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31 March 2016

Committee Secretary
Senate Standing Committees on Economics
PO Box 6100, Parliament House
Canberra ACT 2600

Dear Committee Secretary

Re: Carbon Risk Disclosure Inquiry

CDP (formerly the Carbon Disclosure Project) and the Climate Disclosure Standards Board (CDSB) welcome the Senate Economics References Committee's Inquiry into Carbon Risk Disclosure and thank the Committee for the opportunity to make a submission on this important issue.

CDP and the hundreds of institutional investors that we work with have played a formative role in building awareness of climate risks and opportunities since its formation in 2000. Our data has helped build the business case for emissions reduction, informs investment decisions and is an integral part of other platforms such as the UN's Non-State Actor Zone for Climate Action (NAZCA) website.

CDSB is advancing and aligning the global mainstream corporate reporting model to equate natural capital with financial capital. CDSB is referenced:

- in the ASX Corporate Governance Principles and Recommendations
- as a method for compliance to the greenhouse gas reporting requirements mandated by the *UK Companies Act 2006*

With the international community recently signing the Paris Agreement on Climate Change, pledging to limit warming to below 2ºC and as close to 1.5ºC as possible, the need for robust, high quality and comparable carbon risk disclosure should be clear, especially in Australia, which is one of the countries which is most exposed to carbon risk.

CDP and CDSB's joint submission to the Committee is enclosed, and we would be happy to engage further with the Committee as the work of the inquiry progresses.

Yours sincerely

James Day
Director – Australia and New Zealand
CDP

CDP and CDSB Joint Submission to the Economics References Committee's Inquiry into Carbon Risk Disclosure

Table of Contents

Introduction

This joint submission by CDP and CDSB:

- → provides information about the work of CDP and CDSB in motivating better climate and environmental disclosure
- → an introduction to carbon risk and Australia's exposure to it
- → an overview of some of the benefits of carbon risk disclosure
- → addresses each of the inquiry's Terms of Reference (ToR) separately
- → concludes by providing some recommendations

About CDP

CDP, formerly the Carbon Disclosure Project, works to transform the way the world does business to prevent dangerous climate change and protect our natural resources. We see a world where capital is efficiently allocated to create long-term prosperity rather than short-term gain at the expense of our environment. Evidence and insight are vital to driving real change and we use the power of measurement and information disclosure to improve the management of environmental risk. By leveraging market forces including shareholders, customers and governments, CDP has incentivised thousands of companies and cities across the world's largest economies to measure and disclose their environmental information. We put this information at the heart of business, investment and policy decision making.

CDP holds the largest collection globally of self-reported climate change, water and forest-risk data. Through our global system, companies, investors, cities and sub-national governments are better able to mitigate risk, capitalise on opportunities and make investment decisions that drive action towards a more sustainable world.

Climate data reported through CDP is also showcased on the UN's Non-State Actor Zone for Climate Action (NAZCA) website.[1]

For more information about CDP, please visit our website at www.cdp.net

CDP's climate change programs

In 2015, CDP's climate change programs engaged and received data from all over the world from:

- → over 5,500 corporations
- → over 300 cities
- → over 40 sub-national governments

These programs provide investors, purchasing companies and the world with access to high quality climate change information, so that we can effectively manage our individual and collective responses to the global climate challenge.

Corporate climate programs

CDP's corporate climate change program works to reduce companies' greenhouse gas emissions and mitigate climate change risk. CDP believes that improving corporate awareness through measurement and disclosure is vital to the effective management of carbon and climate change risk. As the old management adage says: "You can't manage what you don't measure."

CDP requests information on the risks and opportunities of climate change from the world's largest companies on behalf of:

- → 827 institutional investor signatories with a combined US$100 trillion in assets
- → Over 70 large purchasing companies (including Walmart, Unilever, U.S. Government's General Services Administration, Microsoft, L'Oreal and Coca Cola Co.) with a combined annual purchasing spend of over US$2 trillion are members of CDP's Supply Chain program and request thousands of their supplier companies to disclose through CDP.

