

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

BHP is a world-leading resources company. We are one of the world's largest mining companies by market capitalisation of US\$90 billion. We extract and process minerals, oil and gas, with more than 60,000 employees and contractors, primarily in Australia and the Americas. Our products are sold worldwide, with sales and marketing led through Singapore and Houston, United States. Our global headquarters are in Melbourne, Australia.

Our corporate purpose is to create long-term shareholder value through the discovery, acquisition, development and marketing of natural resources. We do this through our strategy, which is to own and operate large, long-life, low-cost, expandable, upstream assets diversified by commodity, geography and market.

We operate under a Dual Listed Company structure with two parent companies (BHP Billiton Limited and BHP Billiton Plc) operated as if we were a single economic entity, which we refer to as BHP. We are run by a unified Board and management. Our Executive Leadership Team (ELT) is responsible for the day-to-day management of the Group and for leading the delivery of our strategic objectives.

We are among the world's top producers of major commodities, including iron ore, metallurgical coal and copper. We also have substantial interests in oil, gas, energy coal and nickel. A number of by-products are produced by our copper operations, including gold, silver, zinc, lead and uranium. We have operations and projects in Australia, Chile, Peru, Brazil, Colombia, Canada, the US, Trinidad and Tobago, and Algeria. Our principal office locations are in Australia, Chile, Canada, the US, Singapore, Malaysia, and the UK.

We have a simple and diverse portfolio of tier one assets around the world, with low-cost options for future growth and value creation. This operating model allows us to apply our values and culture, emphasise safety and productivity, deploy technology and exert capital discipline to extract the most value and the highest returns from our assets. Assets are a set of one or more geographically proximate operations (including open-cut mines, underground mines and onshore and offshore oil and gas production and processing facilities). We safely produce a broad range of commodities through these assets. Our operated assets include assets that are wholly owned and operated by BHP and assets that are owned as a joint operation and operated by BHP. Our non-operated assets include interests that are owned as a joint venture but not operated by BHP. Note that we report our GHG emissions on an operational control basis.

We disclose GHG emissions and other climate data at the Group level. In addition, CDP requests that we report our operational emissions by region, 'business division', and 'business facility'. In order to ensure consistency between this CDP response and our mainstream financial reporting, our reporting by 'business division' in this response corresponds to the commodity-based 'reportable segments' applied in our Annual report, namely Petroleum, Copper, Iron Ore, and Coal. Similarly, we report by 'business facility' in this response using the definitions of our Assets given in our Annual report.

For additional detail on our commodities, assets, locations, financial results and operating performance as they relate to this CDP response, refer to our 2017 Annual Report, available online at <https://www.bhp.com/investor-centre/annual-reporting-2017>.

Note that our financial year runs from July to June, and this CDP response relates to FY2017. Because of the timing of the CDP disclosure cycle relative to our financial year, more recent information on the topics covered in this CDP response is available for FY2018 in our 2018 Sustainability and Annual reports and online at <https://www.bhp.com>.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	July 1 2016	June 30 2017	No	<Not Applicable>
Row 2	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 3	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 4	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

Algeria
Australia
Brazil
Canada
Chile
Colombia
Malaysia
Peru
Singapore
Trinidad and Tobago
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C-MM0.7

(C-MM0.7) Which part of the metals and mining value chain does your organization operate in?

Row 1

Mining

- Copper
- Gold
- Silver
- Iron ore
- Nickel
- Zinc
- Lead
- Other mining (please specify) (Uranium)

Processing metals

- Copper
- Gold
- Silver
- Nickel
- Zinc

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board/Executive board	Responding to climate change is a priority governance and strategic issue for us. The Board is the highest level of authority at BHP and is responsible for overseeing the Group's approach making strategic decisions in the best interests of the company. This includes taking into account the potential impact of climate change on company strategy including its portfolio of assets and investments. Oversight of climate-related issues therefore lies with the Board. Climate change is a multi-faceted issue that affects investment decisions, our portfolio, oversight of the sustainability of our operations and engagement with government, investors, suppliers and customers. The Board includes an appropriate mix of skills and experience to understand the implications of climate change on our operations, market and society.

C1.1b

(C1.1b) Provide further details on the board’s oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding risk management policies Reviewing and guiding business plans Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Climate change is treated as a Board-level governance issue and is discussed regularly, including during Board strategy discussions, portfolio review and investment decisions, and in the context of scenario triggers and signposts. Our Board is actively engaged in the setting of strategy and governance of climate change issues, supported by the Sustainability Committee, which assists with governance and monitoring. The Sustainability Committee spends a significant amount of time considering systemic climate change matters relating to the resilience of, and opportunities for, BHP’s portfolio. Non-executive Directors must have a clear understanding of the Group’s overall strategy, together with knowledge about BHP and the industries in which it operates. Framed as a Board-level governance issue requiring experience of managing in the context of uncertainty and an understanding of the risk environment of the Group, all of the Non-executive Directors bring relevant experience to bear in our climate change discussions. To enhance that experience, the Board has taken a number of measures to ensure that its decisions are appropriately informed by climate change science and expert advisers. The Board seeks the input of management (including from our Vice President Sustainability and Climate Change), our Forum on Corporate Responsibility (which advises the Board on sustainability issues) and other independent advisers.
Scheduled – some meetings	Reviewing and guiding major plans of action Reviewing and guiding annual budgets Setting performance objectives Overseeing major capital expenditures, acquisitions and divestitures	Climate change is treated as a Board-level governance issue and is discussed regularly, including during Board strategy discussions, portfolio review and investment decisions, and in the context of scenario triggers and signposts. Our Board is actively engaged in the setting of strategy and governance of climate change issues, supported by the Sustainability Committee, which assists with governance and monitoring. The Sustainability Committee spends a significant amount of time considering systemic climate change matters relating to the resilience of, and opportunities for, BHP’s portfolio. Non-executive Directors must have a clear understanding of the Group’s overall strategy, together with knowledge about BHP and the industries in which it operates. Framed as a Board-level governance issue requiring experience of managing in the context of uncertainty and an understanding of the risk environment of the Group, all of the Non-executive Directors bring relevant experience to bear in our climate change discussions. To enhance that experience, the Board has taken a number of measures to ensure that its decisions are appropriately informed by climate change science and expert advisers. The Board seeks the input of management (including from our Vice President Sustainability and Climate Change), our Forum on Corporate Responsibility (which advises the Board on sustainability issues) and other independent advisers.

C1.2

(C1.2) Below board-level, provide the highest-level management position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Operating Officer (COO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Sustainability committee	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored.

Climate change is a priority governance and strategic issue for BHP. Our Board is actively engaged in the setting of strategy and governance of climate change issues, supported by the Sustainability Committee. Management has primary responsibility for the design and implementation of our response to climate change.

(1) Sustainability & climate change governance: Our approach to sustainability is reflected in Our Charter, which defines our values, purpose and how we measure success, and in our sustainability performance targets, which define our public commitments to safety, health, environment – including climate change – and community. Our approach to HSEC and sustainability governance is characterised by (i) the Sustainability Committee assisting the Board in its oversight of material HSEC matters and risks across BHP, including seeking continuous improvement and policy advocacy as applicable; (ii) management having primary responsibility for the design and implementation of an effective HSEC Management System; (iii) management having accountability for HSEC performance; (iv) the HSE function and Community sub-function providing advice and guidance directly to the Sustainability Committee and the Board; (v) the Board, Sustainability Committee and management seeking input and insight from external experts, such as the BHP Billiton Forum on Corporate Responsibility (FCR); (vi) clear links between executive remuneration and HSEC performance.

The Group's HSEC framework - including climate change - consists of (i) the CEO limits set out in the Board Governance Document, which establishes the remit of the Board and delegates authority to the CEO, including in respect of the HSEC Management System, subject to CEO limits; (ii) the Sustainability Committee, which is responsible for assisting the Board in overseeing the adequacy of the Group's HSEC Framework and HSEC Management System (among other things); (iii) the HSEC Management System, established by management in accordance with the CEO's delegated authority, which provides the processes, resources, structures and performance standards for the identification, management and reporting of HSEC risks and the investigation of any HSEC incidents; (iv) a robust and independent internal audit process overseen by the Risk & Audit Committee; and (v) independent advice on HSEC matters, which may be requested by the Board and its Committees where deemed necessary in order to meet their respective obligations.

(2) Management: Our approach to addressing climate change is managed within the Executive Leadership Team by the CEO and the Chief External Affairs Officer (equivalent to the COO). Reducing operational emissions is a key performance indicator for our business and our performance against our targets is reflected in senior executive and leadership remuneration. Within the External Affairs function, the Head of Sustainability & Public Policy and Vice President Sustainability & Climate Change have direct responsibility for identifying emerging trends, developing climate change strategies, coordinating activity across the businesses and external reporting. In developing our approach to climate change, input is sought from the Assets, Regions and Functions (including Finance, Investor Relations, Marketing, Technology and External Affairs).

(3) Sustainability Committee: The role of the Sustainability Committee is to assist the Board in its oversight of the Group's HSEC performance – including climate change – and the adequacy of the Group's HSEC Framework, and in relation to various other governance responsibilities related to sustainability and climate change. Members of the Sustainability Committee are Non-executive Directors, each of whom is appropriately skilled in HSEC and related matters as determined by the Board. The Sustainability Committee provides oversight of the preparation and presentation of the Sustainability Report by management, and reviews and recommends to the Board the approval of the report for publication. The Sustainability Report identifies our targets for HSEC matters – including GHG emissions - and our performance against those targets. The Sustainability Committee met four times during FY2017, including receiving updates on BHP's climate change strategic priorities. In addition, the Committee met with the FCR and discussed a range of topics, including climate change. Members of the Sustainability Committee also visited a number of operations during FY2017.

(4) External engagement: Our climate change strategy is supported by active engagement with our stakeholders, and we regularly hold one-on-one and group meetings with investors and their advisers. The Board, Sustainability Committee and Management also seek input and insight from external experts, such as the FCR. The FCR, which is composed of civil society leaders and BHP executives, has played a critical role in the development of our position on climate change.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.

Who is entitled to benefit from these incentives?

Chief Executive Officer (CEO)

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

CEO remuneration is linked substantially to business outcomes and shareholder returns. The 'at risk' component of his remuneration, comprising short-term (STI) and long-term incentives, is 71% of his total target remuneration (at target performance). Fixed remuneration comprises 29% of the total. The CEO's annual STI is at risk and comprises 35% of total remuneration at target performance. The STI scorecard against which his performance is ordinarily assessed is made up of a number of performance measures, including HSEC measures that specifically address delivery of GHG emissions reduction projects. HSEC measures carried a 25% weighting in the STI scorecard for FY2017. The STI operates as follows: An individual scorecard of measures is set for the CEO at the commencement of each financial year. These measures and their relative weightings are chosen by the Remuneration Committee in order to appropriately drive overall performance in the current year, including achievement of financial outcomes and delivery against measures that impact the long-term sustainability of the Group (current HSEC weighting is 25%). The Sustainability Committee assists in determining appropriate HSEC metrics to be included. At the conclusion of the financial year, the CEO's achievement against scorecard measures is assessed by the Remuneration Committee and the Board, and the STI award determined. The Sustainability Committee assists in relation to assessment of HSEC performance, including GHG metrics. The Board believes this method of assessment is transparent, rigorous and balanced, and provides an appropriate, objective and comprehensive assessment of performance.

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

An individual STI scorecard of measures is set for each executive in the Executive Leadership Team (ELT) at the commencement of each financial year. These measures and their relative weightings are chosen by the Remuneration Committee in order to appropriately drive overall performance in the current year, including achievement of financial outcomes and delivery against measures that impact the long-term sustainability of the Group. The Sustainability Committee assists the Remuneration Committee in determining appropriate HSEC metrics to be included in ELT scorecards. Delivery of GHG emission reduction projects and achievement of absolute emissions targets are included in these HSEC metrics. At the conclusion of the financial year, each executive's achievement against their measures is assessed by the Committee and the Board, and their STI award determined. The Remuneration Committee is assisted by the Sustainability Committee and by the Risk and Audit Committee in relation to assessment of performance against HSEC, including GHG metrics and financial measures, respectively. The Board believes this method of assessment is transparent, rigorous and balanced, and provides an appropriate, objective and comprehensive assessment of performance.

Who is entitled to benefit from these incentives?

Business unit manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Senior executives adopt annual performance indicators aligned with meeting HSEC targets, including GHG targets. The responsibility of BHP's Business Presidents is to ensure their Business GHG emission reduction target is achieved for the operations under their control.

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Senior managers adopt annual performance indicators aligned with meeting HSEC targets that include GHG emission reduction targets. It is their responsibility to ensure that performance against GHG targets is tracked at the operational level and reported on an annual basis.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

We publically state that as an organisation we hold our people accountable to values of Sustainability, Integrity, Respect, Performance, Simplicity and Accountability. We annually review and remunerate based on consideration of the performance of employees with respect to each of these values. At BHP, Sustainability is demonstrated by minimising environmental impacts and contributing to enduring benefits to biodiversity, ecosystems and other environmental resources. Furthermore, the STI pool which gets allocated to each Business (and subsequently each Business employee) is based upon Business performance in pre-defined HSEC metrics including GHG performance.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Recognition (non-monetary)

Activity incentivized

Emissions reduction project

Comment

Every year BHP holds HSEC Awards, where all employees can nominate or be nominated to receive an award in recognition of their achievements in any area related to HSEC, including GHG reductions and energy efficiency. We believe these awards constitute an added incentive to our employees to do their utmost in promoting sustainability at all our operations.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	2	BHP has a two-year budget, a five-year outlook and a 20-year strategic planning horizon. Our forecasts and scenarios extend to 2050 and beyond, with longer term outcomes considered qualitatively, consistent with longer time horizons over which many climate-related risks likely to fully manifest.
Medium-term	2	5	BHP has a two-year budget, a five-year outlook and a 20-year strategic planning horizon. Our forecasts and scenarios extend to 2050 and beyond, with longer term outcomes considered qualitatively, consistent with longer time horizons over which many climate-related risks likely to fully manifest.
Long-term	5	20	BHP has a two-year budget, a five-year outlook and a 20-year strategic planning horizon. Our forecasts and scenarios extend to 2050 and beyond, with longer term outcomes considered qualitatively, consistent with longer time horizons over which many climate-related risks likely to fully manifest.

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	BHP identifies and assesses climate-related risks that may occur over multiple time horizons. We have a two-year budget, a five-year outlook and a 20-year strategic planning horizon. Our forecasts and scenarios extend to 2050 and beyond, with longer term outcomes considered qualitatively, consistent with longer time horizons over which many climate-related risks likely to fully manifest. Risks are monitored on an ongoing basis via a number of different mechanisms. We incorporate climate considerations into our scenario analysis and these are taken into account by the Board when making investment decisions. We also regularly review regulatory changes in our operating countries and monitor the scientific literature to provide insights into possible risks and opportunities. We also conduct annual performance reviews against our GHG targets. The Sustainability Committee monitors the actions being taken to manage a range of climate change impacts and policy responses.

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

We embed risk management in our critical business activities, functions, processes and systems through the following mechanisms:

- Risk assessments – we regularly assess known, new and emerging risks.
- Risk controls – we put controls in place over material risks, and periodically assess the effectiveness of those controls.
- Risk materiality and tolerability evaluation – we assess the materiality of a risk based on the degree of financial and non-financial impacts, including HSE impacts. We assess the tolerability of a risk based on a combination of residual risk and control effectiveness.

Climate-related risks are monitored and managed on an ongoing basis via a number of different mechanisms and at a number of different levels within the organization.

The Board, supported by the Risk and Audit Committee (RAC), is responsible for overseeing our approach to managing risk, including climate risk. The RAC regularly reviews the material risk management framework as part of its responsibility to ensure our system of control for identification and management of risks is operating and effective.

At Group level, our approach to corporate planning, investment decision-making and portfolio management provides a focus on the identification, assessment and management of climate change risks. We use a broad range of scenarios to consider how divergent policy, technology, market and societal outcomes could impact our portfolio, including low plausibility, extreme shock events. We also continually monitor the macro environment for climate change-related developments that would serve as a call to action for us to reassess the resiliency of our portfolio. The impacts of climate change are considered in our Capital Allocation Framework. Our investment evaluation process includes an assessment of non-quantifiable risks such as those impacts on people and the environment that underpin our licence to operate. The process has also incorporated market and sector based carbon prices for more than a decade.

At Asset level, 'Our Requirements for Risk Management' standard provides the framework for risk management relating to climate change and material HSE risks. We conduct internal audits to test compliance with Our Requirements standards and develop action plans to address any gaps. Key findings are reported to senior management and reports are considered by relevant Board committees.

With respect to physical risk, we take a robust, risk-based approach to adapting to the physical impacts of climate change. We work with globally recognised agencies to obtain regional analyses of climate science to inform resilience planning at an asset level and improve our understanding of the climate vulnerabilities our operations may face. Our operations are required to build climate resilience into their activities through compliance with the Our Requirements for Environment and Climate Change standard. We also require new investments to assess and manage risks associated with the forecast physical impacts of climate change. We recognise the body of scientific knowledge about the potential impacts of climate change is rapidly expanding continue to review of our adaptation approach to account for the latest climate science.

To effectively manage and prioritise our material risks, we operate an enterprise-wide risk system that provides an overarching and consistent framework for the assessment and management of risks both at the Group and Asset level. We mandate criteria to identify risks we consider material to our business and take into consideration the potential HSE (including climate change) and other impacts. The severity of any particular risk is assessed according to a matrix that describes the degree of harm, injury or loss from the most severe impact associated with a specific risk, assuming reasonable effectiveness of controls. Risks are considered material if they meet either of the maximum foreseeable loss (MFL) or residual risk rating (RRR) criterion. MFL is the plausible worst-case scenario for any risk when all active risk controls are assumed to be ineffective. The RRR represents the level of residual risk associated with the particular material risk after taking into account the controls that are already in place and have had their effectiveness tested. The materiality criteria are set at the Group level. Tolerance criteria additionally assess the control effectiveness of material risks.

This framework ensures:

- Potential impacts on business plans are identified and supported by clear accountabilities and adequate risk resources
- Risks are ranked using appropriate methodology described in 'Our Requirements'
- Material risks are recorded in the enterprise wide data base and reviewed by senior management
- Risk controls must be designed, implemented, operating and assessed.
- An annual external assurance process reviews Company material risks reviews for the adequacy control measures to ensure risks are effectively controlled.

