the phasing in schedule has not been determined by government. The Carbon tax will however also be levied directly through adjusted fuel prices from 1 January 2017. This will cause AGA's fuel energy cost base to increase approximately 1% from Phase 1 and is negligible. South African - based suppliers are expected to increase their </p>							<p> emissions profile. Energy efficiency improvements of over 15% have been achieved in South Africa, which accounts for 65% of our GHG emissions and efforts are ongoing, as described elsewhere in this submission. The energy efficiency focus was initially in South Africa, but has in recent years spread to other jurisdictions in which we operate. AngloGold Ashanti engages with the international negotiations via government agencies and through international and national industry associations to advocate regulatory provisions that are not detrimental to </p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	prices to offset carbon taxes and other carbon pricing mechanisms and to pass on other costs associated with mitigating risks associated with climate change.							business and the mining industry in particular. These associations also keep the company updated on policy and regulatory trends. AngloGold Ashanti engages with the international negotiations via government agencies and through international and national industry associations to advocate regulatory provisions that are not detrimental to business and the mining industry in particular. These associations also keep the company updated on policy and regulatory trends.	
Fuel/energy taxes and regulations	In all jurisdictions where we operate, fuel taxes apply. Other energy taxes and	Increased operational cost	Up to 1 year	Direct	Virtually certain	Low-medium	In South Africa, the treasury has advised of a direct Carbon tax to be imposed on fossil	AngloGold Ashanti engages with governments via government agencies directly	Our expenditure to influence policy and regulation on a multinational



Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	regulations apply in Australia, Brazil and South Africa already. The possibility of increased regulation poses the risk of the unknown cost and economic impact on our business and on individual national economies. Government tax regimes could also impact on fuel and energy availability and supply chains.						fuels from 1 January 2017. This will increase the fuel cost by approximately 1 percent in this country. The risks relate to uncertainty in regard to potential legislation or regulation and to changes to current legislation and regulation. By its very nature the financial implications of these uncertainties cannot be determined. Uncertainty itself imposes a cost as a result of delays, exploration of alternatives and government advocacy activities.	and through industry associations to advocate regulatory provisions that are not detrimental to business and the mining industry in particular, or to limit their effect. These associations also keep the company updated on policy and regulatory trends. The impact of fossil fuels energy taxes are managed through energy efficiency improvement programmes. These are also supported by cost reduction and efficiency drives in remuneration systems.	scale approached US\$0.5M during 2015.

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
Change in mean (average) temperature	Increased temperatures can cause adverse operating impacts on our underground mining operations in Ghana and South Africa during peak heat periods in the summer months. These operations require air cooling plant and mine ventilation equipment to be operated in order to maintain safe and productive underground working environments. In extreme cases, ambient temperatures may exceed cooling equipment operating	Increased operational cost	>6 years	Direct	Very likely	Medium-high	Increased temperatures impacting on underground productivity and safe work environments will require increased underground cooling capacity. The cost of upgrading or adding additional refrigeration capacity could be significant running into the tens of millions of US dollars. Higher temperatures may affect the effectiveness of rehabilitation programmes, developed at great cost and rectification and additional research could amount to between USD 5 million and	Mines are long-term investments, with the result that mine planning, operation, and closure processes already incorporate management of extreme climate events. We have assessed the climate exposure risks for all of our operations in a detailed study carried out in 2008/9 using external consultants. We are progressively assessing the adaptation requirements for those operations identified as being at	Where necessary, the adaptation interventions would be defined, budgeted for and implemented at the operational level

