BHP’s approach to climate change scenario analysis

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About BHP

We are a leading global resources company

• Our purpose is to create long-term shareholder value through the discovery, acquisition, development and marketing of natural resources.

• We have a unique perspective on the extraordinary potential of natural resources and the role our products contribute to advance the essential building blocks of progress.

• We have a global footprint with 12 core operated assets.
Our position on climate change

Climate change is a critical, Board-level, governance and strategic issue

• We accept the IPCC’s assessment of climate change science.

• We believe the world must pursue the twin objectives to limit climate change and provide access to reliable and affordable energy.

• We don’t prioritise one of these objectives over the other – both are essential to sustainable development.
Our actions

**We are committed to taking action on climate change**

- Reducing our emissions.
- Adapting to the physical impacts of climate change.
- Working in partnership to accelerate the development and deployment of low emissions and renewable technologies.
- Working with others to enhance the global response.
- Testing and building the resilience of our portfolio.
Mitigation

Reducing our operational GHG emissions

• Our target is to keep total operational emissions below FY2006 baseline in FY2017.

• In FY2017, total emissions were 16.3 MtCO$_2$-e, 21 per cent lower than the baseline.

• Performance was driven by emissions reduction projects and improved productivity.

• Projects implemented since FY2013 have delivered more than 975 KtCO$_2$-e of annual abatement at our operations.

Greenhouse gas emissions

(measured in million tonnes of CO$_2$-e)

2. In order to compare the total GHG emissions in FY2015 to prior financial years, GHG emissions (estimated) from South32 assets between the date of demerger and 30 June 2015 have been added to FY2015 GHG emissions as shown above.
3. Scope 2 refers to indirect GHG emissions from the generation of purchased electricity and steam that is consumed by operated assets (calculated using the market-based method).
4. Scope 1 refers to direct GHG emissions from operated assets.
5. Our FY2006 baseline is adjusted as necessary for material acquisitions and divestments based on asset GHG emissions at the time of the applicable transaction.

FY2013

FY2014

FY2015

FY2016

FY2017

Adjustment to allow annual comparison

Scope 1

Scope 2

FY2006 baseline

BHP
Mitigation

Reducing emissions from deforestation and forest degradation

- Developed guide to REDD+\textsuperscript{1,2} governance with Baker and McKenzie.

- Made US$5 million commitment to Alto Mayo in Peru, managed by Conservation International and protecting around 182,000 hectares of globally-significant, threatened forests.

- Supported the world’s first Forests Bond, which could stimulate the global market by enabling investors to receive interest in cash or REDD+ credits.

\textsuperscript{1. Reducing Emissions from Deforestation and Forest Degradation, as well as conservation, sustainable management of forests and enhancement of forest carbon stocks.}

\textsuperscript{2. Image supplied by Conservation International.}
Adaptation

Focusing on the future

• Our assets are long-lived, therefore we must take a robust, risk-based approach to adapting to the physical impacts of climate change.

• We require all our operations to assess the potential physical impacts of climate change.

• We are already taking action to build the resilience of our operations.

• We also consider ways to build community and ecosystem resilience to climate impacts.
Adaptation

**BHP Billiton SaskPower CCS Knowledge Centre**
- The first post-combustion, coal-fired power station with CCS.
- BHP founded the Centre to share knowledge and learnings from the project.
- Now has significant international profile and engagement with project developers.

**Peking University partnership on steel sector CCS**
- BHP, Peking University and the National Centre for Climate Change Strategy and International Cooperation established a collaborative centre in 2016.
- Focused on addressing policy, economic and technical barriers to application of CCS in the steel sector.