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Transitioning to a lower carbon economy may entail extensive policy and regulatory changes to address mitigation and adaptation requirements related to climate change. Policy and regulatory risk is particularly relevant for resource-intensive organizations with high GHG emissions within their value chains, such as BHP, where regulations aimed at reducing emissions may have a particularly direct effect on our operations, value chain, and demand for our products. As both a producer of fossil fuels (including oil and gas and energy coal) and major consumer of electricity and fuel at our operations, BHP is exposed to risk from both current and emerging regulating aimed at reducing GHG emissions from the electricity generation and transport sectors. We have operations and projects in many geographic locations including Australia, Chile, Peru, Brazil, Colombia, Canada, the US, Trinidad and Tobago, and Algeria; and similarly sell our products into numerous markets, particularly in Asia. We also operate under a Dual Listed Company structure, being listed in London and Australia. The regulatory landscape varies significantly between jurisdictions, increasing the challenge that climate-related regulation poses to BHP. For example, in 2017 Chile introduced a carbon tax that impacts electricity generators from which our Chilean copper operations receive power. Uncertainty around current regulations in some of the jurisdictions in which we operate creates additional risk. For example, in the US, the current administration has sought to roll back regulations on a number of environmental issues, including climate change. On a subnational level, many states and cities are continuing to develop and expand initiatives to reduce emissions, leaving companies facing differing regulations across the country and subsequent compliance challenges. In Australia, a carbon tax introduced in 2011 by a Labor government was repealed in 2014 by the Abbott Coalition administration. The government has also taken the decision not to extend renewable energy targets beyond 2020.
Emerging regulation	Relevant, always included	Transitioning to a lower carbon economy may entail extensive policy and regulatory changes to address mitigation and adaptation requirements related to climate change. Policy and regulatory risk is particularly relevant for resource-intensive organizations with high GHG emissions within their value chains, such as BHP, where regulations aimed at reducing emissions may have a particularly direct effect on our operations, value chain, and demand for our products. As both a producer of fossil fuels (including oil and gas and energy coal) and major consumer of electricity and fuel at our operations, BHP is exposed to risk from both current and emerging regulating aimed at reducing GHG emissions from the electricity generation and transport sectors. We have operations and projects in many geographic locations including Australia, Chile, Peru, Brazil, Colombia, Canada, the US, Trinidad and Tobago, and Algeria; and similarly sell our products into numerous markets, particularly in Asia. We also operate under a Dual Listed Company structure, being listed in London and Australia. The regulatory landscape varies significantly between jurisdictions, increasing the challenge that climate-related regulation poses to BHP. The Paris Agreement requires countries to implement their NDCs, and to ratchet up their ambitions over time. This will require countries either to introduce policies, or to revise and strengthen their existing policies. In the jurisdictions in which we operate, and in our key markets, emerging regulation is varied. For example, the Australian government intends to adopt a National Energy Guarantee which is intended to guarantee supply and reduce emissions from the electricity sector. The energy and climate policy landscape in Australia remains uncertain, however, and a change in government at the next Federal election may see alternative strategies pursued.
Technology	Relevant, always included	Transition risk arises from a variety of technological and market responses to the challenges posed by climate change and the transition to a lower carbon economy; these are often interconnected with the policy and regulatory risks discussed separately, with more ambitious emissions reduction targets or GHG regulations likely to accelerate the adoption of lower emissions technologies. The substitution of existing technologies with lower emissions options, particularly in the electricity and transport sectors, has the potential to reduce demand for our fossil fuel products. For example, coal to gas switching in power generation may lead to reduced demand for our energy coal products. The development of low emissions technologies also presents opportunity for BHP. Our copper products have application in a variety of low emissions products in energy generation and transport, for example electric vehicles, that are likely to see growth driven by technology developments. Likewise nickel is a key raw material for batteries, with battery producers expected to match electric vehicle growth rates. Carbon capture and storage (CCS) is another key technology that offers opportunity for BHP as it has the potential to play a pivotal role in decarbonizing industrial processes such as steel production (steelmaking, which uses both iron ore and metallurgical coal, currently accounts for the majority of our scope 3 emissions). Technology developments also have the potential to impact our operations, with the potential requirement for increased capital expenditure or investment in research and development into low emissions technologies. The deployment of low emissions technologies at our operations also presents opportunities to reduce costs and improve productivity. For example, deploying electric vehicles at our mine sites has the potential to lower operating costs, as well as to reduce worker exposure to diesel particulate matter.
Legal	Relevant, always included	Legal risk is relevant to BHP in the form of the potential for enhanced emission-reporting obligations. This is particularly relevant for us, as we have operations and projects in many geographic locations including Australia, Chile, Peru, Brazil, Colombia, Canada, the US, Trinidad and Tobago, and Algeria; and similarly sell our products into numerous markets, particularly in Asia. We also operate under a Dual Listed Company structure, being listed in London and Australia. Similarly to the regulatory landscape more broadly, the climate-related reporting and disclosure obligations to which we are subject vary significantly between jurisdictions, increasing the challenge of managing this issue. Any potential developments in emissions-reporting obligations are likely to be especially relevant to resource-intensive organizations such as BHP with high GHG emissions at their operations or within their value chains. Another form of legal risk is litigation risk. Recent years have seen an increase in climate-related litigation, and a number of emerging trends suggest that this risk will continue in the coming years (noting that the extent of the risk is not yet clear).

	Relevance & inclusion	Please explain
Market	Relevant, always included	Market risk can take the form of changing customer behavior or uncertainty in market signals. The ways in which markets could be affected by climate change are varied and complex. For BHP, market risk is intimately connected with the technology, policy and regulatory risks described separately and is likely to manifest in similar ways; changes in public expectations may also play a role. For example China, one of our major product markets, officially launched its national emissions trading scheme in 2017 and work is underway to prepare for its implementation, with the potential to impact demand for our products. This represents both risk for our fossil fuel products such as energy coal, and opportunity for products such as copper that are likely to benefit from the accelerated adoption of low emissions technologies as a result of more stringent climate policies. More broadly, the substitution of existing technologies with lower emissions options, particularly in the electricity and transport sectors, has the potential to reduce demand for our fossil fuel products. For example, coal to gas switching in power generation may lead to reduced demand for our energy coal products (though it may increase demand for our natural gas). The development of low emissions technologies also presents opportunity for BHP. Our copper products have application in a variety of low emissions products in energy generation and transport, for example electric vehicles, that are likely to see market growth driven by both technology and policy developments. Likewise nickel is a key raw material for batteries, with battery producers expected to match electric vehicle growth rates. The structure of existing markets may change as a result of the transition to a lower carbon economy. For example, as the energy sector decarbonizes, product quality and cost of production will be increasingly important in determining which coal reserves are brought to market. In terms of direct impacts on our operations, another form of market risk is the potential for increases in the cost of fuels or other raw materials as a result of developments in climate regulations. As a major energy consumer, this is of relevance to our business, and managing energy use and cost at our operations is a priority for BHP.
Reputation	Relevant, always included	Climate change has been identified as a potential source of reputational risk tied to changing customer or community perceptions of an organization's contribution to or detraction from the transition to a lower-carbon economy. This may manifest shifts in consumer preferences, as discussed separately in the context of market risk, and as such is of relevance to BHP. This also represents an opportunity for BHP due to the broader social value of the commodities we produce and their contribution to economic development. For example, though they are emissions-intensive to produce, steel products (not to mention products manufactured using steel equipment) are ubiquitous in society and integral to transport, housing, agriculture, manufacturing, energy production, and water supply systems. Developing societies need steel to meet their infrastructure and construction needs, and steel is critical to the sectors and technologies on which a lower carbon economy will be based, such as energy and resource efficient buildings, renewable energy infrastructure, and low emissions transport. Reputational risk may also manifest in the form of stigmatization of certain sectors or increased stakeholder concern. For BHP, there is the potential for reputational risks with investors if our performance and policy commitments on climate and other ESG issues fall short of expectations for a leading resources company.
Acute physical	Relevant, always included	Risks related to the physical impacts of climate change include acute risks resulting from increased severity of extreme weather events and chronic risks resulting from longer-term changes in climate patterns. Both forms of physical risk are relevant to BHP. We have onshore and offshore extractive, processing and logistical operations in many geographic locations and as such a wide variety of physical climate impacts are potentially relevant to our business. Physical risks could impact production at our operations and materially and adversely affect the financial performance of our assets. They also have the potential to impact our supply chain, our customers' facilities, and our transport and distribution networks. Physical risk scenarios generally identify extreme weather threats of moderate or higher risk before 2030 and a larger number and range of physical threats between 2030 and 2050. These timeframes are of relevance given the long lifetimes of our assets. Mining operations are also typically capital intensive, and require investments in plant and equipment that are relatively fixed in terms of location. With respect to acute physical risks, our Western Australia Iron Ore, Queensland Coal and Gulf of Mexico oil and gas assets in particular are located in areas subject to cyclones or hurricanes.
Chronic physical	Relevant, always included	Risks related to the physical impacts of climate change include acute risks resulting from increased severity of extreme weather events and chronic risks resulting from longer-term changes in climate patterns. Both forms of physical risk are relevant to BHP. We have onshore and offshore extractive, processing and logistical operations in many geographic locations and as such a wide variety of physical climate impacts are potentially relevant to our business. Physical risks could impact production at our operations and materially and adversely affect the financial performance of our assets. They also have the potential to impact our supply chain, our customers' facilities, and our transport and distribution networks. Physical risk scenarios generally identify extreme weather threats of moderate or higher risk before 2030 and a larger number and range of physical threats between 2030 and 2050. These timeframes are of relevance given the long lifetimes of our assets. Mining operations are also typically capital intensive, and require investments in plant and equipment that are relatively fixed in terms of location. Chronic physical risks include longer-term shifts in climate patterns that may cause sea level rise, changing precipitation patterns, or chronic heat waves. Storm surges and sea level rise have the ability to affect our port facilities, offshore Petroleum operations and onshore operations located near coastlines. Our key port facilities are located at Coloso and Antofagasta in Chile and Port Hedland and Hay Point in Australia. Changing precipitation patterns can exacerbate water stress and impact availability of water for our operations. Some of our assets, such as those producing copper, are water intensive. Others, for example Queensland Coal, are located in areas that have already experienced significant changes in precipitation patterns in recent years. Temperature extremes could affect the performance of our workforce.
Upstream	Relevant, always included	In addition to affecting our operations directly, many of the regulatory, technology, legal, market, reputational, and physical risks discussed separately may affect our upstream supply chain. We have onshore and offshore extractive, processing and logistical operations in many geographic locations. Acute and chronic physical climate risks have the potential to affect the supply chains servicing these locations. The risk driver for the potential for increases in the cost of fuels or other raw materials purchased by our operations as a result of developments in climate regulations, as described previously, also occurs in our upstream supply chain. As a major energy consumer, this is of relevance to our business, and managing energy use and cost at our operations is a priority for BHP.

	Relevance & inclusion	Please explain
Downstream	Relevant, always included	In addition to affecting our operations directly, many of the regulatory, technology, legal, market, reputational, and physical risks discussed separately may affect our downstream supply chain. We have onshore and offshore extractive, processing and logistical operations in many geographic locations. Acute and chronic physical climate risks have the potential to affect our product transport and distribution networks. In particular, BHP is one of the largest global shippers of bulk commodities, and rising sea levels and increasing storm intensities have the potential to impact our ports and ocean freight networks. Likewise we sell our products into numerous markets in many geographic locations, and physical climate risks have the potential to impact our customers' facilities. For BHP, the drivers for many of the key policy, technology and market risks and opportunities described separately occur in our downstream value chain. Most notably, this includes those transition risks arising from policy, technological and market responses that impact demand for our products. As described separately, the substitution of existing technologies with lower emissions options, particularly in the electricity and transport sectors, has the potential to reduce demand for our fossil fuel products. For example, coal to gas switching in power generation may lead to reduced demand for our energy coal products (though it may increase demand for our natural gas). The development of low emissions technologies also presents opportunity for BHP. Our copper products have application in a variety of low emissions products in energy generation and transport, for example electric vehicles, that are likely to see market growth driven by both technology and policy developments. Likewise nickel is a key raw material for batteries, with battery producers expected to match electric vehicle growth rates.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

We embed risk management in our critical business activities, functions, processes and systems through the following mechanisms:

- Risk assessments – we regularly assess known, new and emerging risks.
- Risk controls – we put controls in place over material risks, and periodically assess the effectiveness of those controls.
- Risk materiality and tolerability evaluation – we assess the materiality of a risk based on the degree of financial and non-financial impacts, including HSE impacts. We assess the tolerability of a risk based on a combination of residual risk and control effectiveness.

Climate-related risks are monitored and managed on an ongoing basis via a number of different mechanisms and at a number of different levels within the organization.

The Board, supported by the Risk and Audit Committee (RAC), is responsible for overseeing our approach to managing risk, including climate risk. The RAC regularly reviews the material risk management framework as part of its responsibility to ensure our system of control for identification and management of risks is operating and effective.

At Group level, our approach to corporate planning, investment decision-making and portfolio management provides a focus on the identification, assessment and management of climate change risks. We use a broad range of scenarios to consider how divergent policy, technology, market and societal outcomes could impact our portfolio, including low plausibility, extreme shock events. We also continually monitor the macro environment for climate change-related developments that would serve as a call to action for us to reassess the resiliency of our portfolio. The impacts of climate change are considered in our Capital Allocation Framework. Our investment evaluation process includes an assessment of non-quantifiable risks such as those impacts on people and the environment that underpin our licence to operate. The process has also incorporated market and sector based carbon prices for more than a decade.

At Asset level, 'Our Requirements for Risk Management' standard provides the framework for risk management relating to climate change and material HSE risks. We conduct internal audits to test compliance with Our Requirements standards and develop action plans to address any gaps. Key findings are reported to senior management and reports are considered by relevant Board committees.

With respect to physical risk, we take a robust, risk-based approach to adapting to the physical impacts of climate change. We work with globally recognised agencies to obtain regional analyses of climate science to inform resilience planning at an asset level and improve our understanding of the climate vulnerabilities our operations may face. Our operations are required to build climate resilience into their activities through compliance with the Our Requirements for Environment and Climate Change standard. We also require new investments to assess and manage risks associated with the forecast physical impacts of climate change. We recognise the body of scientific knowledge about the potential impacts of climate change is rapidly expanding continue to review of our adaptation approach to account for the latest climate science.

To effectively manage and prioritise our material risks, we operate an enterprise-wide risk system that provides an overarching and consistent framework for the assessment and management of risks both at the Group and Asset level. We mandate criteria to identify risks we consider material to our business and take into consideration the potential HSE (including climate change) and other impacts. The severity of any particular risk is assessed according to a matrix that describes the degree of harm, injury or loss from the most severe impact associated with a specific risk, assuming reasonable effectiveness of controls. Risks are considered material if they meet either of the maximum foreseeable loss (MFL) or residual risk rating (RRR) criterion. MFL is the plausible worst-case scenario for any risk when all active risk controls are assumed to be ineffective. The RRR represents the level of residual risk associated with the particular material risk after taking into account the controls that are already in place and have had their effectiveness tested. The materiality criteria are set at the Group level. Tolerance criteria additionally assess the control effectiveness of material risks.

This framework ensures:

- Potential impacts on business plans are identified and supported by clear accountabilities and adequate risk resources
- Risks are ranked using appropriate methodology described in 'Our Requirements'
- Material risks are recorded in the enterprise wide data base and reviewed by senior management
- Risk controls must be designed, implemented, operating and assessed.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Customer

Risk type

Transition risk

Primary climate-related risk driver

Technology: Substitution of existing products and services with lower emissions options

Type of financial impact driver

Technology: Reduced demand for products and services

Company- specific description

Potential reduced demand for our energy coal products. As well as being a major producer of iron ore, metallurgical coal and copper, we also have interests in energy coal. Our energy coal production in FY2017 totalled 29,586 kt (Annual Report 2017, p.245); in comparison our metallurgical coal production was 39,899 kt. Our scenario analysis suggests downside for energy coal under a 2 degrees transition due to a switch from coal to gas in power generation and renewables capacity additions driven by climate policy and technology developments, including in our key product markets such as China. The development of an economic carbon capture and storage solution would minimize this downside.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Low

Potential financial impact

2111000000

Explanation of financial impact

The high degree of uncertainty around the timing and magnitude of the risk makes it difficult to determine the potential financial impact with precision. The risk relates to a number of different markets (geographically and product) and there is variability in the magnitude and timing of the opportunity across and within markets. Potential financial impact is further dependent on our approach to managing the risk. In order to provide an indication of order of magnitude of potential financial impact, the figure provided is the total revenue for our energy coal assets reported for FY2017 (Annual Report 2017, p.90). This compares to total revenue for the Group in FY2017 of US\$38,285 million (Annual Report 2017, p.69). If energy coal demand were to decrease, this revenue, as well as existing asset values, may decrease proportionally. However, our analysis suggest that our diversification results in the resilience and strength of our overall valuation through all plausible scenarios.

Management method

Our approach to managing this risk should be considered in the context of our overall corporate strategy which is to own and operate large, long-life, low-cost, expandable, upstream assets diversified by commodity, geography and market; and of broader trends in the sector. We manage risk by remaining financially disciplined within the framework of our differentiated and proven strategy. We take a portfolio approach as the quality and breadth of our business across geography, commodity and market reduces earnings volatility and ensures that our portfolio is robust across a range of scenarios. We anticipate that potential downside for energy coal will be mitigated by upside for other commodities in our portfolio such as copper. As the energy sector decarbonizes, product quality and cost of production will be increasingly important in determining which coal reserves are brought to market, and we expect high quality and low cost sources of supply such as ours to be advantaged, further mitigating this risk. Energy coal makes up a relatively small part of our portfolio, representing around 4% of EBITDA and less than 1% of Group capital expenditure on a cash basis in FY2017, mitigating the potential financial impact of this risk. In addition, we have not invested in any new greenfield thermal coal assets for the past decade. Recent examples of how we continue to reshape our portfolio to focus on long-life, tier one assets include the divestment of New Mexico Coal and IndoMet Coal

Cost of management

1500000

Comment

Costs associated with modelling and predicting our portfolio response to climate risk, including the demand outlook for thermal coal are expected to be low, estimated at between US\$1 million and US\$2 million for personnel.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact driver

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

Company- specific description

Increased likelihood of greater intensity and more frequent storm systems including tornados, hurricanes and cyclones. These could

impact production at our operations and materially and adversely affect the financial performance of our assets. We have onshore and offshore extractive, processing and logistical operations in many geographic locations. In particular, our Western Australia Iron Ore, Queensland Coal and Gulf of Mexico oil and gas assets are located in areas subject to cyclones or hurricanes. A specific example from FY2017 is Tropical Cyclone Debbie, which hit the Queensland coast in March 2017. The extreme rainfall that followed impacted access, power, logistics and services in the Bowen Basin, impacting our Queensland Coal asset. Dewatering infrastructure installed after previous floods in 2011 worked as designed and all sites were fully operational by early April 2017. As is the case with many climate-related risks and opportunities, this risk may present over short-, medium- and long-term time horizons. Physical risk scenarios generally identify extreme weather threats of moderate or higher risk before 2030 and a larger number and range of physical threats between 2030 and 2050. Mining operations are typically capital intensive, and require investments in plant and equipment that are relatively fixed in terms of location. This reduces the flexibility of approaches to adapting to these risks.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Low

Potential financial impact

300000000

Explanation of financial impact

The high degree of uncertainty around the frequency and severity of the events described by this risk makes it difficult to determine the potential financial impact with precision. Potential financial impact is further dependent on our approach to managing the risk. In order to provide an indication of order of magnitude of potential financial impact, the figure we have provided is the mid-point in the typical range of financial impacts from cyclones and hurricanes based on past events, which is US\$100 million to US\$500 million (including loss of production). The frequency and severity of these events will proportionally determine the long-term financial implication.

Management method

We take a robust, risk-based approach to adapting to the physical impacts of climate change. We work with globally recognised agencies to obtain regional analyses of climate science to inform resilience planning at an asset level and improve our understanding of the climate vulnerabilities our operations may face. Our operations are required to build climate resilience into their activities through compliance with the 'Our Requirements for Environment and Climate Change standard'. We also require new investments to assess and manage risks associated with the forecast physical impacts of climate change. For example, cyclone management is already a critical requirement for our Western Australian Iron Ore asset and maintaining adaptive management practices will allow WAIO to respond to an expected increase in cyclone intensity in the Pilbara region. Our Petroleum business has specifically designed severe weather mitigation systems for Floating Production and Storage Offtake vessels (FPSOs). Although the FPSOs are connected to subsea oil and gas infrastructure, they have the capability to disconnect from this infrastructure, and can sail away from impending cyclonic or extreme weather events. We recognise the body of scientific knowledge about the potential impacts of climate change is rapidly expanding and we continue to review of our adaptation approach to account for the latest climate science.