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	parameters, requiring them to be replaced or additional units to be installed. Higher temperatures can also hinder rehabilitation efforts and result in a number of health and safety risks, including an increased risk of wildfires.						USD10 million for worst affected operations.	greatest risk.	
Change in precipitation extremes and droughts	Extreme weather events have the potential to cause significant damage to livelihoods and property, and thus be costly to the company. In the recent past, floods and droughts have disrupted the operations at some of AngloGold Ashanti's mines. For example, unprecedented heavy rains in	Reduction/disruption in production capacity	Up to 1 year	Direct	Likely	Medium-high	High rainfall events can lead to flooding and disruption of mining and transport operations, amongst other consequences. Droughts have longer-lasting impacts and are more difficult to prepare for. The anticipated impact of reduced water availability in Brazil is that production would	Mines are long-term investments, with the result that mine planning, operation, and closure processes already incorporate management of extreme climate events. We have assessed the climate exposure risks for all of our operations. We	The scoping study is expected to cost ~ZAR350k. Where necessary, the adaptation interventions would be defined, budgeted for and implemented at the operational level.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>February and March 2011 in Australia flooded the Sunrise Dam Gold Mine and forced a temporary shutdown of operations. The flood event reduced underground production for four months and open-pit production for six months, and full costs were incurred despite the shutdown and slow-down. The lack of water reduced percolation through the heap leach pad, curtailing production and productivity. In Brazil, severe water shortages from low rainfall have been experienced in 2014 and 2015, adversely affecting hydro-</p>						<p>be directly constrained. It was anticipated that reducing gold production by up to 5% during peak dry periods in 2014 could have reduced income by up to USD 6 million.</p>	<p>are progressively assessing the adaptation requirements for those operations identified as being at greatest risk. Short-term water supply constraints at the Tropicana Mine in Australia were addressed during 2015 through the expansion of borehole infrastructure, increasing delivery capacity.</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	electrical power generation. Droughts and high intensity rainfall events can also hamper or damage concurrent rehabilitation efforts, increasing the costs of mine closure.								
Induced changes in natural resources	The adverse impacts of climate change on communities in close proximity to AngloGold Ashanti's operations could cause significant distress, especially in developing countries and particularly the poorest countries in which AngloGold Ashanti operates. Specifically, competition for scarce water	Wider social disadvantages	>6 years	Indirect (Client)	More likely than not	Low-medium	Adverse climate change impacts are likely to impact severely on adjacent communities, especially in developing countries. In particular, competition for scarce water resources could require extensive investment in infrastructure. We are still investigating likely impacts on specific communities and expected costs of adaptation	Mines are long-term investments, with the result that mine planning, operation, and closure processes already incorporate management of extreme climate events. We have assessed the climate exposure risks for all of our operations. We are progressively assessing the	The scoping study is expected to cost ~ZAR350k. Where necessary, the adaptation interventions would be defined, budgeted for and implemented at the operational level.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	resources could mean further emphasis on providing water to communities and even on the company's ability to access sufficient water. Food and energy security are likely to be increasing challenges as well. Risk exposure due to increased disease prevalence in communities is not necessarily limited to a specific population, and has the potential to have a direct bearing on the wellbeing of company workforce, site staff and their families.						and remediation activities.	adaptation needs for those operations identified as being at greatest risk.	
Change in mean (average) precipitation	In Ghana, AGA's operations depend on power supplied	Increased operational cost	Up to 1 year	Indirect (Supply chain)	Virtually certain	Medium	Increased power prices negatively impact operating costs and cash	Mines are long-term investments, with the result	The scoping study is expected to cost

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>by the state-controlled Volta River Authority (VRA), a large proportion of which is hydropower. During periods of below average inflows from the Volta reservoir, electricity supplies from the Akosombo Dam, the VRA's primary generation source, are curtailed. This has occurred in previous years (2006 and the first half of 2007). This can result in intermittent or no electricity supply and increased costs, either as a result of the VRA seeking additional, more costly sources, or AGA generating its own power.</p>						<p>flow. Since first experienced in 2006 and 2007 and due to lowered hydropower generation capacity, the VRA has since developed 2 tariff, a cheaper hydropower tariff for communities and a higher, thermal power-based tariff for industry.</p>	<p>that mine planning, operation, and closure processes already incorporate management of extreme climate events. We have assessed the climate exposure risks for all of our operations. We are progressively assessing the adaptation requirements for those operations identified as being at greatest risk.</p>	<p>~ZAR350k. Where necessary, the adaptation interventions would be defined, budgeted for and implemented at the operational level.</p>

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
Reputation	If the company is perceived to be ignoring climate change risks this is likely to impact its reputation. If the mining industry as a whole is perceived to be a poor performer, the company's reputation will be also be affected, though to a lesser extent.	Reduced stock price (market valuation)	Up to 1 year	Direct	Likely	Unknown	AGA has worked hard over many years to build a reputation as being a proactive, constructive contributor to the climate change response debate, pushing for ambitious yet realistic targets. This is expected to stand its reputation in good stead. Increasingly Environmental, Social and Governance focused investors require that AGA demonstrates its response to Climate changes in order to qualify being listed in their investment baskets. This helps underpin the	A major project was carried out during 2008/9 to identify and, where possible, quantify, all of the company's climate change-related risks. This has helped the company to understand the risks it faces, as well as the opportunities it has, and these are now being communicated and addressed as the opportunity arises. Detailed footprint data is being published in the interests of transparency and to demonstrate that the company has a good understanding of the drivers of its	The estimated cumulative cost of the work undertaken to study the company's exposure to climate change, the management time taken to implement GHG emissions accounting systems and periodically respond to investor submissions amounts to approximately US\$2 million over the past 10 years.



Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							company share price for its investors, however it is not practicable to reasonably estimate the US\$ value protected or enhanced.	contribution to climate change. AGA has been reporting on climate change issues through the CDP since 2008 and in Annual and Sustainability reports since before then.	
Other drivers	There is pressure from investors and lenders to reduce the company's exposure to regulatory measures and to reduce its direct and indirect carbon emissions. It is possible that the company's market valuation or cost of capital could be impacted based on its perceived exposure to climate change-related risks.	Reduction in capital availability	Unknown	Direct	Unlikely	Medium	Investor and project lender interest in climate change is growing and broadening. If this translates to pressure to make operational changes, or results in higher borrowing costs, the cost impact is considered potentially high but not easily quantifiable.	In all countries in which it operates, AGA is focussed on reducing its greenhouse gas emissions footprint as possible and improving energy efficiency. Because more than 95% of the company's emissions are derived from fossil fuel use, reducing energy costs has an immediate and direct impact both on our bottom line and on our GHG emissions profile. The energy efficiency focus	We have not yet costed management action associated with addressing these risks.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								was initially in South Africa, but has in recent years spread to other jurisdictions in which we operate. Increasingly detailed footprint data is being published in the interests of transparency and to demonstrate that the company has a good understanding of its contribution to climate change.	
Increasing humanitarian demands	Increased pressure from neighbouring communities struggling with disease, crop failure and the depletion of natural resources.	Wider social disadvantages		Indirect (Supply chain)	Likely	Low-medium	A changing climate is likely to impact severely on adjacent communities, especially in developing countries. Our mines are often the major source of income over a very large area. In particular, competition for scarce water resources could require extensive	AngloGold Ashanti developed in 2013 a new Sustainability Strategy that has a core requirement to work together with host communities to jointly build sustainable futures. A major project was carried out during 2008/9 to identify and, where	We have not yet costed management action associated with addressing these risks.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							investment in infrastructure. We are still investigating likely impacts on specific communities and expected costs of adaptation and remediation activities.	possible, quantify, all of the company's climate change-related risks. This has helped the company to understand the risks it faces, as well as the opportunities it has, and these are now being communicated as the opportunity arises. Increasingly detailed footprint data is being published in the interests of transparency and to demonstrate that the company has a good understanding of its contribution to global climate change	

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

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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

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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

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**Further Information**

**Page: CC6. Climate Change Opportunities**

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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 physical climate parameters
- 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
Carbon taxes	Carbon offsets present an opportunity to AngloGold Ashanti with the anticipated introduction of a carbon tax to South Africa. AGA could generate offsets.	Reduced operational costs	1 to 3 years	Direct	Unlikely	Low	We were anticipating that energy efficiency initiatives or the adoption of renewables at our operations in South Africa or from other operations in Africa would provide offset opportunities but these are excluded from the current proposal published by National Treasury. As currently proposed, offsets would probably be too expensive to develop.	Opportunities to generate carbon credits will be investigated once the requirements have been finalised. If an identified project has potential to earn carbon credits it will be investigated further. Owing to the complexity of the proposals as drafted, this component will be outsourced to specialist consultants.	The cost to the company of carbon credit generation has been less than ZAR10M to date.
Fuel/energy taxes and regulations	In 2010 AngloGold Ashanti commenced a large technology innovation project that aimed at safer,	Reduced operational costs	>6 years	Direct	Likely	High	The potential energy savings are substantial. With electricity prices in South Africa rising at well above the inflation rate, the	The company is partnering with a consortium of worldwide development partners with global reach, who will	The Technology Innovation Consortium project cost USD8m in 2014.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	more productive and energy efficient deep underground mining, in particular new drilling and narrow ore extraction methods for narrow gold-vein underground mines. This project is expected to provide extensive energy and cost benefits (these will be quantified as the projects are specified in more detail).						benefits are compounded. A 5% reduction in annual energy needs translates to approximately US\$9 million per year, before consideration of carbon tax savings.	mutually benefit from project success. The project is staged to ensure that progress can be measured and benefits accrued.	
Cap and trade schemes	In July 2012 the Australian Government introduced a fixed price cap and trade scheme, with the intention of moving towards full market pricing in 2015, however the scheme was	Reduced operational costs	1 to 3 years	Direct	Unlikely	Low-medium	On 1 July 2015, the carbon price was supposed to transition to a fully flexible price under an emissions trading scheme. A study was conducted where carbon trading opportunities were assessed	All possibilities for generating carbon credits from our worldwide operations will be considered once there is certainty that the scheme will proceed or if the global carbon price improves.	Costs are yet to be incurred.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	abolished in 2014. AGA was hoping to gain benefits from carbon offsets from this market. After the success of the Paris Agreement, the Australian Government may consider resurrecting this scheme.						on seven parameters. If an internal project met the criteria, the intention was to trade verified credits within the company, however this will now only be possible if the Australian ETS is revived. In addition, there are opportunities to sell credits to companies based in Europe and elsewhere, though the carbon price does not currently make the project economics work.		