Over 5,500 companies reported climate change information through CDP in 2015. CDP also objectively scores and benchmarks the performance and progress of companies that participate in its climate change program. CDP's corporate climate leadership indices and the scoring system which underpins them have been independently ranked as the most credible corporate environmental ranking system in the world.[2]

Cities program

Over 300 of the world's largest cities reported through CDP's cities program in 2015, including: Bangkok, Jakarta, London, Los Angeles, New York, Rio de Janeiro, Rome, Seoul, Singapore, Tokyo, Wellington and five Australian cities. In total, these cities are responsible for over 1.67 billion metric tonnes of greenhouse gas emissions.

CDP's cities program has found that cities are better managing their risk and increasing resiliency through more than 4,800 activities to mitigate and adapt to climate change.

Sub-national governments program

CDP is the official reporting partner of the Compact of States and Regions which brings together the contributions of 44 sub-national governments from around the world. Together, they represent more than 325 million citizens and one eighth of the global economy. Jay Weatherill, Premier of South Australia, is the co-chair of the Compact of States and Regions.

[1] UN (2016), *Non-State Actor Zone for Climate Action*. Available at: http://climateaction.unfccc.int [31 March 2016].
[2] GlobeScan/SustainAbility (2014), *The 2013 Ratings Survey: Polling the Experts*. Available at: www.sustainability.com/library/the-2013-ratings-survey-polling-the-experts, [29 March 2016].

CDP in Australia

CDP has been requesting climate change information from ASX-listed companies since 2006, when it began its work in Australia in partnership with the Investor Group on Climate Change (Australia & NZ). In 2011, CDP established an Australia & NZ office in Sydney to manage its engagement with companies, investors, policymakers and other stakeholders in the region. CDP also currently requests water information from over 50 ASX companies, and forest commodity information from 15 ASX firms.

Australian corporate participation in CDP's climate change program

390 companies operating in Australia, including 94 ASX200-listed companies, reported GHG emissions (Scope 1 and/or Scope 2) and other climate change information through CDP in 2015. Of these reporting companies:

- → 301 companies reported Scope 1 emissions totalling 182.56 million metric tonnes carbon dioxide equivalent (CO_2–e) in Australia, representing 40% of Australia's total greenhouse gas emissions[3] (excluding emissions categories of agriculture, land use, land use change and forestry, which are not currently within the scope of CDP's reporting system), and
- → 370 companies reported Scope 2 emissions totalling 47.54 million metric tonnes CO_2–e in Australia.

In order to recognise and incentivise higher quality climate disclosure, CDP organises the Australian Climate Leadership Awards, which have been presented to Australian companies for the past 3 years. The awards are objective and data-driven, based on information disclosed in CDP's climate change program and its objective disclosure and performance scores. In 2015, ten CDP climate leadership awards were presented to Australian companies[4]:

CDP Australian Climate Leadership Awards 2015

Award	**Description**
Most profitable carbon reduction activity 2015	Australian company that reported the most profitable carbon reduction activity through CDP in 2015
Largest absolute carbon reduction 2015	Australian company that reported the largest absolute reduction in its total Scope 1 and Scope 2 emissions – in metric tons CO2-e – due to emission reduction activities
Largest relative carbon reduction 2015	Australian company that reported the largest percentage reduction in its carbon emissions due to emission reduction activities, relative to the company's total Scope 1 and Scope 2 emissions
Largest renewable energy purchaser 2015	Australian company that purchased the largest proportion of its total energy consumption from tracked renewable energy
Best climate disclosure by a new responding company	First-time responding Australian company with the highest CDP climate disclosure score in 2015
Best year on year improvement in climate disclosure 2014-2015	Australian company with the biggest year on year improvement in its CDP climate disclosure score from CDP 2014 to CDP 2015
Best year on year improvement in climate performance 2014-2015	Australian company with the biggest year on year improvement in its CDP climate performance score from CDP 2014 to CDP 2015
Best climate disclosure 2015	Australian company with the highest CDP climate disclosure score and the highest quality overall disclosure in 2015
Consistently high quality climate change disclosure 2006-2015	Special award for three ASX companies that have been included in the CDP ASX Climate Disclosure Leadership Index in every year from 2006-2015
CDP Climate A List Company 2015	Australian companies included on the CDP 2015 Climate Change A List

[3] Australian Government Department of the Environment (2015), *Volume 1: National Inventory Report 2013*. Available at: www.environment.gov.au/climate-change/greenhouse-gas-measurement/publications/national-inventory-report-2013 [29 March 2016].
[4] For more information about these awards, go to www.cdp.net/CDPResults/CDP-Australia-climate-change-report-2015.pdf.