Cost of management

2000000

Comment

Part of our adaptation approach is continuing to learn and test the likely impacts on our businesses. By undertaking climate change resilience deep dives with our businesses, there are a number of areas where we are continuing to build on our understanding. The anticipated total costs of undertaking these deep dives are estimated at less than US\$2 million.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Enhanced emissions-reporting obligations

Type of financial impact driver

Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

Increasing requirements for mandatory reporting and disclosure of GHG emissions and other climate-related topics in the jurisdictions in which we operate. We have operations and projects in many geographic locations including Australia, Chile, Peru, Brazil, Colombia, Canada, the US, Trinidad and Tobago, and Algeria. We also operate under a Dual Listed Company structure with two parent companies (BHP Billiton Limited and BHP Billiton Plc), being listed in London and Australia. We are therefore subject to climate-related reporting and disclosure obligations in a number of jurisdictions, and already report against a number of standards and protocols in compliance with local regulatory requirements, including participation in the Australian National Greenhouse and Energy Reporting scheme (NGER), as detailed separately. The Paris Agreement requires countries to implement their NDCs, and to ratchet up their ambitions over time. This will require countries either to introduce new laws and policies, or to revisit, revise and strengthen their existing policies to keep up with increased ambition. Corporate GHG reporting is an essential component to underpin effective climate change policy design and emissions management, and parallel developments in reporting obligations to support the introduction of new regulations are to be expected. In addition, in light of the growing recognition of the financial risks posed by climate change, during FY2017 the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) released its recommendations. Subsequently, there have been indications that elements of the TCFD recommendations, or similar, will be incorporated into mandatory disclosure requirements in some jurisdictions. For example, Article 173 of the French Energy Transition Law already requires financial institutions to report on how they manage climate risk, and other jurisdictions may follow. This potential development is likely to be especially relevant to resource-intensive organizations with high GHG emissions within their value chains, such as BHP. As is the case with many climate-related risks and opportunities, this issue may develop over short-, medium- and long-term time horizons.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Potential financial impact

1500000

Explanation of financial impact

In order to provide an indication of order of magnitude of potential financial impact, we have assumed that the potential financial impact corresponds to the anticipated additional cost of managing compliance with enhanced reporting obligations, which we estimate at between US\$1 million and US\$2 million, based on personnel and audit costs.

Management method

We recognise both the risks and opportunities posed by enhanced reporting obligations. We support mandatory GHG reporting as an essential component to underpin effective climate change policy design and emissions management. We believe reporting obligations should balance technical accuracy with the time and investment required to meet expectations. Our management approach involves engagement with the relevant stakeholders in the jurisdictions in which we operate, including policy makers. For example, we undertook detailed engagement on the application of and technical amendments to the Australian National Greenhouse and Energy Reporting scheme (NGER). With respect to the TCFD, and the possibility that elements of the TCFD recommendations will be incorporated into mandatory disclosure requirements, our Vice President of Sustainability and Climate Change is a member of the TCFD, and we were one of the first companies to voluntarily align our disclosures (in our 2017 Annual Report) with its recommendations. The Sustainability and Climate Change team, part of the External Affairs function, has responsibility for identifying emerging reporting trends, and for external reporting at the Group level. Our operating Businesses have specific roles dedicated to reporting responsible for the systems and procedures associated with the capture and recording of data and compliance. In addition to internal audit requirements, third party verification of emissions is already required annual

Cost of management

1500000

Comment

It is anticipated that the additional cost of managing compliance with enhanced reporting obligations will be between US\$1 million and US\$2 million, based on personnel and audit costs.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact driver

Increased revenue through demand for lower emissions products and services

Company- specific description

Potential increased demand for our copper products. BHP is one of the world's top producers of copper. Our total copper production (concentrate and cathode) in FY2017 was 1,326 kt (Annual Report 2017, p.244). Our copper products have application in a variety of low emissions products in energy generation and transport that are likely to see growth driven by climate policy and technology developments. Our scenario analysis suggests copper will offer growth opportunities under a 2 degrees transition as a result of more energy efficient machinery, renewables capacity additions for power generation and increased adoption of electric vehicles. Our copper products are ideally placed to support the electrification of energy demand. Our projections assume that the demand for electricity will outstrip the growth in total primary energy demand between now and mid-century. The production, distribution and transmission of that power will require a great deal of copper. Copper is particularly well placed to support the electrification of transport – with a battery-powered electric car requiring three times as much copper as a conventional car. Copper is also required to support build out of renewables capacity – both wind and solar. From a copper point of view, the per MWh demand coefficient associated with offshore wind generation is almost five times that associated with coal generation. For solar, the coefficient is around two and a half. This opportunity should be considered in the context of broader trends in the sector. In the near term, incremental mine production from committed projects, combined with increased scrap availability, will be sufficient to cover steady growth in copper demand. In the longer term, we expect demand growth to remain solid. China is expected to transition to a consumption-based economy, continued growth is expected from other emerging markets, and technological trends (including those related to this opportunity) point to greater copper intensities in key sectors. A deficit is expected to emerge early next decade as grade declines, a rise in costs and a scarcity of high-quality future development opportunities are likely to constrain the industry's ability to cheaply meet this demand growth. As is the case with many climate-related risks and opportunities, this opportunity may present over short-, medium- and long-term time horizons.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Potential financial impact

8335000000

Explanation of financial impact

The high degree of uncertainty around the timing and magnitude of the opportunity makes it difficult to determine the potential financial impact with precision. The opportunity relates to a number of different markets and there is variability in the magnitude and timing of the opportunity across and within markets. Potential financial impact is further dependent on implementation of our strategy to realise the opportunity. In order to provide an indication of order of magnitude of potential financial impact, the figure provided is the total revenue for our Copper business reported for FY2017 (Annual Report 2017, p.86). This compares to total revenue for the Group in FY2017 of US\$38,285 million (Annual Report 2017, p.69). If copper demand were to increase, this revenue, as well as existing asset values, may increase proportionally. However, our analysis suggest that our diversification

results in the resilience and strength of our overall valuation through all plausible scenarios.

Strategy to realize opportunity

Our strategy to realise this opportunity should be considered in the context of our overall corporate strategy which is to own and operate large, long-life, low-cost, expandable, upstream assets diversified by commodity, geography and market; and of broader trends in the sector. We manage opportunity by remaining financially disciplined within the framework of our differentiated and proven strategy. We take a portfolio approach as the quality and breadth of our business across geography, commodity and market reduces earnings volatility and ensures that our portfolio is robust across a range of scenarios. Our scenario analysis has demonstrated that our strategy to invest in copper remains sound due to depletion of existing resource base, scarcity of high-quality development opportunities & expected demand growth. Our Olympic Dam asset in Australia comprises one of the world's largest ore bodies, and we are investigating further options for expanding production. In Chile, the Escondida asset is a leading producer of copper concentrate and cathodes. Pampa Norte consists of two wholly owned assets in northern Chile – Spence and Cerro Colorado. The Spence Growth option, with expected capital expenditure of US\$2.46 billion has been approved, and will extend the life of the Spence copper mine by over 50 years. The project will increase copper production capacity by around 200 ktpa and is expected to deliver first production in FY2021.

Cost to realize opportunity

1484000000

Comment

In order to provide an indication of the order of magnitude of the potential cost to realise the opportunity, the figure provided for 'cost to realise opportunity' is the total capital expenditure reported for our Copper assets for FY2017 (Annual Report 2017, p.86). Looking ahead the expected capital expenditure of the Spence Growth option is US\$2.46 billion.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact driver

Increased revenue through demand for lower emissions products and services

Company- specific description

Potential increased demand for our nickel products. Our Nickel West asset is a fully integrated mine-to-market nickel business. All nickel operations (mines, concentrators, a smelter and refinery) are located in Western Australia. The integrated business adds value throughout our nickel supply chain. Our total nickel production in FY2017 was 85.1 kt (Annual Report 2017, p.245). Nickel is a key raw material for batteries. We expect significant growth in electric vehicle sales, with battery producers expected to match electric vehicle growth rate while responding to growing demand from other areas i.e. stationary storage. Virtually all battery producers are moving to higher nickel-rich chemistries, which are preferred due to their superior energy density, lighter weight for any given battery size, increased vehicle range, and lower metal cost. This opportunity should be considered in the context of broader trends in the sector. As is the case with many climate-related risks and opportunities, this opportunity may present over short-, medium- and long-term time horizons.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Low

Potential financial impact

952000000

Explanation of financial impact

The high degree of uncertainty around the timing and magnitude of the opportunity makes it difficult to determine the potential financial impact with precision. The opportunity relates to a number of different markets and there is variability in the magnitude and timing of the opportunity across and within markets. Potential financial impact is further dependent on implementation of our strategy to realise the opportunity. In order to provide an indication of order of magnitude of potential financial impact, the figure provided is the revenue for Nickel West reported for FY2017 (Annual Report 2017, p.79). This compares to total revenue for the

Group in FY2017 of US\$38,285 million (Annual Report 2017, p.69). If nickel demand were to increase, this revenue, as well as existing asset values, may increase proportionally. However, our analysis suggest that our diversification results in the resilience and strength of our overall valuation through all plausible scenarios.

Strategy to realize opportunity

Our strategy to realise this opportunity should be considered in the context of our overall corporate strategy which is to own and operate large, long-life, low-cost, expandable, upstream assets diversified by commodity, geography and market; and of broader trends in the sector. We manage opportunity by remaining financially disciplined within the framework of our differentiated and proven strategy. We take a portfolio approach as the quality and breadth of our business across geography, commodity and market reduces earnings volatility and ensures that our portfolio is robust across a range of scenarios. We are investing in our Nickel West asset to enable production of downstream battery chemicals like nickel sulphate to support our transition to become a globally significant battery materials supplier. We expect to sell around 65%-70% of 2018 nickel output to the battery sector. We have announced plans to invest US\$43 million in a new nickel sulphate plant at Nickel West. The plant will produce nickel sulfate for use in electric batteries. Its annual capacity of 100,000 tpa would make it the world's largest nickel sulfate plant. First production is expected in April 2019. Looking ahead, exploration access to the Venus nickel deposit at Nickel West is scheduled to be completed in FY2018 and the drilling program to define the ore body will commence thereafter. The Venus deposit has the potential to support the extension of the expected life of Nickel West to FY2032.

Cost to realize opportunity

43000000

Comment

In order to provide an indication of the order of magnitude of the potential cost to realise the opportunity, the figure provided for 'cost to realise opportunity' is the investment that has been announced to build a new facility at Nickel West to produce nickel sulphate for the battery market.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact driver

Increased revenue through demand for lower emissions products and services

Company- specific description

Potential increased demand for our natural gas products. As well as being a major producer of iron ore, metallurgical coal and copper, we also have substantial interests in oil and gas. Our natural gas production in FY2017 totalled 667.8 billion cubic feet (Annual Report 2017, p.247). CO2 emissions from the combustion of natural gas are lower than those from other fossil fuels, with the potential for avoided emissions from fuel switching. The introduction of more stringent climate policy and GHG regulations, including carbon pricing, has the potential to provide a cost advantage for lower carbon energy sources and could increase the market for natural gas. Our scenario analysis suggests natural gas will offer growth opportunities under a 2 degrees transition due to a switch from coal to gas in power generation and increased use of gas in transportation. The development of an economic carbon capture and storage solution would provide additional upside. This opportunity should be considered in the context of broader trends in the sector. In the case of liquefied natural gas (LNG), despite strong demand growth in Asia and Europe, new supply is likely to weigh on the market in the near term. However, in the long run, the outlook for LNG remains positive, underpinned by rising energy demand from emerging economies and the need for low-emission and flexible fuels to supplement intermittent renewables. Depleting indigenous gas supplies will also increase the dependence of some major consumers on the export market. As is the case with many climate-related risks and opportunities, this opportunity may present over short-, medium- and long-term time horizons.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Potential financial impact

Explanation of financial impact

The high degree of uncertainty around the timing and magnitude of the opportunity makes it difficult to determine the potential financial impact with precision. The opportunity relates to a number of different markets and there is variability in the magnitude and timing of the opportunity across and within markets. Potential financial impact is further dependent on implementation of our strategy to realise the opportunity. In order to provide an indication of order of magnitude of potential financial impact, the figure provided is the total revenue from natural gas reported for FY2017 (Annual Report 2017, p.82). This compares to total revenue for the Group in FY2017 of US\$38,285 million (Annual Report 2017, p.69). If natural gas demand were to increase, this revenue, as well as existing asset values, may increase proportionally. However, our analysis suggest that our diversification results in the resilience and strength of our overall valuation through all plausible scenarios.

Strategy to realize opportunity

Our strategy to realise this opportunity should be considered in the context of our overall corporate strategy which is to own and operate large, long-life, low-cost, expandable, upstream assets diversified by commodity, geography and market; and of broader trends in the sector. We manage opportunity by remaining financially disciplined within the framework of our differentiated and proven strategy. We take a portfolio approach as the quality and breadth of our business across geography, commodity and market reduces earnings volatility and ensures that our portfolio is robust across a range of scenarios. Our scenario analysis has demonstrated that our strategy to invest in our petroleum business, which includes natural gas, remains sound. Our Petroleum unit comprises conventional and unconventional oil and gas assets, and includes exploration, development and production activities. We have a high-quality resource base concentrated in the United States and Australia. Our Australian Petroleum operations supply gas to the Australian market and LNG to buyers in north Asia. Natural gas is a key transition fuel particularly in the short to medium term, providing opportunities to invest in the quality gas resources in our portfolio. Examples of developments during FY2017 include the start of production at the Bass Strait Kipper gas field and the progression of development planning for the large Scarborough gas field (located offshore from Western Australia).

Cost to realize opportunity

147200000

Comment

In order to provide an indication of the order of magnitude of the potential cost to realise the opportunity, the figure provided for 'cost to realise opportunity' is the total capital expenditure reported for our Petroleum business – which includes natural gas – for FY2017 (Annual Report 2017, p.82).

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	A variety of policy, technological and market risks and opportunities resulting from the transition to a lower carbon economy could lead to the substitution of existing products and services with lower emissions options, thereby affecting demand for a variety of our products. In particular, a switch from coal to gas in power generation combined with renewables capacity additions could lead to potential reduced demand for our energy coal products; the introduction of more stringent climate policy has the potential to provide a cost advantage for lower carbon energy sources and could increase the market for our natural gas; there is potential increased demand for our copper products due to the increasing electrification of the energy system and increasing adoption of renewables and electric vehicles; and there is potential increased demand for our nickel products due to growth in the battery market. As is the case with many climate-related risks and opportunities, these risks and opportunities are likely to manifest over multiple time horizons. In the case of nickel, the potential opportunity has already impacted our business: we are investing in new facilities at our Nickel West asset to enable production of downstream battery chemicals like nickel sulphate to support our transition to become a globally significant battery materials supplier, and expect to sell around 65%-70% of 2018 nickel output to the battery sector. Similarly for copper we are increasing exploration and investigating options for expanding production, and have approved the Spence Growth option to extend the life of the Spence copper mine in Chile by over 50 years to support expected demand growth. In the case of energy coal, demand for our products has not yet been impacted. We consider this a longer term risk. It is also low in magnitude given energy coal makes up a relatively small part of our portfolio. As discussed separately, as the energy sector decarbonizes, product quality and cost of production will be increasingly important in determining which coal reserves are brought to market, and we expect high quality and low cost sources of supply such as ours to be advantaged, further mitigating this risk.

	Impact	Description
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	In addition to affecting our operations directly, many of the regulatory, technology, legal, market, reputational, and physical risks discussed separately have the potential to affect both our upstream supply chain and downstream value chain, including our customers and the end users of our products. We are already seeing an impact for some value chain participants from some of these risks. For example, policy and regulatory risk was identified as being particularly relevant for resource-intensive companies such as BHP. This is also the case for many of our customers, for example the steel producers who buy our iron ore and metallurgical coal. We already work directly with our customers to help them improve the productivity and environmental performance of their processes based on the quality characteristics of our products. In the case of emissions from steelmaking, for example, we produce premium low volatile (PLV) coking coals that can be processed into high strength metallurgical coke, allowing our customers to increase productivity and lower external energy requirements in the blast furnace. There is opportunity to build on these relationships to identify strategic opportunities to partner in implementing projects with the potential to achieve more material emissions reductions. The global shipping sector is also emissions intensive. Another example of how climate issues are impacting our value chain is the work we have been doing to reduce emissions from the transport and distribution of our products. During FY2017 we worked with an external partner to develop data analytics to measure the GHG emissions of the marine fleet we charter; we subsequently implemented vetting criteria to exclude vessels with poor emissions performance. We have already started to see a response from the shipping industry. Examples of actions taken by our strategic partners (ship owners) include engagement with engine manufacturers to carry out engineering modifications; and a variety of technical adjustments to reduce emissions including limiting engine power output, installing propulsion improvement devices, and applying advanced silicon paints.
Adaptation and mitigation activities	Impacted	Risks related to the physical impacts of climate change include acute risks resulting from increased severity of extreme weather events, including the increased likelihood of greater intensity and more frequent storm system, and chronic risks resulting from longer-term changes in climate patterns. Both forms of physical risk are relevant to BHP. Physical risk has impacted our business in that it has affected our adaptation approach. As discussed separately, we take a robust, risk-based approach to adaptation. We work with globally recognised agencies to obtain analyses of climate science to inform asset-level resilience planning & improve our understanding of the climate vulnerabilities our operations may face. Our operations are required to build climate resilience into their activities through compliance with the 'Our Requirements for Environment & Climate Change' standard. We also require new investments to assess & manage risks associated with forecast physical climate impacts. Note also that our Western Australia Iron Ore, Queensland Coal and Gulf of Mexico oil and gas assets are located in areas already subject to cyclones or hurricanes. Transition risks, for example the potential for increases in the cost of energy inputs to our operations as a result of developments in climate regulations, have also impacted our mitigation activities. As a major energy consumer, managing energy use & reducing emissions are key components of our mitigation strategy. FY2017 was the final year of our five-year target to maintain operational emissions below FY2006 levels while growing our business. With our FY2017 emissions at 21% below the adjusted FY2006 baseline, we exceeded this target, with numerous projects having contributed to this achievement. In FY2017, we announced a new five-year target, which is to maintain emissions in FY2022 below FY2017 levels. We also set the longer-term goal of achieving net-zero operational emissions in the latter half of this century, consistent with the Paris Agreement. Our five-year target & longer-term goal underpin our strategy & drive internal performance. We require our assets to identify, evaluate & implement projects that prevent/minimise emissions, including in project design & equipment selection.
Investment in R&D	Impacted	Technology risk and opportunities were identified as having the potential to impact our operations, with the potential requirement for increased investment in research and development into low emissions technologies. These considerations have impacted our business in that they have informed our low emissions technology strategy. Our strategy is to develop emerging & deploy existing technologies that have the potential to make step-change emissions reductions. We have a suite of initiatives underway aimed at achieving reductions across operational emissions sources (electricity, fuel use, fugitives). In evaluating investments, we emphasise technologies with potential to deliver material emissions savings across time horizons & to leverage our global operating model. For example, during FY2017 we are participating in the Lakeland Solar & Storage Project to demonstrate connecting large-scale battery storage to a fringe-of-the-grid solar project in regional Australia. Carbon capture and storage (CCS) is another key technology that has been identified as offering opportunity for BHP as it has the potential to play a pivotal role in decarbonizing industrial processes such as steel production (which consumes our metallurgical coal and iron ore). This has impacted our business in that it has informed our product stewardship approach. Our CCS investments form a key part of our approach to product stewardship. Our CCS investments focus on reducing costs & accelerating development timeframes, and include knowledge sharing from commercial-scale projects & funding for R&D. E.g., in FY2017 we established a collaboration between the University of Melbourne, University of Cambridge & Stanford University to support research into long-term sub-surface CO2 storage mechanisms.
Operations	Impacted	Many of both the transition (policy, technology, market) and physical risks identified as already having impacted our business in the form of impacts on our products, value chain, adaptation and mitigation activities, and investment in R&D (all of which are described separately) affect our operations either directly or indirectly. For example, as part of our adaptation approach, our operations are required to build climate resilience into their activities through compliance with the 'Our Requirements for Environment & Climate Change' standard, and we also require new investments to assess and manage risks associated with forecast physical climate impacts. Another example is that as part of our mitigation approach, designed in part to address the risk resulting from increasingly stringent emissions regulations in the jurisdictions in which we operate, we have set the long-term goal of achieving net-zero operational emissions in the latter half of this century, consistent with the Paris Agreement. Our long-term goal, together with our five-year emissions reduction target, is intended to drive internal performance at our operations. We require our operations to identify, evaluate & implement projects that prevent/minimise emissions, including in project design & equipment selection. Numerous individual improvement projects at our operations have contributed to emissions reductions to date, as well as improvements in technology and productivity at our operations. The risk identified from enhanced emissions-reporting obligations also affects our operations directly. Our operations have specific roles dedicated to reporting responsible for the systems and procedures associated with the capture and recording of data and compliance. In addition to internal audit requirements, third party verification of emissions is already required annually.
Other, please specify	Please select	

C2.6

(C2.6) Describe where and how the identified risks and opportunities have factored into your financial planning process.