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
Change in mean (average) temperature	AngloGold Ashanti has operations in the southern part of Argentina, where the average annual temperature at its operations is below 10 degrees Celcius. The predicted increase in temperature in Argentine Patagonia will reduce heating costs at the company's mine operations.	Reduced operational costs	3 to 6 years	Direct	Likely	Low	The predicted temperature increase will reduce the energy required for heating and hence operational costs. The cost savings will increase as average temperatures increase but will depend on the extent of the rise. The reduction in heating energy requirements although small, are anticipated to total US\$ 10,000 to US\$ 50,000 per annum.	The opportunity is managed by adapting equipment operating protocols on the basis of prevailing weather conditions.	No additional costs would be incurred, except for minor control system adjustments.
Change in mean (average) precipitation	AngloGold Ashanti's operations in water positive areas such as Brazil and Ghana require active treatment and release of excess water from process systems. This is achieved using costly water treatment systems. Reduced average precipitation in these regions will reduce the volume of water	Reduced operational costs	>6 years	Direct	Likely	Medium	Operating cost savings from treating lower volumes of excess water ahead of release its to the environment, can be realised.	The opportunity is managed by adapting equipment operating protocols (operating throughput) to lower precipitation cycles.	No additional costs would be incurred.



Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	required to be treated and consequently the associated total cost of water treatment.								

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
Changing consumer behaviour	Uranium is a by-product of some of AngloGold Ashanti's operations in South Africa. Increased demand for nuclear power as a substitute for carbon-based electricity presents an opportunity. AngloGold Ashanti produces uranium oxide concentrates as a	Increased demand for existing products/services	3 to 6 years	Direct	Very likely	Medium-high	Uranium income represented US\$37 million in 2014 and it is expected that this proportion will rise.	AngloGold Ashanti is the largest uranium producer in South Africa and because of the expected demand for nuclear fuel, AGA will explore opportunities to increase its uranium production, especially in South Africa. This strategy includes	The 2011 transaction cost US\$30M. The 2012 transaction cost US\$335M. In respect of new opportunities, full project assessment methodologies are applied to each acquisition opportunity.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	by-product. The company considers that nuclear power has a good outlook in the medium- to long-term and the financial implication of this opportunity lies in a positive influence that uranium prices will rise. In 2011, AGA invested in a company with significant uranium production potential, and acquired the company completely in 2012.							acquisition of refining assets and other production opportunities.	

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

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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

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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

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**Further Information**

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

**Page: CC7. Emissions Methodology**

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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	Mon 01 Jan 2007 - Mon 31 Dec 2007	1088000

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 2 (location-based)	Mon 01 Jan 2007 - Mon 31 Dec 2007	3423000
Scope 2 (market-based)	Mon 01 Jan 2007 - Mon 31 Dec 2007	0

---

**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**

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

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**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**

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**CC7.3**

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

Gas	Reference
HFCs	IPCC Fourth Assessment Report (AR4 - 100 year)
Other: CFC-11	IPCC Third Assessment Report (TAR - 100 year)
CO2	IPCC Fourth Assessment Report (AR4 - 100 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
Aviation gasoline	2.54	metric tonnes CO2e per m3	NGA Factors 2008
Bituminous coal	2.47	metric tonnes CO2e per metric tonne	IPCC2006
Distillate fuel oil No 6	3.35	metric tonnes CO2e per m3	IPCC2006
Diesel/Gas oil	2.93	metric tonnes CO2e per m3	IPCC2006
Liquefied petroleum gas (LPG)	2.97	metric tonnes CO2e per metric tonne	NGA Factors 2008
Natural gas	2.56	metric tonnes CO2e per m3	IPCC2006
Lubricants	2.81	metric tonnes CO2e per m3	IPCC2006
Motor gasoline	2.5	metric tonnes CO2e per m3	IPCC2006

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#### Further Information

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

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**CC8.1**

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

Operational control

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**CC8.2**

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

1287220

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**CC8.3**

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

No

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**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
3047236	0	

**CC8.4**

**Are there 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
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**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 Metering/ Measurement	With a number of operations in remote locations, it is difficult to ensure that full disclosure is occurring. However, a rigorous internal audit program is progressively removing shortfalls in approach. There is some uncertainty as to whether the emissions factors used for fuels in the different countries of