Australian institutional investor support of CDP's climate change program
In 2016, 68 of the 827 investor signatories to CDP's climate change program are headquartered and/or listed in Australia and NZ. Their combined assets of USD$3.8 trillion comprise around 4% of the global total of USD$100 trillion.[5]

Australian cities participating in CDP's Cities program
Five Australian cities participated in CDP's Cities program in 2015:

- → City of Adelaide
- → Canberra
- → City of Melbourne
- → City of Perth
- → City of Sydney

The City of Adelaide and Canberra were both recently recognised by CDP as two of the top ten cities in the world in 2015 for environmental risk reporting.[6] The City of Sydney was recognised by CDP as one of the top ten cities in the world in 2014 for environmental risk reporting.[7]

Australian states and territories reporting through CDP to the Compact of States & Regions
The Australian Capital Territory and South Australia are two of the 44 sub-national governments which are reporting through CDP to the Compact of States & Regions.

About CDSB

CDSB is an international consortium of business and environmental NGOs, which was established at the World Economic Forum annual meeting (2007). Its mission is to elicit, through mainstream corporate reports, climate-related information that could be acted on by investors, trustees, directors and managers in their decision-making. More comparable and comprehensive information, it was agreed, would allow investors to assess the implications for shareholder value of climate-related risks to physical assets, identify mitigation and adaption strategies, understand corporate performance on climate and allocate capital efficiently.

CDSB is comprised of three bodies:

- → The Board, whose members are drawn from business and environmental organisations;
- → The Technical Working Group, formed of representatives of the major accounting firms and their professional bodies, professional advisors and academics; and
- → A Secretariat who deliver CDSB activities and support the Technical Working Group, which is provided by CDP on behalf of the Board.

CDSB has developed a framework for companies to use in reporting environmental information with the same rigour as financial information. Over the years, CDSB has carried out, and reflected in its framework, evidence-based research on how lessons from the existing mainstream reporting model can be used to enhance the development of climate, natural capital and environmental reporting. CDSB is a signatory of the Natural Capital Declaration (NCD) and active participant to Working Group 4. CDSB is currently collaborating on a three-year project with WBCSD and Ecodesk on the creation of a Reporting Exchange.

For more information about CDSB, please visit our website at www.cdsb.net

[5] CDP (2016), *CDP Australia and New Zealand*, The full list of institutional investor signatories to CDP's climate change program that are headquartered and/or listed in Australia is available at: https://www.cdp.net/en-US/WhatWeDo/Pages/Australia-and-New-Zealand.aspx
[6] CDP (2015) 'Ten cities setting the bar on climate disclosure?', *CDP blog*, Available at: http://blog.cdp.net/ten-cities-setting-the-bar-on-climate-disclosure/ [31 March 2016].
[7] CDP (2015) 'What does it take to be a leading city?', *CDP blog*. Available at: http://blog.cdp.net/what-does-it-take-to-be-a-leading-city/ [31 March 2016].

What is carbon risk?

There are several categories of carbon risk, which are summarised in the following table:

Category of risk	Description	Examples
Physical risks	Physical impacts from climate change on carbon assets and operating companies	→ Severe weather events such as storms, floods and drought. → Gradual changes such as sea level rise and desertification.
Transitional risks	Regulatory and/or policy changes that impact the operational and financial viability of carbon assets	→ Fuel-efficiency standards for personal vehicles → Emissions trading systems → U.S. EPA regulations targeting air pollution and GHGs from power plants → Chinese air pollution regulations
Liability risks	1) Impacts that could arise tomorrow if parties who have suffered loss or damage from the effects of climate change seek compensation from those they hold responsible. 2) Costs of environmental rehabilitation 3) Current or future costs of permits to emit carbon in jurisdictions which have established carbon pricing schemes	→ Cost of rehabilitation at the end of a coal mine's life → Cost of insurance or compensation claims → Cost of acquiring permits to emit carbon in the EU Emissions Trading Scheme
Technological risks	Developments in the commercial availability and cost of alternative and low-carbon technologies	→ Energy storage technologies → Advances in renewable energy technologies, carbon capture and storage → Alternative fuels
Market and economic risks	Changes in market or economic conditions that may negatively impact carbon assets	→ Changes in fossil fuel prices → Changes in consumer preferences