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	The physical and non-physical impacts of climate change may affect our assets, productivity, the markets in which we sell our products, and the communities in which we operate. Transition risks in particular may affect demand for our products. As discussed separately, the substitution of existing technologies with lower emissions options, particularly in the electricity and transport sectors, has the potential to reduce demand for our fossil fuel products. For example, coal to gas switching in power generation may lead to reduced demand for our energy coal products (though it may increase demand for our natural gas). The development of low emissions technologies also presents opportunity for BHP. Our copper products have application in a variety of low emissions products in energy generation and transport, for example electric vehicles, that are likely to see market growth driven by both technology and policy developments. Likewise nickel is a key raw material for batteries, with battery producers expected to match electric vehicle growth rates. We consider the potential impact of such change in demand on revenues and identify potential opportunities for enhancing or developing new revenues. The potential impact on revenue of climate-related risks and opportunities is not always clear or direct, and will be dependent on the strategic approach taken to managing risk and seizing opportunities. We manage potential risk to our revenue by remaining financially disciplined within the framework of our differentiated and proven strategy. We take a portfolio approach as the quality and breadth of our business across geographies, commodity and market reduces earnings volatility and ensures that our portfolio is robust across a range of scenarios. We also engage with governments and other key stakeholders to make sure the potential adverse impacts of proposed policy and regulatory changes are understood and, where possible, mitigated.
Operating costs	Impacted for some suppliers, facilities, or product lines	The physical and non-physical impacts of climate change may affect our assets, productivity, the markets in which we sell our products, and the communities in which we operate. There are costs associated with managing the resulting risks and opportunities. For example, costs associated with modelling and predicting our portfolio response to climate risk, including the demand outlook for thermal coal are estimated at between US\$1 million and US\$2 million for personnel. Climate policy and regulatory changes may also lead to increased operating costs in the form of higher compliance costs or increased insurance premiums. For example, there is a risk of increasing requirements for mandatory reporting and disclosure of GHG emissions and other climate-related topics in the jurisdictions in which we operate. It is anticipated that the additional cost of managing compliance with enhanced reporting obligations will be between US\$1 million and US\$2 million, based on personnel and audit costs. We have onshore and offshore extractive, processing and logistical operations in many geographic locations and as such a wide variety of physical climate impacts are potentially relevant to our business. Physical risks could impact production at our operations and materially and adversely affect the financial performance of our assets. Based on our risk management and the limited value of external insurance in the natural resource sector, our risk financing (insurance) approach is to minimise or not to purchase external insurance for certain risks, including property damage and business interruption. Existing business continuity plans may not provide protection for all the costs that arise from such events, including clean-up costs, litigation and other claims. The impact of these events could lead to disruptions in production, increased costs and loss of facilities. Where external insurance is purchased, third party claims arising from these events may exceed the limit of liability of the insurance policies we have in place. Additionally, any uninsured or underinsured losses could have a material adverse effect on our financial position or results of assets.
Capital expenditures / capital allocation	Impacted for some suppliers, facilities, or product lines	The physical and non-physical impacts of climate change may affect our assets, productivity, the markets in which we sell our products, and the communities in which we operate. We consider the impacts of climate change in our strategy process. We use a broad range of scenarios to consider how divergent climate-related policy, technology, market and societal outcomes could impact our portfolio, including low plausibility, extreme shock events. We also continually monitor the macro environment for climate-related developments that would serve as a call to action for us to reassess the resiliency of our portfolio. Climate issues are considered in our capital allocation framework. Our investment evaluation process includes an assessment of non-quantifiable risks and has also incorporated market & sector based carbon prices for more than a decade. A recent example of how portfolio evaluation has informed investment decisions is the approval during FY2017 of US\$2.46 billion in capex to extend the life of the Spence copper mine in Chile by over 50 years. As regards energy coal, careful consideration would be required before pursuing growth opportunities given the current returns and growing regulatory and societal pressures that could impact future asset values.
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	The physical and non-physical impacts of climate change may affect our assets, productivity, the markets in which we sell our products, and the communities in which we operate. Climate change is treated as a Board-level governance issue and is discussed regularly, including during Board strategy discussions, portfolio review and investment decisions. We regularly review the composition of our asset portfolio and from time-to-time may add assets to, or divest assets from, the portfolio. Recent examples of how portfolio evaluation, which incorporates carbon pricing, has informed investment decisions include simplification of our portfolio to focus on long-life, tier one assets (including the divestment of New Mexico Coal and IndoMet Coal); increasing exploration in copper; and approval during FY2017 of US\$2.46 billion in capex to extend the life of the Spence copper mine in Chile by over 50 years. In addition, we have not invested in any new greenfield thermal coal assets for the past decade.
Access to capital	Impacted for some suppliers, facilities, or product lines	The physical and non-physical impacts of climate change may affect our assets, productivity, the markets in which we sell our products, and the communities in which we operate. We seek to maintain a strong balance sheet. However, climate-related risks could adversely affect our future cash flows and ability to access capital from financial markets at acceptable pricing. If our key financial ratios and credit ratings are not maintained, our liquidity and cash reserves, interest rate costs on borrowed debt, future access to financial capital markets and the ability to fund current and future major capital projects could be adversely affected.
Assets	Impacted for some suppliers, facilities, or product lines	The physical and non-physical impacts of climate change may affect our assets, productivity, the markets in which we sell our products, and the communities in which we operate. Transition risks in particular may affect demand for our products. As discussed separately, the substitution of existing technologies with lower emissions options, particularly in the electricity and transport sectors, has the potential to reduce demand for our fossil fuel products. For example, coal to gas switching in power generation may lead to reduced demand for our energy coal products (though it may increase demand for our natural gas). The development of low emissions technologies also presents opportunity for BHP. Our copper products have application in a variety of low emissions products in energy generation and transport, for example electric vehicles, that are likely to see market growth driven by both technology and policy developments. Likewise nickel is a key raw material for batteries, with battery producers expected to match electric vehicle growth rates. Decreasing or increasing demand for our products or other market dynamics related to climate change could affect the valuation of our assets and liabilities. We may not fully recover our investments in mining, oil and gas assets, which may require financial write-downs. Long-lived assets may be particularly affected by climate-related issues. BHP produces fossil fuels including oil and gas and energy coal. There is a potential gap between the current valuation of fossil fuel reserves on the balance sheets of companies and in global equities markets and the reduced value that could result if a significant proportion of reserves were rendered incapable of extraction in an economically viable fashion due to technology, regulatory or market responses to climate change. In such a scenario, stranded reserve assets held on our balance sheet may need to be impaired or written off and our inability to make productive use of such assets may also negatively impact our financial condition and results.

	Relevance	Description
Liabilities	Impacted for some suppliers, facilities, or product lines	The physical and non-physical impacts of climate change may affect our assets, productivity, the markets in which we sell our products, and the communities in which we operate. Transition risks in particular may affect demand for our products. As discussed separately, the substitution of existing technologies with lower emissions options, particularly in the electricity and transport sectors, has the potential to reduce demand for our fossil fuel products. For example, coal to gas switching in power generation may lead to reduced demand for our energy coal products (though it may increase demand for our natural gas). The development of low emissions technologies also presents opportunity for BHP. Our copper products have application in a variety of low emissions products in energy generation and transport, for example electric vehicles, that are likely to see market growth driven by both technology and policy developments. Likewise nickel is a key raw material for batteries, with battery producers expected to match electric vehicle growth rates. Decreasing or increasing demand for our products or other market dynamics related to climate change could affect the valuation of our assets and liabilities. We may not fully recover our investments in mining, oil and gas assets, which may require financial write-downs. Long-lived assets may be particularly affected by climate-related issues. BHP produces fossil fuels including oil and gas and energy coal. There is a potential gap between the current valuation of fossil fuel reserves on the balance sheets of companies and in global equities markets and the reduced value that could result if a significant proportion of reserves were rendered incapable of extraction in an economically viable fashion due to technology, regulatory or market responses to climate change. In such a scenario, stranded reserve assets held on our balance sheet may need to be impaired or written off and our inability to make productive use of such assets may also negatively impact our financial condition and results.
Other	Please select	

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, qualitative and quantitative

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b)

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

Yes

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

Climate issues are integrated into our business objectives & strategy via a variety of mechanisms. Our approach focuses on (1) reducing operational emissions, (2) product stewardship, (3) managing climate risk & opportunity, and (4) working with others to enhance the global response.

(1) Operational emissions: As a major energy consumer, managing energy use & reducing emissions are key components of our strategy. Reducing operational emissions is a key performance indicator for our business and performance against our targets is

reflected in senior executive and leadership remuneration.

(1.a) Emissions reduction targets: FY2017 was the final year of our five-year target to maintain operational emissions below FY2006 levels while growing our business. With our FY2017 emissions of 16.3 Mt CO₂e at 21% below the adjusted FY2006 baseline, we exceeded this target. Numerous projects contributed to this achievement; projects tracked as part of the target achieved more than 975,000 tonnes CO₂e of annualised abatement in FY2017. In FY2017, we announced a new five-year target, which is to maintain emissions in FY2022 below FY2017 levels. We also set the longer-term goal of achieving net-zero operational emissions in the latter half of this century, consistent with the Paris Agreement. Our five-year target & longer-term goal underpin our strategy & drive internal performance. We require our assets to identify, evaluate & implement projects that prevent/minimise emissions, including in project design & equipment selection.

(1.b) Low emissions technologies (LET) investments: Our strategy is to develop emerging & deploy existing technologies that make step-change emissions reductions. We have a suite of initiatives underway aimed at achieving reductions across operational emissions sources (electricity, fuel use, fugitives). In evaluating investments, we emphasise technologies with potential to deliver material emissions savings across time horizons & to leverage our global operating model. E.g., during FY2017 we are participating in the Lakeland Solar & Storage Project to demonstrate connecting large-scale battery storage to a fringe-of-the-grid solar project in regional Australia.

(2) Product stewardship: While reducing operational emissions is vital, scope 3 emissions are significantly higher than those from our operations. Our strategy recognises we have a stewardship role in working with our customers, suppliers & others in our value chain to influence emissions reductions across the life cycle of our products.

(2.a) Scope 3 emissions: By definition, scope 3 emissions occur from sources that are not owned or controlled by BHP. For some emissions sources, we have the ability to influence suppliers to reduce emissions, as demonstrated by activities to reduce our freight emissions where we worked with an external partner during FY2017 to measure the emissions of the marine fleet, and subsequently implemented vetting criteria to exclude vessels with poor emissions performance. For other emissions sources, such as the downstream processing of our products, we work with customers (e.g. steelmakers) to help them improve productivity & environmental performance.

(2.b) Carbon capture & storage (CCS) investments: We also work with others to develop technologies such as CCS with the potential to deliver step-change emissions reductions from the use of our products over a longer time horizon. CCS has the potential to play a pivotal role in reducing emissions from industrial processes such as steelmaking. Our CCS investments focus on reducing costs & accelerating development timeframes, and include knowledge sharing from commercial-scale projects & funding for R&D. E.g., in FY2017 we established a collaboration between the University of Melbourne, University of Cambridge & Stanford University to support research into long-term sub-surface CO₂ storage mechanisms.

(3) Climate risk & opportunity management: Our strategy recognises the physical & non-physical impacts of climate change may affect our assets, productivity, markets and communities.

(3.a) Adaptation: We take a robust, risk-based approach to adaptation. We work with globally recognised agencies to obtain analyses of climate science to inform asset-level resilience planning & improve our understanding of the climate vulnerabilities our operations may face. Our operations are required to build climate resilience into their activities through compliance with the Our Requirements for Environment & Climate Change standard. We also require new investments to assess & manage risks associated with forecast physical climate impacts.

(3b) Portfolio evaluation: We consider the impacts of climate change in our strategy process. We use a broad range of scenarios to consider how divergent climate-related policy, technology, market and societal outcomes could impact our portfolio, including low

plausibility, extreme shock events. We also continually monitor the macro environment for climate-related developments that would serve as a call to action for us to reassess the resiliency of our portfolio. Climate issues are considered in our capital allocation framework. Our investment evaluation process includes an assessment of non-quantifiable risks and has also incorporated market & sector based carbon prices for more than a decade. A recent example of how portfolio evaluation has informed investment decisions is the approval during FY2017 of US\$2.46 billion in capex to extend the life of the Spence copper mine in Chile by over 50 years.

(4) Contributing to the global response: Climate change is a global challenge that requires collaboration. Our strategy prioritises working with others to enhance the global policy & market response.

(4.a) Public policy engagement: We believe an effective policy framework should include a complementary set of measures, including a price on carbon, support for LET & measures to build resilience. We are a signatory to the World Bank's Putting a Price on Carbon statement & a partner in the Carbon Pricing Leadership Coalition. We contribute to policy reviews throughout our global operating regions.

(4.b) Promoting market mechanisms: We support the development of market mechanisms that reduce global emissions through projects that generate carbon credits. Our strategy focusses on support for REDD+. E.g., in partnership with the International Finance Corporation (IFC) and Conservation International we developed a first-of-its-kind US\$152 million Forests Bond, issued by the IFC in 2016. We provide a price-support mechanism for the bond, which supports the Kasigau Corridor REDD project in Kenya. We also support the Alto Mayo REDD+ project in Peru.

We regularly review our approach to integrating climate change into our business objectives & strategy in response to emerging scientific knowledge, changes in global climate policy & regulation, developments in LET, and evolving stakeholder expectations.

C3.1d

(C3.1d) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios	Details
Other, please specify (4 x internal scenarios incl. 2 degrees)	<p>Approach: We use a range of scenarios to consider how divergent climate-related policy, technology, market and societal outcomes could impact our portfolio, including low plausibility, extreme shock events. As a diversified miner there are no 'reference' scenarios to describe our business; we use internally-developed scenarios. Our analysis considers a range of external sources, including IPCC and IEA mitigation pathways. Our planning process starts with construction of a 'central case' through in-depth, bottom-up analysis. We optimise our 20-yr plan based on this, and use scenarios to test the portfolio resilience across range of possible futures. We also track signals, including signposts (trends) and triggers (events), in the external environment; these indicate which scenarios are becoming dominant over time, and serve as calls to action for us to reassess our portfolio. Disclosure: Our Climate Change: Portfolio Analysis (2015) and Climate Change: Portfolio Analysis – Views after Paris (2016) reports, available at https://www.bhp.com, describe in more detail how we use scenario analysis to evaluate the resilience of our portfolio to a 2 degrees transition. Boundary and time horizon: We use 4 scenarios, designed to be divergent, plausible and internally consistent. The scenarios apply across our whole business and full range of commodities. Our Portfolio Analysis reports describe quantitatively the impact on our portfolio over a 20-year time horizon (to 2035) consistent with our strategic planning horizon. Scenarios extend to 2050 and beyond, with longer term outcomes considered qualitatively, consistent with time horizons over which climate-related risks are likely to manifest. Assumptions: All 4 scenarios assume climate change occurs but vary in the extent of the global response. 'Global Accord' scenario describes a unified focus on limiting climate change, leading to an orderly transition to 2 degrees. Emissions in Global Accord align with levels indicated by IPCC after 2030. Along with scenario analysis, we also test the portfolio against unlikely and extreme shock events that are typically short-term but may have associated longer-term impacts. Our shock event based on Global Accord describes a much more rapid shift to 2 degrees where emissions align with levels indicated by IPCC by 2030, driven by aggressive policy measures and technology developments. Our analysis includes assumptions on carbon pricing. In the central case, the long-term carbon price forecast is US\$24/tCO₂e by 2030; US\$50/tCO₂e by 2030 in Global Accord; and US\$80/tCO₂e by 2030 in the shock event. Outcomes: Our current portfolio is robust under both an orderly and more rapid transition to 2 degrees. In Global Accord, there is likely upside for uranium, met coal and iron ore; we expect copper and natural gas to offer growth opportunities. We anticipate these commodities mitigate potential negative impacts on other commodities, e.g. energy coal. We anticipate impact on current portfolio value will be minimal due to portfolio diversification and the diminishing contribution of fossil fuels as a proportion of portfolio value. We project carbon price impact on portfolio value of < 2%. In the shock event there is likely more downside, but our portfolio will still be resilient, and carbon price impact on total portfolio value <5%. Influence on strategy: Analysis has demonstrated that our strategy to invest in copper and oil remains sound due to depletion of existing resource base, scarcity of high-quality development opportunities and expected demand growth. Our portfolio is not static, and the Board continues to consider attractiveness and potential addition of new commodities. Recent examples of how we continue to reshape our portfolio include divestment of IndoMet Coal; increasing exploration in copper; and approval in FY2017 of US\$2.46 billion in capex to extend the life of the Spence copper mine in Chile by > 50 yrs.</p>

(C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e)
Disclose details of your organization's low-carbon transition plan.

Consideration of the low carbon transition forms part of our broader approach to climate change and focuses on (1) reducing operational emissions, (2) product stewardship, and (3) evaluating the risks & opportunities to our portfolio resulting from the low carbon transition.

(1) Operational emissions: As a major energy consumer, managing energy use & reducing emissions are key components of our strategy. Reducing operational emissions is a key performance indicator for our business and performance against our targets is reflected in senior executive and leadership remuneration.

(1.a) Emissions reduction targets: FY2017 was the final year of our five-year target to maintain operational emissions below FY2006 levels while growing our business. With our FY2017 emissions of 16.3 Mt CO₂e at 21% below the adjusted FY2006 baseline, we exceeded this target. Numerous projects contributed to this achievement; projects tracked as part of the target achieved more than 975,000 tonnes CO₂e of annualised abatement in FY2017. In FY2017, we announced a new five-year target, which is to maintain emissions in FY2022 below FY2017 levels. We also set the longer-term goal of achieving net-zero operational emissions in the latter half of this century, consistent with the Paris Agreement. Our five-year target & longer-term goal underpin our strategy & drive internal performance.