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
		Constraints Other: Published Emission Factors	operation are the most current. Emissions from land clearance and explosives were determined in a comprehensive GHG emissions study carried out in 2008/9 and were found to be immaterial. The quantification of direct emissions from land clearance activities is under review.
Scope 2 (location-based)	Less than or equal to 2%	Data Gaps Assumptions Metering/ Measurement Constraints	Where isolated instances of immaterial emissions exist, eg with respect to regional office buildings, these emissions are not included. AGA relies on advice from regulators in countries with national electricity grids to provide conversion factors between quantity of electricity consumed and resultant emissions. AGA reports on a calendar year basis and sometimes, regulators do not provide latest information in time for reporting. (In these instances, data will be restated in subsequent years.) AGA has real time check metering installed at most but not all grid supply points.
Scope 2 (market-based)	Less than or equal to 2%	No Sources of Uncertainty	

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**CC8.6**

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

Third party verification or assurance process in place

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**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	Reasonable assurance	<a href="https://www.cdp.net/sites/2016/79/779/Climate%20Change%202016/Shared%20Documents/Attachments/CC8.6a/15%20-%20Appendix%20A%20-%20Signed%20Assurance%20Report.pdf">https://www.cdp.net/sites/2016/79/779/Climate Change 2016/Shared Documents/Attachments/CC8.6a/15 - Appendix A - Signed Assurance Report.pdf</a>	Whole document.	ISAE3000	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	Reasonable assurance		<a href="http://www.aga-reports.com/15/sdr/topics/sdr/external-assurance-statement">http://www.aga-reports.com/15/sdr/topics/sdr/external-assurance-statement</a>	ISAE3000	100

#### 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
Other: Energy Consumption	A host of additional data is verified, including energy consumption.

#### 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

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**Further Information**

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

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**CC9.1**

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

Yes

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**CC9.1a**

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

<b>Country/Region</b>	<b>Scope 1 metric tonnes CO2e</b>
Argentina	115434
Australia	336485
Brazil	48914
Ghana	43137
Guinea	158039
Mali	112971
South Africa	99481
Tanzania	217717
United States of America	155042

---

**CC9.2**

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

By business division  
By facility  
By GHG type

---

**CC9.2a**

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

<b>Business division</b>	<b>Scope 1 emissions (metric tonnes CO2e)</b>
Americas Region	319389
Australia Region	336485
Continental Africa Region	531864
South Africa Region	99482

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**CC9.2b**

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

<b>Facility</b>	<b>Scope 1 emissions (metric tonnes CO2e)</b>	<b>Latitude</b>	<b>Longitude</b>
Vaal River	53905	-26.967366	26.771278
West Wits	45291	-26.338961	27.495003
Mine Waste Solutions	286	-26.96859	26.769562

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Obuasi	8372	6.192225	-1.670909
Iduapriem	34765	5.309766	-2.005005
Siguiri	158039	11.428374	-9.18457
Sadiola	104130	13.890411	-11.70318
Yatela	8841	14.105944	-11.78421
Geita	217717	-2.880123	15.765638
Sunrise Dam	116074	-29.075375	122.415161
Tropicana	220411	-29.308227	124.698994
Cripple Creek and Victor	155042	38.710379	-105.140061
Corrego do Sitio Mineração	36087	-19.987304	-43.84635
Mineração Serra Grande	12826	-14.55833	-49.972000
Cerro Vanguardia	115434	-49.30621	-67.729168

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**CC9.2c**

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

GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	1232081
HFCs	55139
Other: CFC (R11)	0

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**CC9.2d**

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

Activity	Scope 1 emissions (metric tonnes CO2e)
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### Further Information

When comparing 2015 data to previous years please note that Cripple Creek and Victor was sold to Newmont in July 2015. And Obuasi has gone to full care and maintenance during 2015.

### 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)
Brazil	7767	0	266010	0
Ghana	131017	0	257780	0

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)
South Africa	2859692	0	2978846	0
United States of America	48760	0	64063	0

### CC10.2

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

By business division  
By facility

### 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)
Americas Region	56527	0
Continental Africa Region	131017	0
South Africa Region	2859692	0

### 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)
Vaal River operations	1381640	0
West Wits operations	1285674	0
Mine Waste Solutions	192378	0
Iduapriem Gold Mine	60029	0
Obuasi Gold Mine	70987	0
Corrego do Sitio Mineracao	5277	0
Mineracao Serra Grande	2490	0
Cripple Creek & Victor operations	48760	0

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**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)

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**Further Information**

When comparing 2015 data to previous years please note that Cripple Creek and Victor was sold to Newmont in July 2015. And Obuasi has gone to full care and maintenance during 2015.