All of these types of risks have the capacity to contribute to 'carbon asset stranding' – the inability to exploit assets such as fossil fuel reserves due to the significant emissions that would be generated. The potential economic impacts of stranded assets are significant, with current estimates that approximately two thirds of the world's fossil fuel reserves must remain unburned if warming is to be held at 2ºC.[8]

Stranded assets not only pose a significant risk to operators of carbon assets but also have the potential to affect financial intermediaries, investors and financial markets more broadly.[9] The economic impact of stranded assets is exacerbated by continued growth in investment in the carbon sector. It is essential that companies identify and discuss these risks in their mainstream reports in the same way that financial results are, so that decision-makers and investors to properly assess the risks and make environmentally responsible investment decisions.[10]

[8] CDSB (2014), *Proposals for reporting on Carbon Asset Stranding Risks,* p.2. Available at: www.cdsb.net/sites/cdsbnet/files/cdsb_proposals_for_reporting_on_carbon_asset_stranding_risks.pdf [29 March 2016].
[9] World Resources Institute and UNEP Finance Initiative n.d, *Carbon Asset Risk: Discussion Framework*, pp.16-17. Available at: www.unepfi.org/fileadmin/documents/carbon_asset_risk.pdf [29 March 2016].
[10] CDSB, op. cit., p.2.

Australia's exposure to carbon risk

A 2015 report by Mercer identified Australia, the UK and Canada as being particularly susceptible to carbon risk, due to the carbon-intensive nature of their economies and the companies listed on their stock exchanges. Australia was identified as being at an even higher risk because of the greater level of climate policy uncertainty, which exposes the economy to policy shock.[11]

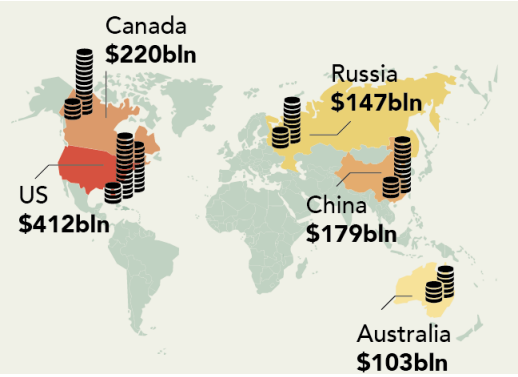
The energy sector of the Australian economy makes up 7% of GDP, and is currently responsible for producing $65.4 billion (20%) of Australia's total export earnings[12]. Australia is the:

- → 4th largest coal producer after China, India and the US with 491Mt - 6.2% of the global total,
- → 2nd largest coal exporter after Indonesia, with over 300Mt of thermal and metallurgical coal exported annually, which represent 30% of global coal exports,
- → 10th largest net exporter of natural gas, including LNG, with 25 billion cubic metres,
- → 9th largest producer of electricity from coal,[13] and
- → 3rd largest producer of uranium after Kazakhstan and Canada, and has the world's largest known uranium resources with 31% of the world total.[14]

97% of metallurgical coal, 71% of thermal coal, 84% of oil and 50% of gas extracted annually in Australia is exported and Australia's coal exports alone represent 11.9% of its total goods and services trading.[15] As a result, the Australian economy is highly exposed to fluctuations in international demand for these commodities and changes in overseas markets and policies. 195 countries, including Australia's major coal and LNG trading partners – Japan, China, India, Korea and Taiwan – have recently approved the Paris Agreement on climate change[16,17] which is expected to lead to a large reduction in the demand for fossil fuels as nations seek to honour their climate commitments and limit their production of carbon emissions. Other growing concerns, such as air pollution, are also expected to result in further reductions in coal production and use in China in particular[18] and in other developing economies.