(1.b) Low emissions technologies (LET) investments: Our strategy is to develop emerging & deploy existing technologies that make step-change emissions reductions. We have a suite of initiatives underway aimed at achieving reductions across operational emissions sources (electricity, fuel use, fugitives). In evaluating investments, we emphasise technologies with potential to deliver material emissions savings across time horizons & to leverage our global operating model. E.g., during FY2017 we are participating in the Lakeland Solar & Storage Project to demonstrate connecting large-scale battery storage to a fringe-of-the-grid solar project in regional Australia.

(2) Product stewardship: While reducing operational emissions is vital, scope 3 emissions – the majority of which come from the steelmaking process (i.e. use & processing of our metallurgical coal & iron ore) – are significantly higher than those from our operations. Our strategy recognises we have a stewardship role in working with our customers, suppliers & others in our value chain to influence emissions reductions across the life cycle of our products.

(2.a) Scope 3 emissions: By definition, scope 3 emissions occur from sources that are not owned or controlled by BHP. For some emissions sources, we have the ability to influence suppliers to reduce emissions, as demonstrated by activities to reduce our freight emissions where we worked with an external partner during FY2017 to measure the emissions of the marine fleet, and subsequently implemented vetting criteria to exclude vessels with poor emissions performance. For other emissions sources, such as the downstream processing of our products, we work with customers (e.g. steelmakers) to help them improve productivity & environmental performance.

(2.b) Carbon capture & storage (CCS) investments: We also work with others to develop technologies such as CCS with the potential to deliver step-change emissions reductions from the use of our products over a longer time horizon. CCS has the potential to play a pivotal role in reducing emissions from industrial processes such as steelmaking. Our CCS investments focus on reducing costs & accelerating development timeframes, and include knowledge sharing from commercial-scale projects & funding for R&D. E.g., in FY2017 we established a collaboration between the University of Melbourne, University of Cambridge & Stanford University to support research into long-term sub-surface CO₂ storage mechanisms.

(3) Portfolio evaluation: 'Transition' climate risks arise from a variety of policy, legal, technological & market responses to the challenges posed by climate change and the transition to a lower carbon economy. We consider the impacts of transition risk in our strategy process. We use a broad range of scenarios to consider how divergent climate-related policy, technology, market and societal outcomes could impact our portfolio, including low plausibility, extreme shock events. We also continually monitor the macro environment for climate-related developments that would serve as a call to action for us to reassess the resiliency of our portfolio. Climate issues are considered in our capital allocation framework. Our investment evaluation process includes an assessment of non-quantifiable risks and has also incorporated market & sector based carbon prices for more than a decade. A recent example of how portfolio evaluation has informed investment decisions is the approval during FY2017 of US\$2.46 billion in capex to extend the life of the Spence copper mine in Chile by over 50 years.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Scope

Scope 1+2 (location-based)

% emissions in Scope

100

% reduction from base year

0

Base year

2006

Start year

2012

Base year emissions covered by target (metric tons CO2e)

20600000

Target year

2017

Is this a science-based target?

No, but we are reporting another target that is science-based

% achieved (emissions)

100

Target status

Expired

Please explain

FY2017 represented the final year of our previous five-year target. Our target, set in FY2012, was to maintain our total operational GHG emissions at or below FY2006 levels while growing our business. With our FY2017 emissions of 16.3 million tonnes CO2e at

21% below the adjusted FY2006 baseline of 20.6 million tonnes CO₂e, we have successfully met and exceeded this target. Note that the FY2006 baseline was adjusted as necessary for material acquisitions and divestments (including the demerger of South32) based on GHG emissions at the time of the applicable transition. Building on our success in meeting this target, we set new targets in FY2017, as detailed separately. Note that this CDP response relates to FY2017. More recent information on our new targets and progress against them during FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>.

Target reference number

Abs 2

Scope

Scope 1 +2 (market-based)

% emissions in Scope

100

% reduction from base year

0

Base year

2017

Start year

2017

Base year emissions covered by target (metric tons CO₂e)

16300000

Target year

2022

Is this a science-based target?

No, but we are reporting another target that is science-based

% achieved (emissions)

0

Target status

New

Please explain

In FY2017, we set a new five-year GHG emissions reduction target. Our new target is to maintain our total operational GHG emissions in FY2022 at or below FY2017 levels while we continue to grow our business. Note that the FY2017 baseline will be adjusted for any material acquisitions and divestments as necessary based on GHG emissions at the time of the transaction. Our new target builds on our success in exceeding our previous five-year target, as detailed separately. Our new target is a component of our longer-term net-zero goal, also detailed separately. Our five-year target and our longer-term net-zero goal underpin our strategy and are an important driver of internal performance.

Target reference number

Abs 3

Scope

Scope 1 +2 (market-based)

% emissions in Scope

100

% reduction from base year

100

Base year

2017

Start year

2017

Base year emissions covered by target (metric tons CO₂e)

16300000

Target year

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

% achieved (emissions)

0

Target status

New

Please explain

In addition to our new five-year target (as detailed separately), we have set the longer-term goal of achieving net-zero operational GHG emissions in the latter half of this century. While there is no generally accepted 'science-based' target setting methodology applicable to the diversified mining sector that has been approved by the Science Based Targets initiative, our long-term net-zero goal is consistent with the goals of the Paris Agreement, and as such we consider it to be science-based. Our five-year target and our longer-term net-zero goal underpin our strategy and are an important driver of internal performance. Note that this CDP response relates to FY2017. More recent information on our new targets and progress against them during FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>.

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO₂e savings.

	Number of projects	Total estimated annual CO ₂ e savings in metric tonnes CO ₂ e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	1	2000
Implemented*	10	426000
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Activity type

Fugitive emissions reductions

Description of activity

Oil/natural gas methane leak capture/prevention

Estimated annual CO2e savings (metric tonnes CO2e)

203000

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

5000000

Investment required (unit currency – as specified in CC0.4)

7800000

Payback period

1-3 years

Estimated lifetime of the initiative

1-2 years

Comment

Initiative relates to improved facility design to reduce emissions from flaring at our US onshore oil & gas operations. Emission reductions achieved through improved site design and optimization of chemical injection points, compression sizing & strategy, and catalytic heaters and power redundancy to minimize downtime and capture gas streams that would otherwise be flared. Estimated lifetime of initiative accounts for operations being under a Purchase & Sales Agreement with anticipated completion by end of October 2018.

Activity type

Low-carbon energy installation

Description of activity

Natural Gas

Estimated annual CO2e savings (metric tonnes CO2e)

203344

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

2500000

Investment required (unit currency – as specified in CC0.4)

507000000

Payback period

<1 year

Estimated lifetime of the initiative

>30 years

Comment

Kelar Natural Gas Combined Cycle Project, Chile. Project consists of a greenfield natural gas fired combined cycle power plant located in the community of Mejillones in the north of Chile and connected to the former Grand North Interconnected System, today integrated to National Electric System. Project was conceived by BHP with the aims of guaranteeing electricity supply to cover the future demand of its Escondida copper asset. Project originally planned - in 2005 - as a 500 MW sub-critical coal fired power plant as evidenced by the project EIA submitted to the national Environmental Impact Assessment System (SEA) on 09/11/2006 and approved on 26/10/2007. In 2012, before construction started, decisions made to switch the fuel source from coal to natural gas. Main reasons being (i) new energy requirements from 2016: replace expiring contracts and supply project's additional energy needs; (ii) switching to gas could reduce GHG emissions and better complement intermittent renewable energy (wind and solar) in terms of supply stability; and (iii) alignment with strategy of providing secure, sustainable and competitive power price. Kelar started commercial operation in December 2016. Note payback period given as <1 year due to CDP questionnaire format, but according to the business model (finance lease) there is no payback measured. We are currently in the process of obtaining CERs via the CDM, but ex-ante estimation of annual CO2e savings in a 10 year crediting period is given.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	National energy and emissions reporting and compliance programs can drive investment in emissions reduction opportunities and energy efficiency at our operations. For example, the National Greenhouse and Energy Reporting and Clean Energy Acts in Australia have resulted in some operations moving to higher order calculation methodologies for fugitive methane emissions and significantly improved the accuracy of emissions accounting. Similarly, in the USA, GHG legislative requirements have led to improved measurement methods at our operations. Internal requirements and standards can also drive investment in emissions reduction opportunities. Our internal Our Requirements for Environment and Climate Change standard mandates that all our operations identify, evaluate and implement all suitable projects that prevent and/or minimise GHG emissions, encompassing all major sources of emissions, and embed these projects into their 5 year business plans. For new projects the standard also mandates that GHG emission reduction opportunities are included in project design and equipment selection.
Marginal abatement cost curve	Some of our operations utilise marginal abatement cost curves (MACCs) to evaluate GHG and energy reduction opportunities. MACCs allow our operations to evaluate projects for consideration for inclusion in the operations' 5 year planning process.
Internal incentives/recognition programs	Our five-year emissions reduction target underpins our strategy and drives internal performance. Reducing operational emissions is a key performance indicator for our business and performance against our targets is reflected in senior executive and leadership remuneration. Our Executive Leadership Team, Business and Functional employees all have annual performance indicators that are aligned with meeting HSEC targets, including a focus on delivery of GHG emission reduction projects.
Internal price on carbon	Our investment evaluation process has incorporated market and sector based carbon prices for more than a decade through the mandated use of our Carbon Pricing Protocol. The Protocol tracks the progress of national commitments to tackle climate change throughout the world, including our major operating regions and customer demand centres. We look at the potential for reductions in emissions and the cost associated with those reductions to determine an appropriate price level for each relevant country or region. In doing so, we consider the effectiveness of different policies, political situations required to pass legislation, timing to implement reductions and the interaction between policy mechanisms.
Dedicated budget for low-carbon product R&D	Our low emissions technology strategy is to develop emerging and deploy existing technologies that make step-change reductions in GHG emissions, both from our own operations and from the downstream processing and use of our products. We have a suite of initiatives currently underway aimed at achieving reductions across our major operational emissions sources (electricity, fuel use, fugitives). In evaluating low emissions technology investment opportunities, we consider technologies with the potential to deliver results across a range of time horizons; emphasise investments that can deliver material GHG savings; consider the ability of projects and technologies to leverage our global operating model (replicability, scale and market power); and evaluate the potential for building capacity, capability and internal awareness across our business. We also work with others to develop technologies such as CCS with the potential to deliver step-change emissions reductions from the use of our products. CCS has the potential to play a pivotal role in reducing emissions from industrial processes such as steelmaking, and our CCS investments focus on reducing costs and accelerating development timeframes, and include knowledge sharing from commercial-scale projects and funding for R&D.

C4.5

(C4.5) 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

C4.5a

(C4.5a) 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

Product

Description of product/Group of products

Copper

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify (Fuel Switching)

% revenue from low carbon product(s) in the reporting year

21.8

Comment

Avoided emissions from the use of our copper products throughout their lifecycle in a variety of low carbon applications. For example, our copper products are ideally placed to support the electrification of energy demand. Our projections assume that the demand for electricity will outstrip the growth in total primary energy demand between now and mid-century. The production, distribution and transmission that power will require a great deal of copper. Copper is particularly well placed to support the electrification of transport – with a battery-powered electric car requiring three times as much copper as a conventional car. Copper is also required to support build out of renewables capacity – both wind and solar. From a copper point of view, the per megawatt hour demand coefficient associated with offshore wind generation is almost five times that associated with coal generation. For solar, the coefficient is around two and a half.

Level of aggregation

Product

Description of product/Group of products

Nickel

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify (Fuel Switching)

% revenue from low carbon product(s) in the reporting year

2.5

Comment

Avoided emissions from the use of our nickel products throughout their lifecycle in a variety of low carbon applications. In particular nickel is a key material for batteries, and investments in our Nickel West asset to enable production of downstream battery chemicals like nickel sulphate are supporting our transition to become a globally significant battery materials supplier. We expect significant growth in electric vehicle sales, with battery producers expected to match electric vehicle growth rate while responding to growing demand from other areas i.e. stationary storage. Virtually all battery producers are moving to higher nickel-rich chemistries, which are preferred due to their superior energy density, lighter weight for any given battery size, increased vehicle range, and lower metal cost.

Level of aggregation

Product

Description of product/Group of products

Natural gas

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify (Fuel Switching)

% revenue from low carbon product(s) in the reporting year

4.7

Comment

Avoided emissions from fuel switching resulting from CO2 emissions from combustion of natural gas being lower than those from other fossil fuels (specific emission reductions differ from case to case and should consider total value chain emissions of natural gas vs. alternatives, however, implied emission factors from electricity generation given by the IEA ('CO2 Emissions from Fuel Combustion', 2017) are natural gas 400 g CO2/kWh; lignite 1,020 gCO2/kWh, sub-bituminous coal 940 g CO2/kWh; other bituminous coal 870 g CO2/kwh).

Level of aggregation

Product

Description of product/Group of products

Uranium

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify (Fuel Switching)

% revenue from low carbon product(s) in the reporting year

Comment

Uranium is produced at our Olympic Dam asset, the primary activity being copper production; percent revenue not reported separately. Nuclear energy is a low emission alternative to conventional fossil fuel energy generation. Our annual uranium production (3,661 tonnes in FY2017) is estimated to avoid emissions of almost 100 million tonnes CO2 per annum when compared to base load electricity production generated using the global average mix of energy sources (estimates prepared by Allen Consulting based on global average of emissions from electricity generation (730 tonnes CO2 per GWh); average emissions from nuclear energy generation (40kg CO2 per MWh); approx. 27.7 tonnes uranium (U308) produces 1 TWh electrical energy; all uranium we produce used for electricity generation).

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

July 1 2005

Base year end

June 30 2006

Base year emissions (metric tons CO2e)

12900000

Comment

Scope 2 (location-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 2 (market-based)

Base year start

July 1 2005

Base year end

June 30 2006

Base year emissions (metric tons CO2e)

7700000

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

Australia - National Greenhouse and Energy Reporting Act
Environment Canada, Metal Mining, Guidance Manual for Estimating Greenhouse Gas Emission
European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
US EPA Mandatory Greenhouse Gas Reporting Rule
Other, please specify (BHP internal requirements)

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

We have developed the Group level document 'Our Requirements for HSEC Reporting'. BHP's 'Our Requirements' documents are internal standards which outline accountabilities and minimum requirements across the Company. 'Our Requirements for HSEC Reporting' prescribes how our Assets are to account for and report GHG and energy data. It states that in the absence of national regulation, the 2006 'IPCC Guidelines for National Greenhouse Gas Inventories' is to be used.

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Row 1

Gross global Scope 1 emissions (metric tons CO2e)

10430000

End-year of reporting period

<Not Applicable>

Comment

Note this CDP response relates to FY2017. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Unless otherwise noted, all scope 2 emissions reported are calculated using the market-based method. Our market-based scope 2 emissions were calculated using supplier specific emissions factors. A residual mix is currently unavailable to account for voluntary purchases and this may result in double counting between electricity consumers.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Row 1

Scope 2, location-based

5800000

Scope 2, market-based (if applicable)

5800000

End-year of reporting period

<Not Applicable>

Comment

In accordance with the new GHG Protocol Scope 2 disclosure requirements our market-based Scope 2 emissions were 5.8 million tonnes CO2e which compare to our location-based scope 2 emissions of 5.8 million tonnes CO2e. Unless otherwise noted, all scope 2 emissions reported are calculated using the market-based method. Our market-based Scope 2 emissions were calculated using supplier specific emissions factors. A residual mix is currently unavailable to account for voluntary purchases and this may result in double counting between electricity consumers. Note this CDP response relates to FY2017. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>.

C6.4

(C6.4) 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

C6.5

(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

7700000

Emissions calculation methodology

Inclusions: Upstream production and transport of purchased goods and services for the reporting year. Exclusions: Spend associated with activities reported under other scope 3 categories. These cover fuel consumption, upstream transport, business travel and employee commuting activities. Data used: Annual spend data is extracted from the internal system which tracks all external spend. Emission factors are sourced from the Quantis Scope 3 Evaluator tool, as recommended by the GHG Protocol. Calculation methodology: The 'Spend-based' method from the GHG Protocol Scope 3 Guidance is used. Spend data is broken down by BHP's internal taxonomy codes and allocated to the most appropriate product group category available within the GHG Protocol Scope 3 Evaluator tool (Quantis). The emissions factors from this tool are then used to generate an overall emissions figure for this category.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. This is an immaterial source of scope 3 emissions for the business (approximately 1% of total scope 3 emissions), however a high level estimate has been calculated for completeness and transparency.

Capital goods

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. As described in the GHG Protocol calculation guidance, this category can be difficult to segregate from the Purchased goods and services category. Given all of our spend data (which would include purchases of capital goods) has been captured in category 1, the scope 3 emissions from capital goods are not reported out separately. The scope 3 emissions reported under category 1 includes purchased goods and services and purchases of capital goods.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

1400000

Emissions calculation methodology

Inclusions: Upstream production and distribution of fuels and electricity consumed on the facilities over which the company holds operational control. Exclusions: A small quantity of fuel reported internally under a mixed category (representing less than 2% of total energy). This quantity has been excluded due to the difficulty in assigning a meaningful scope 3 emissions factor to the variety of fuels involved. Data used: Fuel and energy consumption data is sourced from BHP's internal database. Consumption of each type of fuel in GJ is recorded by each operation. Factors are sourced from the Australian National Greenhouse Accounts for both Australian and non-Australian operations. Calculation methodology: The GHG Protocol's 'average-data' method is used. Scope 3 emission factors for each fuel type consumed are applied to the total consumption volumes.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. Although this is an immaterial source of scope 3 emissions for the business (much less than 1% of total scope 3 emissions), consumption of fuels and energy represent a material contribution to our scope 1 and 2 operating emissions; the associated scope 3 emissions are therefore also of interest.

Upstream transportation and distribution

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

3200000

Emissions calculation methodology

Inclusions: Purchased third party transportation services. Includes product transport where marine, road and rail freight costs are covered by the business (e.g. under CFR or similar terms). Also includes purchased transport services for process inputs to operations. Exclusions: The transport of process inputs to BHP's operations where spend data is not available (i.e. transport costs are incorporated into the supplier price). These scope 3 emissions are likely to be captured under category 1 – purchased goods and services. Data used: Data is sourced from BHP's Freight team, including (for each product cargo) loading and destination ports, tonnage of the cargo, and the size of the vessel if freight was by sea (deadweight in kg). For emissions from transport of inputs to our operations, data is sourced from the internal system that tracks all external spend. Scope 3 emission factors are sourced from RightShip methodology (see Calculation Methodology) for all marine freight excluding Nickel, Zinc, NGLs and Crude. For all remaining freight (including road and rail), UK Defra emission factors were used (in tonne.km units). For other purchased transport services, factors are sourced from the Quantis Scope 3 Evaluator tool, as recommended by the GHG Protocol. Calculation methodology: For all marine cargoes other than Nickel, Zinc, NGLs and Crude, the external engineering consultancy RightShip was contracted to develop an accurate scope 3 emissions estimate based on their certified methodology. For the remaining marine cargoes, the 'Distance-based' method from the GHG Protocol Scope 3 Guidance was used to calculate these emissions. Spend data is allocated to the most appropriate category available within the GHG Protocol Scope 3 Evaluator tool (Quantis).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. Although this is an immaterial source of scope 3 emissions for the business (approximately 1% of total scope 3 emissions), emissions associated with the freight of our products to customers are of increasing interest as a component of our supply chain.