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**CC11.1**

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

More than 15% but less than or equal to 20%

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**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	0
Steam	0
Cooling	0

---

**CC11.3**

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

4422456

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**CC11.3a**

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

Fuels	MWh
Aviation gasoline	5065
Bituminous coal	89132
Diesel/Gas oil	3366271
Distillate fuel oil No 6	327572
Kerosene	1906
Liquefied petroleum gas (LPG)	4882
Waste oils	2443
Natural gas	618884
Motor gasoline	6300

---

**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
	0	
	0	

---

**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
4533051	3566699	824275	142077	142077	Total Grid Electricity consumed is 3,566,699 MWh and then self generation facilities totals 824,275 MWh from fossil fuels and 142,077 MWh from renewables to provide a total electricity consumption of 4,533,051 MWh's.

#### Further Information

#### 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?

Decreased

#### 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	0.49	Decrease	During 2015 Cripple Creek and Victor (CC&V) mine was sold to Newmont and Obuasi was placed under full

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
reduction activities			care and maintenance. To therefore provide a transparent emission reduction these business units have been removed from the absolute 2014 and 2015 Scope 1 & 2 emission data to provide a reduction of 1.34% year on year from the following calculation: AGA absolute total 2014 emissions = 4584384 tCO <sub>2</sub> e AGA absolute total 2015 emissions = 4334456 tCO <sub>2</sub> e Obuasi absolute 2014 / 2015 emissions = 197589 / 79360 tCO <sub>2</sub> e CC&V absolute 2014 / 2015 emissions - 280570 / 203802 tCO <sub>2</sub> e SAR 2015 absolute emission reduction activities (From section 3 for 2015) = 20160 tCO <sub>2</sub> e The adjusted 2014 emission is 4584284 - (280570+197589) = 4106225 tCO <sub>2</sub> e The adjusted 2015 emission is 433456 - (2013802+79360) = 4051295 tCO <sub>2</sub> e And thus the emissions reduction activities percentage calculates to: $((20160/4106225)-1)*100%=0.49%$
Divestment	1.67	Decrease	During 2015 AGA sold CC&V to Newmont so to adjust for their contribution towards global emissions a reduction of 1.67% is calculated as follows: CC&V absolute 2014 / 2015 emissions - 280570 / 203802 tCO <sub>2</sub> e AGA absolute total 2014 emissions = 4584384 tCO <sub>2</sub> e Therefore (280570-203802) = 76768 tCO <sub>2</sub> e and this then calculates to: $((76768/4584384)-1)*100% = 1.67%$ reduction
Acquisitions			
Mergers			
Change in output	2.58	Decrease	AGA's Obuasi operation in Ghana was put into full care and maintenance during 2015 and the reduction percentage as a result of change in output is therefore: Obuasi absolute 2014 / 2015 emissions = 197589 / 79360 tCO <sub>2</sub> e AGA absolute total 2014 emissions = 4584384 tCO <sub>2</sub> e Therefore (197589 - 79360) = 118230 tCO <sub>2</sub> e and this then calculates to: $((118230/4584384)-1)*100% = 2.58%$ reduction
Change in methodology			
Change in boundary			
Change in physical operating conditions			
Unidentified			
Other	0.85	Decrease	During 2015 Cripple Creek and Victor (CC&V) mine was sold to Newmont and Obuasi was placed under full care and maintenance. To therefore provide a transparent emission reduction these business units have been removed from the absolute 2014 and 2015 Scope 1 & 2 emission data to provide a reduction of 1.34% year on year from the following calculation: AGA absolute total 2014 emissions = 4584384 tCO <sub>2</sub> e AGA absolute total 2015 emissions = 4334456 tCO <sub>2</sub> e Obuasi absolute 2014 / 2015 emissions = 197589 / 79360 tCO <sub>2</sub> e CC&V absolute 2014 / 2015 emissions - 280570 / 203802 tCO <sub>2</sub> e SAR 2015 absolute emission reduction activities (From section 3 for 2015) = 20160 tCO <sub>2</sub> e The adjusted 2014 emission is 4584284 - (280570+197589) = 4106225 tCO <sub>2</sub> e The adjusted 2015 emission is 433456 - (2013802+79360) = 4051295 tCO <sub>2</sub> e Delta = Adjusted 2014 - Adjusted 2015 (tCO <sub>2</sub> e) = 4106225 - 4051295 = 54930 tCO <sub>2</sub> e And thus other reduction activities

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
			calculates to: Other = Delta - SAR 2015 = 54930 - 20160 = 34770 tCO2e and therefore the other percentage is calculated as: $((34770/4106225)-1)*100\%= 0.847\%$ reduction

#### 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
0.0010079	metric tonnes CO2e	4300000000	Location-based	18.75	Increase	Despite a 5.4% decrease in absolute emissions, 2015 revenue was 20.3% lower than in 2014 and is ascribed to a lower gold price and decreased production ounces. This is also partly attributed to the mid-2015 divestment of the Cripple Creek and Victor mine.