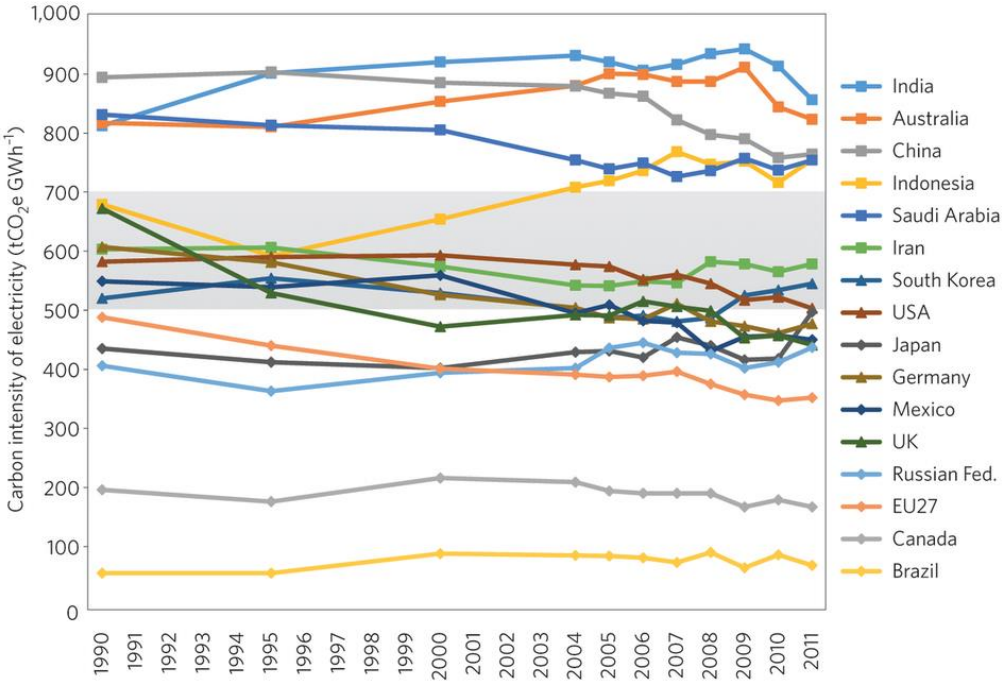
[11] Mercer (2015), *Investing in a time of climate change*, p.46. Available at: www.mercer.com.au/services/investments/sustainable-growth/climate-changereport-2015.html [29 March 2016].
[12] DFAT-Australian Government Department of Foreign Affairs and Trade (2016), 'Australia's top 25 exports, goods and services, 2014-15', *Australia's trade in goods and services*. Available at: http://dfat.gov.au/about-us/publications/trade-investment/australias-trade-in-goods-and-services/Pages/australias-trade-in-goods-and-services-2014-15.aspx#exports [29 March 2016].
[13] International Energy Agency (2015), *Key World Energy Statistics*. Available at: https://www.iea.org/publications/freepublications/publication/KeyWorld_Statistics_2015.pdf [29 March 2016].
[14] World Nuclear Association (2016), Australia's Uranium. Available at: www.world-nuclear.org/information-library/country-profiles/countries-a-f/australia.aspx [29 March 2016].
[15] DFAT (2016), op. cit.
[16] Davenport, C. (2015), 'Nations Approve Landmark Climate Accord in Paris', *NY Times*. Available at: www.nytimes.com/2015/12/13/world/europe/climate-change-accord-paris.html?_r=0 [29 March 2016].
[17] UNFCCC (2015), Paris Agreement. Available at: http://unfccc.int/paris_agreement/items/9485.php [29 March 2016].
[18] Latimer, C. (2015), 'China to cut coal consumption', *Australian Mining*, Available at: www.australianmining.com.au/news/china-to-cut-coal-consumption [29 March 2016].

Research by Carbon Tracker has found that Australia is one of the five countries in the world which is most at risk from stranded fossil fuel assets. They estimate that if we are to limit emissions below 2˚C, production from some of the existing coal mines is sufficient to meet the volume of coal required under the International Energy Agency's 450 scenario and that **no new coal mines are needed anywhere in the world**. Up to US$103 billion of planned investment in new fossil fuel projects in Australia could be unneeded and become stranded according to Carbon Tracker's estimates.[19]



Australia's electricity is highly carbon intensive in comparison with its peers in other advanced economies and its trading partners. Amongst OECD nations, only Estonia produces more CO_2 emissions per unit of electricity generated (kWh) than Australia.[20] A 2015 paper in *Nature Climate Change* also highlighted how carbon-intensive Australia's electricity generation is in comparison to its other large carbon emitting nations, many of which are major trading partners – see chart below.[21]

Carbon intensity of electricity generation of major carbon emitting nations[22]



[19] Carbon Tracker (2015), *The $2 trillion stranded assets danger zone: How fossil fuel firms risk destroying investor returns*, Available at: www.carbontracker.org/report/stranded-assets-danger-zone/, [31 March 2016]
[20] IEA (2012), *CO_2 Emissions from Fuel Combustion Highlights 2012*. Available at:www.iea.org [29 March 2016]
[21] Kennedy, C. (2015), Figure 1: Carbon intensity of electricity generation from 'Key threshold for electricity emissions', *Nature Climate Change*, 5, pp.179–181. Available at: www.nature.com/nclimate/journal/v5/n3/fig_tab/nclimate2494_F1.html [29 March 2016].
[22] Ibid.