Waste generated in operations

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. This category has been identified as immaterial to BHP's inventory and an emissions figure is not calculated. BHP operations do not generate waste resulting in GHG emissions other than minimal quantities of domestic waste. This assessment will be periodically reviewed.

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

100000

Emissions calculation methodology

Inclusions: Emissions from domestic and international flights, hotel accommodation and car rental for business travel purposes. Exclusions: Business travel activities for which distance or spend data is not available. Data used: Flight mileage data is sourced from BHP's corporate travel services provider. Hotel and car rental spend data is sourced from the internal system that tracks all external spend. Scope 3 emission factors for flights are referenced from the latest US EPA Centre for Corporate Climate Leadership GHG Emission Factors Hub. Factors for hotel and car rental are sourced from the Quantis Scope 3 Evaluator tool, as recommended by the GHG Protocol. Calculation methodology: For flights, the 'distance-based' method from the GHG Protocol Scope 3 Guidance is used, with industry-average emission factors applied based on whether the flight distance is categorised as a short, medium or long-haul flight. For hotel accommodation and car rental emissions, the 'spend-based' method is used as described under the 'Purchased goods and services' category's calculation methodology.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. This is an immaterial source of scope 3 emissions for the business (much less than 1% of total scope 3 emissions), however a high level estimate has been calculated for completeness and transparency.

Employee commuting

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

100000

Emissions calculation methodology

Inclusions: Emissions from FIFO flights and bus services utilised by employees for commuting purposes. Exclusions: Employee commuting activities for which spend data is unavailable. Data used: FIFO flight and bus service spend data is sourced from the internal system that tracks all external spend. Scope 3 emission factors are sourced from the Quantis Scope 3 Evaluator tool, as recommended by the GHG Protocol. Calculation methodology: This estimate uses the 'spend-based' method as described under the 'Purchased goods and services' category's calculation methodology.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. This is an immaterial source of scope 3 emissions for the business (much less than 1% of total scope 3 emissions), however a high level estimate has been calculated for completeness and transparency.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. An emissions figure is not calculated for this category as BHP does not lease upstream assets in our normal operations. This assessment will be periodically reviewed.

Downstream transportation and distribution

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

2800000

Emissions calculation methodology

Inclusions: Third party transportation services where freight costs are not covered by the business (e.g. under FOB or similar terms). Exclusions: None Data used: Data is sourced from BHP's Freight team, including tonnage, loading and destination ports for each cargo, and the size of the vessel if freight was by sea (deadweight). Factors are sourced from vessel-specific UK Defra Freight emission factors which are the latest available (in tonne.km units) Calculation methodology: Product freight emissions are calculated using the GHG Protocol's 'distance-based' method, as described for the 'Upstream transportation and distribution' category. For some FOB cargoes, destination ports are not available and an assumption is used based on known product market locations by customer.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. Although this is an immaterial source of scope 3 emissions for the business (approximately 1% of total scope 3 emissions), emissions associated with the freight of our products to customers are of increasing interest as a component of our supply chain.

Processing of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

313700000

Emissions calculation methodology

Inclusions: Processing of BHP's produced iron ore to steel and produced copper cathode to copper wire. Exclusions: Processing of BHP's nickel, zinc, gold, silver, ethane and uranium oxide. Excluded as production volumes are much lower than iron ore/copper and a large range of possible end uses apply. Processing/refining of petroleum products also excluded as these emissions are considered immaterial compared to their end-use combustion reported in the 'Use of sold products' category. Data used: Produced volumes in tonnes are sourced from BHP's publicly available Operational Review Report. Calculations have been performed on an equity basis. For iron ore processing, factors are sourced from the World Steel Association 'Sustainability Indicators' publication'. For copper processing, factors are sourced from the European Copper Institute - Copper Alliance's 2012 publication 'The Environmental Profile of Copper Products'. Calculation methodology: The GHG Protocol's 'average-data' method is used, with industry-wide emission factors applied to production volumes (on an equity basis) to estimate emissions. All iron ore production assumed to be processed to steel and all copper metal production assumed to be processed into copper wire for end-use. The copper emission factor is for the full cradle-to-grave life cycle of the end-product. As such there is a degree of double counting with the scope 1 and 2 emissions generated from copper mining activities (which BHP also reports). This represents 1% of the total scope 3 emissions from this category.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. The most significant contributors to scope 3 emissions associated with our business are those resulting from our customers' processing and use of our products, which in FY2017 accounted for around 97% of the total. In particular, emissions emanating from the steelmaking process (the processing and use of our iron ore and metallurgical coal) made up over 65% of the total scope 3 emissions for our business. Emissions from the combustion of our energy commodities (energy coal, natural gas and petroleum products) were estimated at around 25% of the total in FY2017. The breakdown of emissions from the Processing of sold products category (313.7 million tonnes CO2-e total) is as follows: - Iron ore to steel: 309.5 million tonnes CO2-e - Copper cathode to copper wire: 4.2 million tonnes CO2-e There is an element of double counting across emissions categories for our iron ore and metallurgical coal products; both are used in the same process (steelmaking) further downstream, which inflates the total scope 3 emissions figure.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

254000000

Emissions calculation methodology

Inclusions: Combustion of BHP's produced crude oil, natural gas and coal products. Exclusions: None Data used: Produced volumes in tonnes, barrels or bcf are sourced from BHP's publicly available Operational Review Report. Calculations have been performed on an equity basis. Factors are sourced from the Australian National Greenhouse and Energy Reporting Determination; scope 1 factors for each fuel are applied as the scope 3 factor to BHP's on-sold products. Calculation methodology: The GHG Protocol's direct use-phase method is used, applied to production volumes (on an equity basis) to estimate emissions. All crude oil, natural gas and coal production is assumed to be combusted. All crude oil produced is assumed to be combusted as diesel as a reasonable basis for emissions calculation.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. There is an element of double counting across emissions categories for our iron ore and metallurgical coal products; both are used in the same process (steelmaking) further downstream, which inflates the total scope 3 emissions figure. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. The most significant contributors to scope 3 emissions associated with our business are those resulting from our customers' processing and use of our products, which in FY2017 accounted for around 97% of the total. In particular, emissions emanating from the steelmaking process (the processing and use of our iron ore and metallurgical coal) made up over 65% of the total scope 3 emissions for our business. Emissions from the combustion of our energy commodities (energy coal, natural gas and petroleum products) were estimated at around 25% of the total in FY2017. The breakdown of emissions from the Use of sold products category (254.0 million tonnes CO2-e total) is as follows: - Metallurgical coal: 105.5 million tonnes CO2-e - Energy coal: 72.1 million tonnes CO2-e - Natural gas: 38.3 million tonnes CO2-e - Crude oil and condensates: 33.1 million tonnes CO2-e - Natural gas liquids (NGL): 5.1 million tonnes CO2-e

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. This category has been identified as immaterial to BHP's inventory and an emissions figure is not calculated. BHP's products which are not incorporated into the assessment of scope 3 emissions from 'Use of sold products' include metals and minerals with minimal emissions at end of life. This assessment will be periodically reviewed.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. An emissions figure is not calculated for this category as BHP does not lease downstream assets in our normal operations. This assessment will be periodically reviewed.

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. An emissions figure is not calculated for this category as BHP does not have franchised operations. This assessment will be periodically reviewed.

Investments

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

1900000

Emissions calculation methodology

Inclusions: All of BHP's non-operated investments. Exclusions: None Data used: Annual emissions for each of BHP's investments are sourced from the public domain wherever possible, including government-published data (US EPA and LEPID registry in Australia) and Sustainability Reports published by the operating entities. Where required, production volumes from investments in tonnes, barrels or bcf are sourced from BHP's publicly available Operational Review Report. Calculation methodology: The accounting approach for 'Equity investments' in the GHG Protocol Scope 3 Guidance is used. Scope 1 and 2 emissions for each investment (which form the basis for scope 3 emissions from BHP) are sourced from publicly available information. If the available figure is for a previous reporting year, it is adjusted for the current year's production levels. This approach covered approximately 90% of the emissions reported for this category. For investments which do not have publicly available emissions data, the emissions intensity from a similar operation in BHP's portfolio is applied to the current year's production to generate an estimate.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. Although this is an immaterial source of scope 3 emissions for the business (less than 1% of total scope 3 emissions), emissions associated with BHP's investments are relevant in risk identification and management.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. An emissions figure has not been calculated for this category; no other upstream scope 3 emissions sources have been identified.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Explanation

Scope 3 emissions have been calculated using methodologies consistent with the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3 Standard). For further detail on the basis of preparation of the FY2017 scope 3 inventory for our business please refer to <https://www.bhp.com/-/media/documents/investors/annual-reports/2017/bhpscope3emissionsbasisofcalculation2017.pdf>. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. An emissions figure has not been calculated for this category; no other downstream scope 3 emissions sources have been identified.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.000426

Metric numerator (Gross global combined Scope 1 and 2 emissions)

16300000

Metric denominator

unit total revenue

Metric denominator: Unit total

3828500000

Scope 2 figure used

Market-based

% change from previous year

27

Direction of change

Decreased

Reason for change

Our GHG intensity per unit of revenue decreased as a result of (i) decrease in combined scope 1 and 2 emissions and (ii) increase in revenue realized from the sale of our products, primarily as a result of higher realized commodity prices for FY2017. With respect to the decrease in emissions, numerous individual improvement projects contributed to this achievement, as well as improvements in productivity and technology, and changes in production profile. Projects tracked since FY2013 as part of our five-year GHG target achieved more than 975,000 tonnes CO2e of annualised abatement in FY2017 at our operations. Notable was our initiative reduce emissions from flaring at our US onshore oil & gas operations which contributed 203,000 tonnes CO2e of annualised abatement during FY2017. Note that intensity per unit revenue is not an ideal comparative measure for BHP given that our revenue can vary significantly year on year due to the volatility of commodity prices for the products that we sell.

Intensity figure

2.4

Metric numerator (Gross global combined Scope 1 and 2 emissions)

16300000

Metric denominator

Other, please specify (Tonnes of copper equivalent)

Metric denominator: Unit total

6874000

Scope 2 figure used

Market-based

% change from previous year

14

Direction of change

Decreased

Reason for change

Our GHG intensity per unit of copper equivalent production decreased primarily a result of the decrease in combined scope 1 and 2 emissions. Numerous individual improvement projects contributed to this achievement, as well as improvements in productivity and technology, and changes in production profile. Projects tracked since FY2013 as part of our five-year GHG target achieved more than 975,000 tonnes CO2e of annualised abatement in FY2017 at our operations. Notable was our initiative reduce emissions from flaring at our US onshore oil & gas operations which contributed 203,000 tonnes CO2e of annualised abatement during FY2017. Note this CDP response relates to FY2017. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>. Copper equivalent production was calculated based on FY2017 average realised product prices. Note that intensity per unit of copper equivalent production is not an ideal comparative measure for BHP given that copper equivalent production is calculated using the realised prices for our various commodities, which can vary significantly year on year due to the volatility of commodity prices for the products that we sell.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	8292000	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	2113000	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	21000	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	4000	IPCC Fourth Assessment Report (AR4 - 100 year)
PFCs	0	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	0	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Asia Middle East (AME)	10000
Australasia	7144000
Europe	0
North America	1974000
South America	1302000

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

By facility

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Coal	3899000
Copper (includes Nickel)	1787000
Iron Ore	1893000
Petroleum and Potash	2851000
Group and Unallocated (includes Marketing and Functions)	0

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Olympic Dam (Australia, copper)	174975	-30.440514	136.802759
Western Australia Iron Ore (Australia, iron ore)	1890640	-23.531299	117.223958
Queensland Coal (Australia, metallurgical coal)	3411193	-26.402614	149.670159
New South Wales Energy Coal (Australia, energy coal)	450040	-32.532366	150.659224
Nickel West (Australia, nickel)	494060	-28.95385	120.523355
Escondida (Chile, copper)	799164	-27.922911	-72.764376
Pampa Norte (Chile, copper)	319086	-25.099567	-70.987772
Jansen Potash Project (Canada, potash)	9360	51.88665	-104.739435
Gulf of Mexico production (US, conventional oil and gas)	232768	24.358456	-93.972518
Onshore US production (US, unconventional oil and gas)	1640321	33.489844	-113.868094
Australia production (Australia, conventional oil and gas)	720353	-38.517462	145.556653
Trinidad and Tobago production (Trinidad and Tobago, conventional oil and gas)	183805	10.550464	-61.512486
Other (includes Marketing and Functions)	104345		

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	3680000	<Not Applicable>	
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons 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)
Asia Middle East (AME)		33	33	
Australasia		2420000	3597348	61308
Europe		0	0	
North America		69000	98705	11109
South America		3336000	4072208	

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

- By business division
- By facility

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Coal		1125000
Copper (includes Nickel)		4379000
Iron Ore		257000
Petroleum and Potash		60000
Group and Unallocated (includes Marketing and Functions)		3000

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2 location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Olympic Dam (Australia, copper)		490424
Western Australia Iron Ore (Australia, iron ore)		257400
Queensland Coal (Australia, metallurgical coal)		1027078
New South Wales Energy Coal (Australia, energy coal)		84180
Nickel West (Australia, nickel)		554390
Escondida (Chile, copper)		2723465
Pampa Norte (Chile, copper)		611179
Jansen Potash Project (Canada, potash)		25840
Onshore US production (US, unconventional oil and gas)		12977
Australia production (Australia, conventional oil and gas)		3705
Trinidad and Tobago production (Trinidad and Tobago, conventional oil and gas)		870
Other (includes Marketing and Functions)		33722

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization’s total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities		4637000	
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) 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.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable>		
Other emissions reduction activities	975000	Decreased	57	Total reduction in scope 1 and 2 emissions from FY2016 to FY2017 was 1,700,000 tonnes CO2e. Projects tracked as part of our five-year GHG target achieved more than 975,000 tonnes CO2e of annualised abatement in FY2017 at our operations. Calculation: $(975,000/1,700,000)*100= 57\%$
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other	725000	Decreased	43	Numerous improvements in productivity and technology, and changes in production profiles, contributed to the remainder of the reduction in emissions from FY2016 to FY2017. Calculation: $((1,700,000-975,000)/1,700,000) = 43\%$

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 10% but less than or equal to 15%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization’s energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	31111112	31111112
Consumption of purchased or acquired electricity	<Not Applicable>	72222	7777778	7849999
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	72222	38888890	38961111

C-MM8.2a

(C-MM8.2a) Report your organization’s energy consumption totals (excluding feedstocks) for metals and mining production activities in MWh.

	Heating value	Total MWh
Consumption of fuel (excluding feedstocks)	LHV (lower heating value)	14341501
Consumption of purchased or acquired electricity	<Not Applicable>	6243479
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0
Total energy consumption	<Not Applicable>	20584980

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)

Coal

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

277778

MWh fuel consumed for the self-generation of electricity

277778

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

21111111

MWh fuel consumed for the self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

9166667

MWh fuel consumed for the self-generation of electricity

9166667

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)

Other, please specify (Other)

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

555556

MWh fuel consumed for the self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Coal

Emission factor

0.09023

Unit

metric tons CO2e per GJ

Emission factor source

Australian National Greenhouse and Energy Reporting (NGER)

Comment

Diesel

Emission factor

0.0702

Unit

metric tons CO2e per GJ

Emission factor source

Australian National Greenhouse and Energy Reporting (NGER)

Comment

Natural Gas

Emission factor

0.05163

Unit

metric tons CO2e per GJ

Emission factor source

Australian National Greenhouse and Energy Reporting (NGER)

Comment

Other

Emission factor

Unit

Please select

Emission factor source

Comment

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	9444445	9444445		
Heat				
Steam				
Cooling				

C-MM8.2e

(C-MM8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated for metals and mining production activities.

	Total gross generation (MWh) inside metals and mining sector boundary	Generation that is consumed (MWh) inside metals and mining sector boundary
Electricity	2971085	2971085
Heat		
Steam		
Cooling		

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor

Other, please specify (Contracts with third parties)

Low-carbon technology type

Hydropower

Other low-carbon technology, please specify (Other)

MWh consumed associated with low-carbon electricity, heat, steam or cooling

72222

Emission factor (in units of metric tons CO₂e per MWh)

0.6

Comment

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-MM9.3a

(C-MM9.3a) Provide details on the commodities relevant to the mining production activities of your organization.

Output product

Iron ore

Capacity, metric tons

283000000

Production, metric tons

268302000

Production, copper-equivalent units (metric tons)

2778970

Scope 1 emissions

1893000

Scope 2 emissions

257000

Pricing methodology for copper-equivalent figure

Copper-equivalent production calculated based on FY2017 average realised product prices. Our FY2017 average realised sales price for copper was US\$2.54 per pound. Our FY2017 average realised sales price for iron ore was US\$58 per wet metric ton (wmt).

Comment

Production reported on a 100% basis. Production reported on a wet metric ton (wmt) basis. For additional detail on our commodities, assets, locations, financial results and operating performance as they relate to this CDP response, refer to our 2017 Annual Report (<https://www.bhp.com/investor-centre/annual-reporting-2017>) and 2017 Operational Review (https://www.bhp.com/-/media/documents/media/reports-and-presentations/2017/170719_operationalreviewfortheyearended30june2017.pdf?la=en). Note this CDP response relates to FY2017. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>.

C-MM9.3b

(C-MM9.3b) Provide details on the commodities relevant to the metals production activities of your organization.

Output product

Copper

Capacity (metric tons)

1200000

Production (metric tons)

1192200

Annual production in copper-equivalent units (thousand tons)

1192200

Scope 1 emissions (metric tons CO2e)

1293000

Scope 2 emissions (metric tons CO2e)

3825000

Pricing methodology for-copper equivalent figure

N/A

Comment

Production reported on a 100% basis for operated assets only (does not include Antamina). Production reported on payable metal basis. Production is from integrated operations and includes mining as well as processing activities. For additional detail on our commodities, assets, locations, financial results and operating performance as they relate to this CDP response, refer to our 2017 Annual Report (<https://www.bhp.com/investor-centre/annual-reporting-2017>) and 2017 Operational Review (https://www.bhp.com/-/media/documents/media/reports-and-presentations/2017/170719_operationalreviewfortheyearended30june2017.pdf?la=en). Note this CDP response relates to FY2017. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>.

Output product

Nickel

Capacity (metric tons)

110000

Production (metric tons)

85100

Annual production in copper-equivalent units (thousand tons)

154800

Scope 1 emissions (metric tons CO2e)

494000

Scope 2 emissions (metric tons CO2e)

554000

Pricing methodology for-copper equivalent figure

Copper-equivalent production calculated based on FY2017 average realised product prices. Our FY2017 average realised sales price for copper was US\$2.54 per pound. Our FY2017 average real Copper-equivalent production calculated based on FY2017 average realised product prices. Our FY2017 average realised sales price for copper was US\$2.54 per pound. Our FY2017 average realised sales price for nickel was US\$10,184 per metric ton.

Comment

Production reported on a 100% basis. Production reported on a saleable product basis. Production is from integrated operations and includes mining as well as processing activities. For additional detail on our commodities, assets, locations, financial results and operating performance as they relate to this CDP response, refer to our 2017 Annual Report (<https://www.bhp.com/investor-centre/annual-reporting-2017>) and 2017 Operational Review (https://www.bhp.com/-/media/documents/media/reports-and-presentations/2017/170719_operationalreviewfortheyearended30june2017.pdf?la=en). Note this CDP response relates to FY2017. More recent data for FY2018 is available in our 2018 Sustainability Report and online at <https://www.bhp.com>.