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**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
0.046	metric tonnes CO2e	tonne of ore processed	93346000	Location-based	6.9	Increase	Despite a 5.4% decrease in absolute emissions when compared to 2014, a focus on processing higher gold grade ore resulted in a 12% decrease in total ore processed (the denominator used). Additionally, this metric for the overall company was negatively affected by the divestment of Cripple Creek and Victor Mine, which had one of the lowest emissions intensity factors per tonne of ore in the group.

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**Further Information**

**Page: CC13. Emissions Trading**

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**CC13.1**

**Do you participate in any emissions trading schemes?**

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

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**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

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CC13.1b

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

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CC13.2

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

No

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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

---

Further Information

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	565000	During 2014 studies of the potential carbon tax implications were undertaken in the South African Region, with the focus being on carbon intensive commodities and services purchased. It assessed the indirect and direct carbon taxes likely to flow through by virtue of purchasing these commodities and services, where relevant, using the South African grid emissions factors. Carbon costs in unit of local currency (ZAR per tonne of CO2-e) were determined for each of the commodities. The product of these carbon costs and the annual value spent on each, provides a good estimate of the total indirect carbon emissions from the purchase of these goods and services. Since the suite of primary commodities and services purchased each year remains comparable, the total emissions calculated for the 2014 period were used for calculating the 2015 emissions, based on the ratio of 2014 and 2015 actual expenditures.	0.00%	An assessment was carried out of the most carbon-intensive goods and services purchased in the South African region in order to determine the potential impact on the company's supply chain, of the proposed carbon tax. This data was used to calculate the carbon emissions per unit of commodity purchased (South African ZAR). The figures reported here are for goods and services procured in South Africa only, which is a material proportion of the AGA spend on similar goods and services. We used industry averages and worked from our extensive knowledge of our suppliers' activities. Given the high carbon footprint of the South African electrical grid (owing to coal-fired power stations), the data cannot be used to calculate equivalent carbon emissions in our other countries of operations, particularly in those countries with a high level of hydropower in the national energy mix, such as Brazil.



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
Capital goods	Relevant, not yet calculated				As the company's Scope 1 and 2 emissions are high (4.3 Mt in 2015) it is expected that scope 3 emissions from capital goods purchases will be very small by comparison and do not justify the effort and expense of assessing them. However this has not been verified.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	3500	These activities comprise motorcycle, petrol and diesel van, heavy goods diesel vehicle and air freight deliveries. A detailed external assessment was carried out in 2009 of 2008 deliveries across the company. Invoices were reviewed to calculate distances travelled. The WBCSD/WRI Protocol was followed. Because the emissions were small relative to the company's GHG footprint (4.6 Mt), these emissions were deemed to be immaterial and subsequent assessments have not been made. In previous years, the 2008 figure was escalated by 10% pa, but the 2008 figure was used again for 2013, 2014 and 2015 because the company's operations were scaled back significantly from 2013 owing to decreased production, but also due to 2 divestments.	100%	The baseline values obtained in the detailed 2008 and 2009 assessment was immaterial in comparison to Scope 1 and 2 emission and does not warrant annual recalculation. Retaining the 30% cumulative escalation over the baseline emissions value, despite reduced operational activities from 2013 and 2 divestments, results in a very conservative estimate for this Scope 3 emissions category.
Upstream transportation and distribution	Not relevant, explanation provided	0			These emissions have been accounted for in the Fuel-and-energy-related activities..
Waste generated in operations	Relevant, calculated	10100	A detailed external assessment was carried out in 2009 of 2008 waste generated across the company. Delivery notes and manifests were	100.00%	See Calculation Methodology

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
			inspected and the results tallied. The WBCSD/WRI Protocol was followed. Because the emissions (10.1 kt CO2e) were small relative to the company's GHG footprint, these emissions were deemed to be immaterial and subsequent assessments have not been made. In previous years, the 2008 figure was escalated by 10% pa, but the 2008 figure is used again for 2013, 2014 and 2015 because the company's operations were scaled back significantly since 2013 and 2 divestments were made.		
Business travel	Relevant, calculated	6400	Business travel calculations comprise flights and hotel stays. A detailed external assessment was carried out in 2009 of 2008 business travel across the company. Data on flights and hotel stays was collected from the company's travel agents and analysed to calculate the emissions. Because the emissions were small relative to the company's GHG footprint, these emissions were deemed to be immaterial and subsequent assessments have not been made. In previous years, the 2008 figure was escalated by 10% pa, but the 2008 figure is used again for 2013, 2014 and 2015 because the company's operations were scaled back significantly since 2013 and 2 divestments were made.	100.00%	See Calculation Methodology
Employee commuting	Relevant, not yet calculated				As the company's Scope 1 and 2 emissions are high (4.3 Mt in 2015) it is expected that scope 3 emissions from employee commuting will be