Domestically, Australia has the second highest per capita GHG emissions in the OECD, second only to Luxembourg. Its per capita emissions of 16.7 tonnes are higher than the USA's 16.2 tonnes per capita, and are around 75% higher than the OECD average of 9.55 tonnes per capita.[23] Approximately 75% of Australia's emissions are created by the energy sector, and 68% of Australia's electricity generation is coal-powered.[24] With the falling cost of renewable energy infrastructure, investment in fossil-fuels is becoming less financially attractive and the risk of stranded assets is increasing.[25] In addition, many superannuation schemes are heavy invested in carbon-intensive sectors.[26]

With most of Australia's population concentrated in coastal areas, Australia is also particularly exposed to physical climate risks. Australia's biggest banks are heavily invested in residential property, with mortgages making up 66% of their assets. This makes the Australian economy more exposed to the physical impacts of climate change, which is further exacerbated by the fact that many residential properties are underinsured. [27]

Australia's opportunity to become a low carbon, renewable energy 'superpower' while maintaining economic prosperity

A recent analysis by Beyond Zero Emissions found that Australia has amongst the best renewable energy resources in the world. They estimated that the economic renewable energy potential of Australia is 75% greater than its coal, gas, petroleum and uranium resources combined.[28] Unlike Australia's fossil fuel reserves, these abundant and soon-to-be low-cost renewable energy resources can be exploited in a manner that is compatible with climate science and the Paris Agreement.

Earlier research by ClimateWorks Australia and the Australian National University found that

> *"Australia can achieve net zero emissions by 2050 and live within its recommended carbon budget, using technologies that exist today, while maintaining economic prosperity. Major technological transitions and many activities are needed in some industries, but no fundamental change to Australia's economy is required. The technologies required for decarbonisation are currently available or under development.*
>
> *Decarbonisation of energy systems in all countries relies on three pillars: ambitious energy efficiency; low carbon electricity; and electrification and fuel switching. For Australia there is a fourth pillar: reducing non-energy emissions in industry and agriculture."*[29]

[23] IEA (2015), *CO2 Emissions From Fuel Combustion Highlights 2015.* Available at: www.iea.org/publications/freepublications/publication/co2-emissions-from-fuel-combustion-highlights-2015.html [30 March 2016].
[24] Carbon Tracker Initiative (2013), *Unburnable Carbon: Australia's carbon bubble*, p.16. Available at: www.climateinstitute.org.au/verve/_resources/Unburnable_Carbon_Australias_Carbon_Bubble_finalreport.pdf [29 March 2016].
[25] *Unburnable Carbon: Australia's carbon bubble*, p.16
[26] *Australia's Financial System and Climate Risk*, p.11
[27] *Australia's Financial System and Climate Risk*, p.10
[28] Beyond Zero Emissions (2016), *Renewable Energy Superpower*. Available at: http://renewableenergysuperpower.com [29 March 2016].
[29] ClimateWorks Australia and ANU (2014), Pathways to Deep Decarbonisation in 2050: How Australia can prosper in a low carbon world, Available at http://climateworksaustralia.org/project/national-projects/pathways-deep-decarbonisation-2050-how-australia-can-prosper-low-carbon, [Retreived 30 March 2016]

Benefits of carbon risk disclosure

There are a number of benefits to companies from disclosing climate change and sustainability information.