C-MM9.6

(C-MM9.6) Disclose your organization's low-carbon investments for metals and mining production activities.

Investment start date

July 1 2016

Investment end date

June 30 2017

Investment area

Products

Technology area

Green metals

Investment maturity

Large scale commercial deployment

Investment figure

1484000000

Low-carbon investment percentage

61 - 80%

Please explain

Capital expenditure for our copper assets. Investment figure represents total capital expenditure reported for our Copper assets for FY2017 (Annual Report 2017, p.86). Investment percentage figure represents copper's contribution to total capex for metal & mining assets (copper, nickel, and iron ore according to CDP sector classification). Looking ahead, the Spence Growth option, with expected capital expenditure of US\$2.46 billion was approved, and will extend the life of the Spence copper mine at our Pampa Norte asset in Chile by over 50 years. The project will increase copper production capacity by around 200 ktpa and is expected to deliver first production in FY2021. Copper classified as a 'green metal' due to potential for avoided emissions from the use of copper products throughout their lifecycle in a variety of low carbon applications. For example, our copper products are ideally placed to support the electrification of energy demand. Our projections assume that the demand for electricity will outstrip the growth in total primary energy demand between now and mid-century. The production, distribution and transmission that power will require a great deal of copper. Copper is particularly well placed to support the electrification of transport – with a battery-powered electric car requiring three times as much copper as a conventional car. Copper is also required so support build out of renewables capacity – both wind and solar. From a copper point of view, the per megawatt hour demand coefficient associated with offshore wind generation is almost five times that associated with coal generation. For solar, the coefficient is around two and a half.

Investment start date

July 1 2016

Investment end date

June 30 2017

Investment area

R&D

Technology area

Other, please specify (Carbon Capture and Storage)

Investment maturity

Applied research and development

Investment figure

6000000

Low-carbon investment percentage

81 - 100%

Please explain

Carbon capture & storage (CCS) investments. Investment figure represents investments in external CCS partnerships for FY2017. Investment percentage figure represents CCS contribution to product stewardship R&D partnerships. Investments comprise a mixture of basic academic/theoretical research; applied research and development; commercial-scale demonstration. CCS has the potential to play a pivotal role in reducing emissions from industrial processes such as steel production that are recognised as being technologically difficult to decarbonise. Emissions from the steelmaking process account for over 65% of our total scope 3 emissions. Our various CCS investments and partnerships focus on mechanisms to reduce the costs and accelerate deployment of this critical technology, and include activities aimed at knowledge sharing from commercial-scale projects, development of sectoral deployment roadmaps, and funding for R&D at leading universities and research institutes. For example, we have established the

International CCS Knowledge Centre to share lessons from SaskPower's Boundary Dam CCS project in Saskatchewan, Canada. We are working with Peking University and other partners to identify the key policy, technical and economic barriers to CCS deployment in the industrial sector, with a particular focus on the iron and steel industry in China. We have also established the GeoCQuest research collaboration between the University of Melbourne, University of Cambridge and Stanford University to support fundamental research into the long-term storage mechanisms of CO2 in sub-surface locations.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

BHP - Sustainability Report 2017.pdf

Page/ section reference

Page 44

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

BHP - Sustainability Report 2017.pdf

Page/ section reference

Page 44

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope

Scope 3- all relevant categories

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Attach the statement

BHP - Sustainability Report 2017.pdf

Page/section reference

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Relevant standard

ISAE 3410

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Progress against emissions reduction target	ISAE 3410 Assurance on Greenhouse Gas Statements (Standards)	In addition to reasonable assurance over our GHG emissions. KPMG also provide limited assurance over the remaining contents of our Sustainability Report which includes: - Emissions intensity - Progress against emissions target - Emissions from use and processing of products - Level of emissions reductions achieved due to the implementation of emission reduction projects - Energy use. This assurance process is performed every financial year.
C4. Targets and performance	Emissions reduction activities	ISAE 3410 Assurance on Greenhouse Gas Statements (Standards)	In addition to reasonable assurance over our GHG emissions. KPMG also provide limited assurance over the remaining contents of our Sustainability Report which includes: - Emissions intensity - Progress against emissions target - Emissions from use and processing of products - Level of emissions reductions achieved due to the implementation of emission reduction projects - Energy use. This assurance process is performed every financial year.
C6. Emissions data	Product footprint verification	ISAE 3410 Assurance on Greenhouse Gas Statements (Standards)	In addition to reasonable assurance over our GHG emissions. KPMG also provide limited assurance over the remaining contents of our Sustainability Report which includes: - Emissions intensity - Progress against emissions target - Emissions from use and processing of products - Level of emissions reductions achieved due to the implementation of emission reduction projects - Energy use. This assurance process is performed every financial year.
C7. Emissions breakdown	Year on year change in emissions (Scope 1 and 2)	ISAE 3410 Assurance on Greenhouse Gas Statements (Standards)	In addition to reasonable assurance over our GHG emissions. KPMG also provide limited assurance over the remaining contents of our Sustainability Report which includes: - Emissions intensity - Progress against emissions target - Emissions from use and processing of products - Level of emissions reductions achieved due to the implementation of emission reduction projects - Energy use. This assurance process is performed every financial year.
C8. Energy	Other, please specify (Energy Use)	ISAE 3410 Assurance on Greenhouse Gas Statements (Standards)	In addition to reasonable assurance over our GHG emissions. KPMG also provide limited assurance over the remaining contents of our Sustainability Report which includes: - Emissions intensity - Progress against emissions target - Emissions from use and processing of products - Level of emissions reductions achieved due to the implementation of emission reduction projects - Energy use. This assurance process is performed every financial year.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, but we anticipate being regulated in the next three years

C11.1d

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

We recognise both the risks and opportunities posed by carbon pricing schemes and we continue to ensure our strategy minimises the risks and maximise opportunities. Internal carbon pricing (shadow price) is one of the tools we use to consider the impacts of climate change in our strategy. Our investment evaluation process has incorporated market and sector based carbon prices for more than a decade via the mandated use of our Carbon Pricing Protocol across all operations and projects.

Our Operations that participate in these schemes will be required to maintain an accurate emission and energy inventory through consistent data gathering and emissions reporting; provide timely, accurate and detailed data books for internal and external verifier review; understand the regulator's perspective and maintain awareness of future scheme requirements through government interaction and legal compliance registers; identify, evaluate and implement all suitable projects to reduce GHG emissions, including in project design and equipment selection.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities
Supplier engagement

GHG Scope

Scope 1
Scope 2
Scope 3

Application

Our investment evaluation process has incorporated market & sector based carbon prices for over a decade via the mandated use of our Carbon Pricing Protocol across all operations & projects. In our carbon price modelling, the long-term demand for emissions reductions represents the difference between the current emissions trajectory & cuts needed to meet agreed climate goals. As such, we track progress of national commitments, including our major operating regions & demand centres. On the supply side, we undertake a granular assessment of cost & availability of emissions reduction potential. The assessment is carried out by sector & country, considering several detailed characteristics, such as ability to import & export emissions reductions in the form of tradable credits. The analysis output is an explicit carbon price, which is expected to rise as carbon markets are expanded. It represents the marginal inducement cost of emissions reductions needed to meet government targets.

Actual price(s) used (Currency /metric ton)

24

Variance of price(s) used

Our scenario analysis includes assumptions on carbon pricing. In our central case forecast (constructed through in-depth, bottom-up analysis), the long-term carbon price forecast is US\$24/tCO_{2e} by 2030. In our Global Accord scenario (which describes an orderly transition to 2 degrees) it reaches US\$50/tCO_{2e} by 2030. This reflects key global economies such as China, the United States and the European Union going beyond their current climate commitments and significantly increasing demand for long-term emissions reductions. The higher ambitions are matched by stronger policy support to help deliver emissions reduction potential. Under a shock event describing a much more rapid shift to 2 degrees it reaches US\$80/tCO_{2e} by 2030. We apply internal carbon pricing in investment decisions and portfolio evaluation across all operations & projects. Further detail on how we use carbon pricing in our scenario analysis and portfolio evaluation is included in our Climate Change: Portfolio Analysis (2015) report, available online at <https://www.bhp.com>, which also describes more broadly how we use scenario analysis to evaluate the resilience of our portfolio to a 2 degrees transition.

Type of internal carbon price

Shadow price

Impact & implication

Carbon pricing is one of the tools we use to consider the impacts of climate change in our strategy process: For example, we use scenarios to consider how divergent climate-related policy, technology, market and societal outcomes could impact our portfolio, including low plausibility, extreme shock events, and the impacts of climate change are considered in our capital allocation framework. Our investment evaluation process includes an assessment of non-quantifiable risks such as those impacts on people and the environment that underpin our licence to operate. Our investment decision-making and portfolio evaluation process has also incorporated market & sector based carbon prices for more than a decade, with carbon pricing assumptions being key to our scenario analysis. This analysis, described in more detail in our Climate Change: Portfolio Analysis (2015) and Climate Change: Portfolio Analysis – Views after Paris (2016) reports, available online at <https://www.bhp.com>, has demonstrated that our current portfolio is robust under both an orderly & more rapid transition to 2 degrees, and the commodities we produce remain attractive. In our Global Accord scenario (orderly transition), there is likely upside for uranium, metallurgical coal & iron ore; we expect copper and natural gas to offer growth opportunities. We anticipate these commodities mitigate potential negative impacts on other commodities such as energy coal. We anticipate the impact on current portfolio value will be minimal due to portfolio diversification & the diminishing contribution of fossil fuels as a proportion of portfolio value. We project carbon price impact on portfolio value would be less than 2%. In the shock event there is likely to be more downside, but our portfolio will still be resilient, and carbon price impact on total portfolio value <5%. This analysis has demonstrated that our strategy to invest in copper & oil remains sound. Recent examples of how portfolio evaluation, which incorporates carbon pricing, has informed investment decisions include simplification of our portfolio to focus on long-life, tier one assets (e.g. divestment of IndoMet Coal); increasing exploration in copper; and approval during FY2017 of US\$2.46 billion in capex to extend the life of the Spence copper mine in Chile by over 50 years.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Compliance & onboarding

Details of engagement

Code of conduct featuring climate change KPIs

Climate change is integrated into supplier evaluation processes

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

% Scope 3 emissions as reported in C6.5

2

Rationale for the coverage of your engagement

For all the goods and services we procure, we manage supplier relationships through a commercial framework aligned with Our Charter values and applicable regulatory frameworks. We require our direct suppliers to apply our standards of health, safety, anti-corruption and environmental protection, including with respect to climate. To ensure sustainability in our supply chain, including with respect to climate issues, we take a risk based approach to assessing suppliers. By better understanding and managing these risks, we provide greater certainty and confidence to our stakeholders regarding our choice of suppliers. We also support suppliers from host communities to help them meet our standards, build their capabilities and generate local employment. We work with our suppliers through a variety of methods including face-to-face meetings, teleconferences, emails and contracts. Potential suppliers are assessed on their compliance with our requirements based on a combination of questionnaires, due diligence and third-party data. The Vice President Supply is responsible for sustainability initiatives for centrally managed suppliers. The Regional Engagement Manager (China) is responsible for sustainability initiatives for Chinese suppliers. Both of these roles report directly to the Head of Group Supply. Asset Supply Managers are responsible for sustainability initiatives for each individual Asset, and have a dotted-reporting line to the Head of Group Supply. Contracted suppliers are assessed on a matrix of commercial dependency versus supplier risk and segmented on a tiered scale. Based on the determined level of risk, an approach to engage with each supplier is developed. If required, a development plan is jointly created to ensure the supplier continuously meets the business requirements. 'Significant suppliers' from a risk perspective represent approximately 2% of our supply base. We regularly review our internal risk register and assess any reported changes that have the potential to introduce a higher risk than what was previously assessed. We actively monitor our controls and actions for the assessed risks in our supply chain.

Impact of engagement, including measures of success

Measuring success: Environmental and climate change requirements are documented within BHPs 'Our Requirements' internal standards, ensuring they are included and measured in all processes, both with suppliers engaged at our Assets and those engaged centrally. KPIs relating to sustainability and climate change are incorporated into the Head of Group Supply's scorecard. All suppliers must agree to meet zero tolerance requirements. Suppliers must comply with our environmental and climate change requirements for work to work completed as part of the supply contract with BHP. Suppliers have been removed where this is not the case. Engagement impact: An example of engagement impact is that biofuels must only be sourced from global companies that have policies or standards for the sustainable sourcing of biofuel components; they must demonstrate that biofuels are not sourced in conflict with agricultural, biodiversity or other environmental values and have a positive lifecycle GHG emissions impact. Another example related to fuel and energy related activities is that we have driven improvements in engine combustion efficiency by working with key fuel suppliers to conduct research into fuel chemistry, cleanliness, infrastructure and handling.

Comment

Figure for percent scope 3 emissions corresponds to emissions reported in the Purchased goods and services (7.7 million tonnes CO₂e in FY2017), Fuel and energy related activities (1.4 million tonnes CO₂e) and Business travel (0.1 million tonnes CO₂e) categories. Note that this is not a material source of scope 3 emissions for our business, representing approximately 2% of total scope 3 emissions (whereas over 97% of our scope 3 emissions are related to our customers' processing and use of our products).

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

Size of engagement

73

% Scope 3 emissions as reported in C6.5

72

Please explain the rationale for selecting this group of customers and scope of engagement

Figure for percent scope 3 emissions corresponds to emissions emanating from the steelmaking (415 million tonnes CO₂e in FY2017 from the processing and use of our iron ore and metallurgical coal combined (though there is some degree of overlap in the reporting boundaries of the emissions reported in these categories) and copper production processes (4.2 million tonnes CO₂e). Note size of engagement figure estimated based on percent emissions from these sources as a proportion of total emissions from downstream processing and use of our products, rather than number of customers, given our products are traded commodities. Emissions from these processes represent our most significant sources of scope 3 emissions, therefore present commensurately significant opportunities for achieving emissions reductions. In addition, whereas reducing the scope 3 emissions from our energy commodities (energy coal, natural gas and petroleum products) could be achieved by diversifying towards lower carbon energy sources (including shifting from oil to gas), reducing the emissions intensity related to the processing of non-energy commodities (such as iron ore and copper) relies on the decarbonisation of the relevant industrial process (such as steelmaking or copper metal production) employed by our customers. Further, the emissions from industrial processes involved are more dependent on process route, raw material quality and eventual end use – and therefore more variable by individual facility – than combustion of fossil fuels for energy production, offering greater scope for customer engagement around the climate change impacts of using our products. We believe we have a shared role in engaging with our customers to address these emissions. Our engagement on climate forms part of our broader approach to product stewardship whereby we encourage the responsible design, use, reuse, recycling and disposal of our products throughout our value chain, in line with the ICMM Sustainable Development Framework. We also participate in product stewardship initiatives, such as the Australian Steel Stewardship Forum, as well as commodity and industry associations that seek to bring together the participants in a product's life cycle to improve sustainability performance, such as the International Copper Association.

Impact of engagement, including measures of success

While for some emissions sources, we have the ability to influence our suppliers or other service providers to reduce emissions from their activities, for the downstream processing of our products, the fact that these emissions occur 'outside the gate' makes them more challenging to address. We work directly with our customers to help them improve the productivity and environmental performance of their processes based on the quality characteristics of our products. In the case of emissions from steelmaking, for example, we produce premium low volatile (PLV) coking coals that can be processed into high strength metallurgical coke. This has allowed our customers to increase productivity and lower external energy requirements (and hence emissions) in the blast furnace. There is opportunity to build on these relationships to identify strategic opportunities to partner in implementing projects with the potential to achieve more material emissions reductions. We also work in partnership with others to accelerate the development of low emissions technologies such as Carbon Capture and Storage (CCS) with the potential to deliver step-change emissions reductions from the processing and use of our products over a longer time horizon. Our various CCS investments and partnerships focus on mechanisms to reduce the costs and accelerate deployment of this critical technology, and include activities aimed at knowledge sharing from commercial-scale projects, development of sectoral deployment roadmaps, and funding for R&D at leading universities and research institutes. Measures of success include: establishment of International CCS Knowledge Centre in Saskatchewan, Canada, to share lessons from SaskPower's Boundary Dam CCS project; establishment of partnership with Peking University and other partners to identify the key policy, technical and economic barriers to CCS deployment in the industrial sector, with a particular focus on the iron and steel industry in China; and establishment of research collaboration between the University of Melbourne, University of Cambridge and Stanford University to support fundamental research into the long-term storage mechanisms of CO₂ in sub-surface locations.

C12.1c

(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

In addition to engaging with our suppliers and customers, we also have the ability to influence other partners in our value chain to reduce emissions from their activities. The benefit of using our influence to reduce emissions is demonstrated by recent activities to work with the owners of the ships we charter to reduce emissions from freight. BHP is one of the largest global shippers of bulk commodities and emissions resulting from the transportation and distribution of our products represent a material source of scope 3 emissions (6 million tonnes CO₂e from upstream (includes product transport where freight costs are covered by BHP) and downstream (product transport where freight costs are not covered by BHP) distribution combined in FY2017). We are working on initiatives to reduce our freight emissions, and seek to drive change more broadly within the shipping industry.

In order to control the emissions from the vessels we charter, we first need to understand them. During FY2017 we collaborated with RightShip, a leading maritime risk management and environmental assessment organisation, to develop a calculation methodology for measuring a vessel's GHG emissions. Using this Existing Vessel Design Index (EVDI) we can now measure, benchmark and track emissions performance across the freight associated with our business. Based on the EVDI, a practical GHG emissions rating on an A to G scale has also been developed for use across the industry. This allows transparent comparison of a ship's emissions performance relative to vessels of a similar size and type. As part of our commitment to sustainable shipping, we subsequently decided not to accept (almost without exception) vessels with the lowest F and G ratings. As an early adopter of the RightShip rating in our vessel vetting criteria, we are already seeing the impact on the scope 3 emissions profile for transport and distribution.

There are a number of examples where application of our vetting criteria has resulted in significant reductions in GHG emissions for individual voyages. For example, for a voyage involving approximately 180,000 tonnes of iron ore being shipped from Port Hedland to China, an F-rated vessel was rejected and an A-rated vessel was selected. In this case, the selection of a more efficient vessel resulted in an emissions saving of over 400 tonnes CO₂e, or 23 per cent of the total voyage emissions.