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
					very small by comparison and do not justify the effort and expense of assessing them. However this has not been verified.
Upstream leased assets	Not relevant, explanation provided				The company's operating model is to own and operate assets. Leased assets are insignificant.
Downstream transportation and distribution	Not relevant, calculated				Gold is a low volume, high value product. AngloGold Ashanti produced 3.9 Moz of gold, against revenue of \$4.3 bn. Transportation and distribution of this mass of product would result in insignificant emissions compared to our Scope 1 and 2 emissions of 4.3 Mt and does not justify the effort and expense of assessing them. However this has not been verified
Processing of sold products	Relevant, not yet calculated				Except for our Brazilian operations, where we refine the impure gold bullion ourselves, the gold bullion produced by AngloGold Ashanti is refined by third parties. Refining of bullion and fabrication of jewellery and coins are not energy-intensive, unlike mining, milling and smelting. It is anticipated that GHG emissions from these activities would be very small compared to our Scope 1 and 2 emissions of 4.3 Mt and does not justify the effort and expense of assessing them. However this has not been verified.
Use of sold products	Not relevant, explanation provided				Gold produced in 2015 was used in jewellery (57%), investment products - bars and coins (24.4%), central bank reserves (12%) and technological applications (8%). None of these

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
					uses demand the consumption of energy for the product itself, so emissions are irrelevant.
End of life treatment of sold products	Not relevant, explanation provided				It is estimated that, because of its value, 99% of the world's gold ever produced is still in circulation. Gold is recycled not disposed of. It may be recycled infinitely. Refined gold produced in 2015 was 4.3 kt. Of this, 26% was from gold recycling sources. The emissions from this are not material.
Downstream leased assets	Not relevant, explanation provided				The company's operating model is to own and operate assets. Leased assets are insignificant.
Franchises	Not relevant, explanation provided				The company does not have any franchises
Investments	Relevant, calculated	287000	AngloGold Ashanti has 2 joint ventures that it does not operate but maintains a material equity shareholding, Kibali Mine in the DRC and Morila mine in Mali. Randgold Resources, publishes GHG emissions at site level in its CDP report. The amount given represents the combined GHG emissions of Kibali and Morila mines in 2014. Emissions data was calculated using emission factors for diesel used on site for operating vehicle fleets and electrical generators.	100.00%	Sourced from Randgold Resources 2014 CDP submission.
Other (upstream)					
Other					

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
(downstream)					

**CC14.2**

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

No third party verification or assurance

**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 (%)

**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	0.4	Decrease	The installation of a +900km gas pipeline to supply natural gas instead of Liquefied Natural Gas and Diesel for electrical power generation at our Australian mines, has eliminated the Scope 3 emissions associated with the long distance road haulage of these materials. This totals an estimated reduction of 4888 metric tonnes of GHG emissions per year.
Purchased goods & services	Change in output	0	No change	Cost-cutting activities continued during 2015 and a material divestment was made. it is estimated that these emissions decreased but because we prefer to apply a conservative approach we have reported unchanged emissions from previous years.
Waste generated in operations	Change in output	0	No change	Because of cost-cutting activities continued during 2015 it is estimated that these emissions decreased but because we prefer to apply a conservative approach we have reported unchanged emissions from previous years.
Business travel		0	No change	Because of cost-cutting activities continued during 2015 it is estimated that these emissions decreased but because we prefer to apply a conservative approach we have reported unchanged emissions from previous years.

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 customers

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**CC14.4a****Please give details of methods of engagement, your strategy for prioritizing engagement and measures of success**

One of our customers submitted CDP Supply Chain requests in 2010 - 2013 and a second customer did so in 2013 too and we responded to those. Our success indicator was that the companies (which bought sulphuric acid, not gold) said that they appreciated our responses and were satisfied with them.

All of the gold produced by AngloGold Ashanti is sold to bullion banks. In our engagements with our customers we provide GHG emissions data and climate change strategy information on request, though they do report that they obtain the primary information from our detailed annual Sustainability Reports and CDP reports. Our customers generally report that they are more than satisfied with our public reporting.

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**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
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**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
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**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

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**Further Information**

**Module: Sign Off**

**Page: CC15. Sign Off**

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**CC15.1**

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

<b>Name</b>	<b>Job title</b>	<b>Corresponding job category</b>
Tony da Cruz	Vice President: Environment, Group Sustainability.	Other: Group Vice President / Head of Discipline

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**Further Information**

**CDP**