**Lakeland Solar and Storage**
- Batteries offer potential to deliver baseload renewable power.
- Partnering to develop a 13MW solar photovoltaic power plant.
- Incorporates 5.3 MW/h lithium-ion battery storage at a 'fringe of grid' location in Australia.
Portfolio evaluation

We have been testing the resilience of our portfolio for many years

• We develop forecasts based on detailed analysis.
• We have a robust scenario planning process to test the resilience of our portfolio against a range of scenarios and shock events.
• We use signposts to help us understand which scenario is becoming more dominant.
Scenario analysis

Global Accord

- Robust global economic growth.
- Unified action to address climate change – high cooperation and commitment to limit emissions.
- Breakthroughs in low emission and renewable technologies.
- There is an orderly transition to a 2°C world.
Potential impact on demand

Long-term commodity demand range in a 2°C world
Potential impact on EBITDA

Note: Portfolio analysis using scenarios is based on the expected development of our current portfolio. Underlying figures are in real terms.
Our portfolio remains resilient

Scenario analysis provides valuable insights

• BHP will continue to create substantial value for shareholders under both an orderly and a more rapid transition to a 2°C world:
  ✓ Diversified portfolio;
  ✓ Low cost assets;
  ✓ High quality products;
  ✓ Growth options of ~20% IRR\(^1\);
  ✓ Scenario planning and future optimisation.

• We will continue to adapt and evolve to strengthen the portfolio and deliver long term shareholder value.

1. Based on the project pipeline in both the Global Accord scenario and shock event. Refer to BHP’s 2015 report ‘Climate Change - Portfolio Analysis’
Portfolio Analysis

Climate Change: Portfolio Analysis

• Provides insight into our approach to scenario analysis.

• Explores the potential implications for our company of both an orderly and a more rapid transition to a 2 degree world.

• Shows that in these scenarios our diverse portfolio is resilient because of its high quality resources, low costs of production and rapid payback periods.
Views After Paris

Views after Paris

• Describes how we monitor the external environment.

• Explains how we identify and track signals which provide timely insights into potential impacts on our portfolio.

• Provides an insight into how these inform our strategic decision-making at the highest levels of our company.

• Describes some of the key climate-related signals we see.
Stakeholder engagement

Supporting an effective global response

- Published CEO COP21 Statement.
- Signed UNFCCC’s Paris Pledge.
- Recognised in CDP’s Climate Disclosure Leadership Index.
- Participated in the Financial Stability Board’s Task Force on Climate-related Financial Disclosures (TCFD).
## Disclosures in financial filings

<table>
<thead>
<tr>
<th>TCFD recommendation</th>
<th>Disclosure</th>
<th>Location</th>
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</table>
| Governance – Disclose the organisation's governance around climate-related risks and opportunities | (a) Describe the Board's oversight of climate-related risks and opportunities.  
Board skills and experience – climate change  
Sustainability Committee – role and focus | 2.8  
2.13.4 |
|                      | (b) Describe management's role in assessing and managing climate-related risks and opportunities.  
Our climate change strategy  
Sustainability Committee – role and focus  
FY2017 STI performance outcomes | 11.0.6  
2.13.4  
3.3.2 |
| Strategy – Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material | (a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.  
Sustainability risks  
Operational risks  
Climate change – overview | 1.8.3  
1.8.5  
11.0.6 |
|                      | (b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.  
Sustainability risks  
Operational risks  
Portfolio evaluation | 1.8.3  
1.8.5  
11.0.8 |
|                      | (c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.  
Portfolio evaluation | 11.0.6 |
| Risk management – Disclose how the organisation identifies, assesses, and manages climate-related risks | (a) Describe the organisation's processes for identifying and assessing climate-related risks.  
Managing performance and risk | 1.5.2 |
|                      | (b) Describe the organisation's processes for managing climate-related risks.  
Managing performance and risk  
Sustainability risks | 1.5.2  
1.8.3 |
|                      | (c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.  
Managing performance and risk  
Sustainability risks  
Sustainability KPIs | 1.5.2  
1.8.3  
1.8.1 |
| Metrics and targets – Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material | (a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.  
Sustainability KPIs | 1.6.1 |
|                      | (b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.  
Sustainability KPIs (GHGs)  
Mitigation – GHGs  
Low emissions technology | 1.6.1  
11.0.6  
11.0.6 |
|                      | (c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.  
Sustainability KPIs (GHGs)  
FY2017 STI performance outcomes | 1.6.1  
3.3.2 |
Conclusion

**Addressing climate change is a priority for BHP Billiton**

- We have a clear and consistent position.
- Our integrated strategy address a range of climate-related risks and opportunities.
- Transparency is critical – more disclosure will help everyone make informed choices.
- We remain committed to taking action and supporting an effective global response.