We have also started to see a response from the shipping industry. Examples of actions taken by our strategic partners (ship owners) include: A US-based ship owner, which operates 17 vessels, has engaged with its main engine manufacturer to carry out engineering modification to reduce emissions; a Greece-based ship owner, which operates over 40 vessels, has carried out a variety of technical adjustments to reduce emissions, including limiting engine power output, installing propulsion improvement devices and applying advanced silicon paints.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

C12.3a

(C12.3a) 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	Direct engagement with relevant government officials in the regions where we operate. For example, we undertook detailed review and engagement on the application of and technical amendments to the Australian National Greenhouse and Energy Reporting scheme (NGER).	We believe an effective policy framework should include a complementary set of measures, including a price on carbon, support for low emissions technology and energy efficiency, and measures to build resilience. We support mandatory GHG reporting as an essential component to underpin effective climate change policy design and emissions management. This should balance technical accuracy with the time and investment required to meet expectations.
Carbon tax	Support with minor exceptions	Direct engagement with relevant government officials and contribution to policy reviews in the regions where we operate. For example, we made a submission in response to the Australian Government's 2017 Review of Climate Change Policies. In this, we shared our views on key climate change policy design principles and policy instruments (including a carbon price).	We believe an effective policy framework should include a complementary set of measures, including a price on carbon, support for low emissions technology and energy efficiency, and measures to build resilience. We are a signatory to the World Bank's Putting a Price on Carbon statement and a partner in the Carbon Pricing Leadership Coalition, a global initiative that brings together leaders from industry, government, academia and civil society with the goal of putting in place effective carbon pricing policies. We believe carbon pricing should be implemented in a way that addresses competitiveness concerns and achieves lowest cost emissions reductions. We believe that to be effective and efficient, a carbon price should be (i) clear – the objectives and principles should be clearly defined and consistently applied; (ii) predictable – effective planning and investment requires certainty on the parameters, timelines and long term trajectory of policy; and (iii) measured – a measured transition requires a gradual approach in which there is time for preparation and adjustment.
Energy efficiency	Support	Direct engagement with relevant government officials in the regions where we operate. For example, we engaged on the Australian Government's draft Direct Action Plan, including the Emissions Reduction Fund and the associated Safeguard Mechanism. (Legislation and implementation of the Direct Action Plan followed repeal of Australia's carbon pricing mechanism.)	We believe an effective policy framework should include a complementary set of measures, including a price on carbon, support for low emissions technology and energy efficiency, and measures to build resilience.
Clean energy generation	Support	Direct and indirect engagement with relevant government officials and contribution to policy reviews in the regions where we operate. For example, we made a submission in response to the Australian Government's 2017 Independent Review into the Future Security of the National Electricity Market (Finkel review).	We believe an effective policy framework should include a complementary set of measures, including a price on carbon, support for low emissions technology and energy efficiency, and measures to build resilience. We support policy design that (1) considers energy security, energy affordability and emissions reduction on an integrated basis; (2) includes technology neutral policy frameworks; and (3) supports open and transparent markets in energy. Policymakers should focus on providing clear and stable emissions reduction goals, allowing industry to determine the most effective and least cost means of achieving these goals. Such an approach would likely spur innovation and avoid a scenario where less-efficient technologies are 'locked in' and/or potentially more efficient technologies are 'locked out'.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

American Petroleum Institute

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The API represents the upstream and downstream oil and gas industry in the US. It facilitates the lifting of industry and member performance (through information sharing, standards development, guidance development, equipment certification, research, events and training). It has approximately 625 members. The API believes US climate policy must recognize the vital role of petroleum products in modern society, and the many benefits that oil and natural gas provide our nation and the world. Affordable energy helps to secure life's basic needs: clean water and sanitation; food production and storage; lighting, heating and cooling of homes; and transportation. Beyond their uses as fuels, oil and natural gas serve as the feedstocks for thousands of products like medical devices, cellphones, clothing, building materials and pharmaceuticals. Domestic production, refining and delivery of oil and natural gas strengthens the American economy, enhances national security and reduces our trade deficit, thus maintaining the competitive position of the US in the global marketplace. Modern life as we know it would be impossible without the fuels and products derived from oil and natural gas. As such, policy proposals must balance environmental, economic and security concerns.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of the API, and our employees also represent BHP on various working groups. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

Australian Industry Greenhouse Network

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The AIGN is a network of industry associations and individual businesses that contribute to the climate change policy debate and see value in joint industry action on climate change to promote sustainable industry development. It has approximately 25 members. The AIGN believes that Australia should engage the international community in pursuing identified and beneficial environmental outcomes through greenhouse gas emissions reduction action that allows for differentiated national approaches; promotes international cooperation; minimises the costs and distributes the burden equitably across the international community; is comprehensive in its coverage of countries, greenhouse gases, sources and sinks; recognises the economic and social circumstances and aspirations of all societies; and is underpinned by streamlined, efficient and effective administrative, reporting and compliance arrangements.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of the AIGN, and our employees also represent BHP on various working groups. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

Australian Petroleum Production and Exploration Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

APPEA represents Australia's oil and gas exploration and production industry. It facilitates the lifting of industry and member performance through information sharing, guidance development, research, events and training). It has approximately 60 full member companies and 140 associate member companies. APPEA believes that Australia should engage the international community in pursuing identified and beneficial environmental outcomes through greenhouse gas emissions reduction action that allows for differentiated national approaches; promotes international participation; minimises the costs and distributes the burden equitably across the international community; is comprehensive in its coverage, allows for the unrestricted flow of credible

emissions units between international jurisdictions; and is underpinned by streamlined, efficient and effective administrative, reporting and compliance arrangements.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of APPEA, and our employees also represent BHP on various working groups. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

Business Council of Australia

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The BCA provides a forum for Australian business leaders to contribute to public policy debates. It promotes the contribution and social responsibility of the business community; and facilitates the lifting of industry and member performance (through information sharing, research and events). It has approximately 130 members. With extensive policy positions on energy and climate change, the BCA supports consideration of complementary measures to reduce greenhouse emissions focused on shifting the mix of power sources away from higher emission technologies and toward low or zero emission technologies while managing community transition; encouraging greater energy efficiency; better managing land use; an encouraging adoption of more fuel-efficient vehicles.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of the BCA, and our employees also represent BHP on various working groups. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

Chamber of Minerals and Energy of Western Australia

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The CME represents the mineral and energy resources sector in Western Australia. It facilitates the lifting of industry and member performance (through information sharing, research and events). It has approximately 70 ordinary members and 50 associate members. The CME, along with other minerals sector industry associations, published a Statement of Principles on Climate Change Policy in 2011. This document maintains that a measured transition to a low emissions global economy will require the alignment of three key policy pillars: (1) a global agreement for greenhouse gas emission abatement that includes emissions reduction commitments from all major emitting nations; (2) market-based policy measures that promote the abatement of greenhouse gas emissions at the lowest cost, while minimising adverse social and economic impacts, including on the competitiveness of the internationally traded sector; and (3) substantial investment in a broad range of low emissions technologies and adaptation measures.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of the CME, and our employees also represent BHP on various working groups. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a

clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

Consejo Minero de Chile

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

CM Represents Chile's mineral resources sector. It facilitates the lifting of industry and member performance (through information sharing, research, skills development, events and training). It has approximately 20 members. CM has adopted ten principles on climate change, outlined at <https://consejominero.cl/quienes-somos/principios-sobre-cambio-climatico/>

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of CM, and our employees also represent BHP on various working groups. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

International Council on Mining and Metals

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The ICMM aims to strengthen the environmental and social performance of the mining industry, with members having to meet specified performance standards and sustainable development commitments to be eligible. It has 25 company members and approximately 30 association members. The ICMM supports development of greenhouse gas emission reduction strategies, implementation of economic emissions reductions opportunities, efficient use of natural resources and supports research and development into low emission technologies that are appropriate to the industry.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of the ICMM, including the ICMM Council, the Principal Liaison Committee and the Environment and Climate Change Program Committee. Our employees also represent BHP on various working groups related to water, biodiversity and climate change. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

International Emissions Trading Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

IETA is a member-led organisation that promotes market-based trading systems as a solution to climate change; participates in the design and implementation of national and international rules and guidelines; and disseminates information on emissions training. It has approximately 120 members. IETA's objective is to build international policy and market frameworks for reducing greenhouse

gases at lowest cost. IETA believes that emissions trading is one of the principal policy instruments available to manage industrial GHG emissions by encouraging operational excellence and the deployment of new and existing technologies.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of IETA, and our employees also represent BHP on various working groups. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

Minerals Council of Australia

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

The MCA represents and promotes Australia's exploration, mining and minerals processing industry. It facilitates the lifting of industry and member performance (through information sharing, guidance development, research and events). It has approximately 50 member companies and 30 associate members. The MCA, along with other minerals sector industry associations, published a Statement of Principles on Climate Change Policy in 2011. This document maintains that a measured transition to a low emissions global economy will require the alignment of three key policy pillars: (1) a global agreement for greenhouse gas emission abatement that includes emissions reduction commitments from all major emitting nations; (2) market-based policy measures that promote the abatement of greenhouse gas emissions at the lowest cost, while minimising adverse social and economic impacts, including on the competitiveness of the internationally traded sector; and (3) substantial investment in a broad range of low emissions technologies and adaptation measures.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of the MCA, including the Board and the Energy and Climate Change Standing Committee. Our employees also represent BHP on various working groups related to water, biodiversity and environmental management. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements. BHP conducted an Industry Association Review in the first half of FY2018. This Review focused on 21 industry associations assessed as holding an active position on climate and energy policy, and 10 climate and energy policies identified as being of key importance to BHP's position strategy and/or policy advocacy. Based on a case-by-case assessment, the Review identified two material differences between the climate and energy policy positions held by BHP and the MCA. In light of the identified material differences and assessment of broader activities of the association, we determined to remain a member of the MCA, subject to a number of actions, including requesting that the MCA refrain from policy activity or advocacy in relation to the identified material differences. Further information on the Industry Association Review, and the actions BHP has taken with respect to its membership of the MCA, can be found online at <https://www.bhp.com/our-approach/operating-with-integrity/industry-associations-bhps-approach>.

Trade association

New South Wales Minerals Council

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The NSWMC represents the minerals industry in New South Wales, Australia. It facilitates the lifting of industry and member performance (through information sharing, research and events). It has approximately 30 full members and 60 associate members. The NSWMC, along with other minerals sector industry associations, published a Statement of Principles on Climate Change Policy in 2011. This document maintains that a measured transition to a low emissions global economy will require the alignment of three key policy pillars: (1) a global agreement for greenhouse gas emission abatement that includes emissions reduction

commitments from all major emitting nations; (2) market-based policy measures that promote the abatement of greenhouse gas emissions at the lowest cost, while minimising adverse social and economic impacts, including on the competitiveness of the internationally traded sector; and (3) substantial investment in a broad range of low emissions technologies and adaptation measures.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of the NSWMC, and our employees also represent BHP on various working groups. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

Queensland Resources Council

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The QRC represents the mineral and energy resources sector in Queensland, Australia. It facilitates the lifting of industry and member performance (through information sharing, guidance development, research and events). It has approximately 75 full members and 85 service members. The QRC, along with other minerals sector industry associations, published a Statement of Principles on Climate Change Policy in 2011. This document maintains that a measured transition to a low emissions global economy will require the alignment of three key policy pillars: (1) a global agreement for greenhouse gas emission abatement that includes emissions reduction commitments from all major emitting nations; (2) market-based policy measures that promote the abatement of greenhouse gas emissions at the lowest cost, while minimising adverse social and economic impacts, including on the competitiveness of the internationally traded sector; and (3) substantial investment in a broad range of low emissions technologies and adaptation measures.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of the QRC, and our employees also represent BHP on various working groups. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

South Australian Chambers of Mines and Energy

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The SACOME represents the minerals, energy, extractive and oil and gas sectors in South Australia through advocacy, research and industry events. It has approximately 200 members. The SACOME, along with other minerals sector industry associations, published a Statement of Principles on Climate Change Policy in 2011. This document maintains that a measured transition to a low emissions global economy will require the alignment of three key policy pillars: (1) a global agreement for greenhouse gas emission abatement that includes emissions reduction commitments from all major emitting nations; (2) market-based policy measures that promote the abatement of greenhouse gas emissions at the lowest cost, while minimising adverse social and economic impacts, including on the competitiveness of the internationally traded sector; and (3) substantial investment in a broad range of low emissions technologies and adaptation measures.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of the SACOME, and our employees also represent BHP on various working groups. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the

industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

Trade association

World Coal Association

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

The WCA is a member-led organisation that aims to demonstrate and gain acceptance for the role coal can play in achieving a sustainable and lower carbon energy future. It has 15 corporate members and more than 20 associate members. The WCA supports the use of high-efficiency, low-emissions coal combustion technologies, setting of an ambitious pathway to move the global average efficiency of coal-fired power generation plants to current state-of-the-art levels and support for developing countries in accessing clean coal technologies, including high-efficiency low-emissions coal combustion technologies.

How have you, or are you attempting to, influence the position?

BHP is represented in key governance bodies of the WCA, including the Executive Committee. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements. BHP conducted an Industry Association Review in the first half of FY2018. This Review focused on 21 industry associations assessed as holding an active position on climate and energy policy, and 10 climate and energy policies identified as being of key importance to BHP's position strategy and/or policy advocacy. Based on a case-by-case assessment, the Review identified one material difference between the climate and energy policy positions held by BHP and the WCA. In light of the material difference identified by the review and the narrow range of activities of benefit to BHP from membership, we determined to cease membership of the WCA. Further information on the Industry Association Review, and the actions BHP has taken with respect to its membership of the WCA, can be found online at <https://www.bhp.com/our-approach/operating-with-integrity/industry-associations-bhps-approach>.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

Industry has a key role to play in supporting policy development, and we engage with governments and other stakeholders to inform the development of an effective, long-term policy framework that can deliver a measured transition to a lower carbon economy.

While we plan for a range of climate scenarios, we continue to advocate for a less than 2 degrees outcome. We are signatories to the UNFCCC 'Paris Pledge' which brings together cities, regions, companies and investors in support of the Paris Agreement. We believe an effective policy framework should include a complementary set of measures, including a price on carbon, support for low

emissions technology and measures to build resilience. We are a signatory to the World Bank's 'Putting a Price on Carbon' statement and a partner in the Carbon Pricing Leadership Coalition. We also advocate for a framework of policy settings that will accelerate the deployment of Carbon Capture and Storage (CCS), and are a member of the Global CCS Institute.

We engage directly with policy makers, participate in industry associations, and contribute to policy reviews throughout our global operating regions, as described separately. We recognise there is increasing stakeholder interest in the nature and role of industry associations and the extent to which the positions of industry associations on key issues are aligned with those of member companies. During FY2018, we completed a review of our membership of those industry associations which hold an active position on climate and energy policy (the review covered the previous three years, including the FY2017 reporting period covered by this CDP response). Our Industry Association Review report, published in December 2017, sets out a list of the material differences between the positions we hold on climate and energy policy and the advocacy positions on climate and energy policy taken by industry associations to which we belong. It also describes the outcomes of the review of our membership of those industry associations. More information on our approach to industry associations, including the Industry Association Review report, is available online at <https://www.bhp.com/our-approach/operating-with-integrity/industry-associations-bhps-approach>.

We also engage in a number of other activities that could either directly or indirectly influence public policy on climate-related topics. These activities include participating in public fora on climate change-related topics, and publishing our views on climate change-related issues on BHP's blog, Prospects.

We also fund research into climate mitigation efforts. For example, BHP, along with most other sector producers, is a member of ACA Low Emissions Technologies (ACALET), which is committed to reducing GHG emissions from coal mines and coal use. BHP also partners with the Cooperative Research Centre for Greenhouse Gas Technologies (CO2CRC), one of the world's leading collaborative research organisations focused on CO2 capture and geological sequestration.

In particular, as described separately, we fund research into CCS. Our CCS investments and partnerships focus on mechanisms to reduce costs and accelerate development timeframes. Our investments include activities aimed at knowledge sharing from commercial-scale projects, development of sectoral deployment roadmaps and funding for R&D at leading universities and research institutes. For example, we established the International CCS Knowledge Centre to share lessons from SaskPower's Boundary Dam CCS project in Saskatchewan, Canada. We are working with Peking University and other partners to identify the key policy, technical and economic barriers to CCS deployment in the industrial sector, with a particular focus on the iron and steel industry in China. We have also established a research collaboration between the University of Melbourne, University of Cambridge and Stanford University to support fundamental research into the long-term storage mechanisms of CO2 in sub-surface locations.

In addition to our public policy engagement, our climate change strategy is supported by active engagement with a wide variety of stakeholders, including investors, peer companies and non-governmental organisations. We regularly hold one-on-one and group meetings with investors and their advisers. We also seek input and insight from external experts, such as the BHP Forum on Corporate Responsibility (FCR). The FCR, which is composed of civil society leaders and BHP executives, has played a critical role in the development of our position on climate change.

Informed by this engagement, we continue to regularly review our approach to climate change in response to emerging scientific knowledge, changes in global climate policy and regulation, developments in low emissions technologies and evolving stakeholder expectations.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Our BHP Charter sets the minimum expectations on how we engage with both internal and external stakeholders, including governments. Our position on climate change is directly supported by Our Charter value of Sustainability and supporting 'Our Requirements' documents (which define mandatory performance requirements for all our Businesses). In particular, governance of our engagement activities with internal and external stakeholders is provided in 'Our Requirements on Communications, Community and External Engagement'. This document prescribes standards of engagement with government, media, employees, equity analysts, investors and host communities. We recognize that engaging with our stakeholders in a consistent way is essential to build, protect and enhance our reputation, licence to operate and meet regulatory requirements.

We recognise there is increasing stakeholder interest in the nature and role of industry associations and the extent to which the positions of industry associations on key issues are aligned with those of member companies. Industry associations play a number of roles in civil society. They provide a platform for the sharing of global best practice in the interests of the industry and those with whom the industry works. They develop technical standards and public policy positions. They provide a forum for debate between members of a particular sector in developing those policy positions. They do not, however, and nor should they, represent the views of any single member. We have long held the view that active participation in industry associations provides a leadership opportunity. We believe that by working within associations, we can, with other like-minded members, seek to exert a positive influence on the industry as a whole. This does not mean, however, that we will always agree with every position or approach that every industry association to which we belong adopts on every issue. This is particularly the case where the association's membership is large and the mandate is broad, covering a wide range of issues. The role of each member of an association is to articulate its view in a clear and constructive way, and to seek to influence the association through free and open debate. This is certainly how we see BHP's role within the industry associations to which we belong - both in Australia and globally. It is not the role of any association to represent BHP and there are times when our views are not aligned. We keep under review our alignment with, and membership of, industry associations. We also communicate our own views directly, through submissions, media commentary, speeches, reports and other engagements.

During FY2018, we completed a review of our membership of those industry associations which hold an active position on climate and energy policy (the review covered the previous three years, including the FY2017 reporting period covered by this CDP response). Our Industry Association Review report, published in December 2017, sets out a list of the material differences between the positions we hold on climate and energy policy and the advocacy positions on climate and energy policy taken by industry associations to which we belong. It also describes the outcomes of the review of our membership of those industry associations. More information on our approach to industry associations, including the Industry association review report, is available online at <https://www.bhp.com/our-approach/operating-with-integrity/industry-associations-bhps-approach>.

C12.4

(C12.4) 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

In mainstream reports, in accordance with TCFD recommendation AND in line with CDSB framework

Status

Complete

Attach the document

BHP - Annual Report 2017.pdf

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Publication

In voluntary sustainability report

Status

Complete

Attach the document

BHP - Sustainability Report 2017.pdf

Content elements

- Governance
 - Strategy
 - Risks & opportunities
 - Emissions figures
 - Emission targets
 - Other metrics
-

Publication

In voluntary communications

Status

Complete

Attach the document

BHP - Climate Change - Views After Paris.pdf

Content elements

- Strategy
 - Risks & opportunities
 - Emission targets
-

Publication

In voluntary communications

Status

Complete

Attach the document

BHP - Industry Association Review 2017.pdf

Content elements

- Governance
 - Other metrics
-

Publication

In voluntary communications

Status

Complete

Attach the document

Australian Government 2017 Review of Climate Change Policies - BHP submission.pdf

Content elements

- Strategy
 - Risks & opportunities
-

Publication

In voluntary communications

Status

Complete

Attach the document

Finkel Review - BHP submission.pdf

Content elements

- Strategy
-

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief External Affairs Officer	Chief Operating Officer (COO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	Investors

Please confirm below

I have read and accept the applicable Terms