Higher company valuation

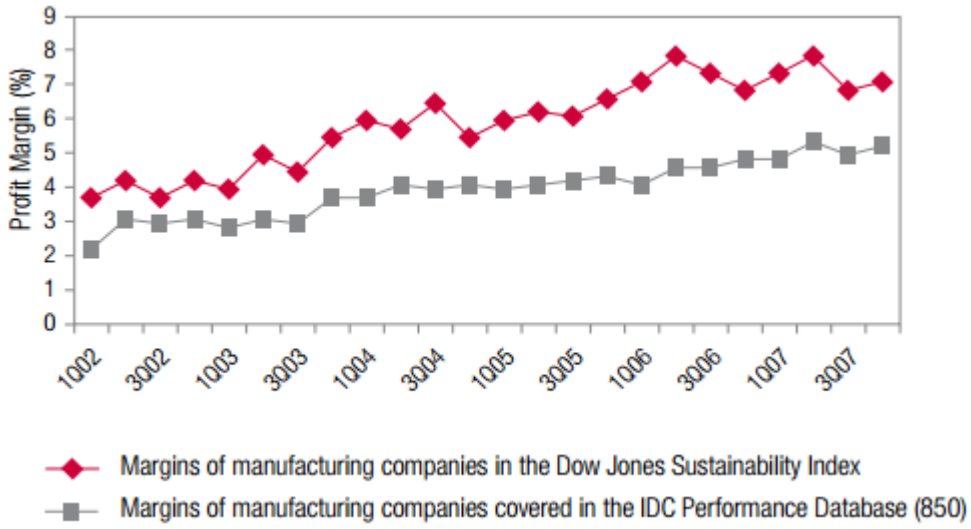
A study by the Harvard Business School has shown that the stock price performance of companies is positively influenced by good sustainability practices, finding that firms with good ratings on material sustainability issues significantly outperform firms with poor ratings on these issues.[30] These findings have been supported by meta-studies by the University of Oxford[31] and Deutsche Bank.[32]

Climate change disclosure has shown some strong linkages to valuation outperformance. For instance, in his 2015 Moskowitz Prize winning paper,[33] Philipp Krüger found that London Stock Exchange firms which were most heavily affected by the introduction of mandatory greenhouse gas reporting regulations experienced significant increases in their valuations. Kruger identified that the underlying reason for this increase is the value placed by investors on greater transparency regarding corporate climate change risks, particularly for large firms or those operating in carbon intensive sectors.

A number of global studies by CDP have also found financial outperformance by climate change leaders compared to the benchmark stock index.[34, 35]

Reduced operating costs and increased profit margins

Programs to improve sustainability disclosure and performance can drive reductions in energy, material, transportation, manufacturing, and disposal costs, and increase profit margins. For instance, IDC (2009) found that manufacturing companies included in the Dow Jones Sustainability Index achieved superior profit margins, which improved over time, as shown in the figure below:[36]



[30] Khan, M., Serafeim, G. and Yoon, A. (2015), *Corporate Sustainability: First Evidence on Materiality*. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2575912&rec=1&srcabs=2600524&alg=1&pos=9, [29 March 2016].
[31] Clark, G., Feiner, A., and Viehs, M. (2015), *From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance*. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2508281, [29 March 2016].
[32] Deutsche Bank Climate Change Advisors, Deutsche Bank Group (2012), *Sustainable Investing: Establishing Long-term Value & Performance*. Available at: https://institutional.deutscheam.com/content/_media/Sustainable_Investing_2012.pdf [29 March 2016].
[33] Kruger, P., n.d., *Climate Change and Firm Valuation: Evidence from a Quas-Natural Experiment*. Available at: https://responsiblebusiness.haas.berkeley.edu/programs/Climate%20Change%20and%20Firm%20Valuation%20Evidence%20from%20a%20Quasi-Natural%20Experiment.pdf [29 March 2016].
[34] CDP (2014), *The A List: The CDP Climate Performance Leadership Index 2014*, p. 14. Available at: https://www.cdp.net/CDPResults/CDP-climate-performance-leadership-index-2014.pdf [29 March 2016].
[35] CDP (2013), *CDP Global 500 Climate Change Report 2013*, p. 17. Available at: https://www.cdp.net/CDPResults/CDP-Global-500-Climate-Change-Report-2013.pdf [29 March 2016].
[36] IDC (2009), *The Business Case for Environmental Excellence is Real*, p.15. Available at: http://natcapsolutions.org/business-case/IDCbusiness_case.pdf, [29 March 2016].

Lower cost of capital

A meta-study of over 100 academic studies by Deutsche Bank Climate Change Advisors (DBCCA 2012) identified that 100% of these studies found that companies with high sustainability and corporate social responsibility ratings have a lower cost of capital in terms of debt (loans and bonds) and equity. The market appears to be recognising that "these companies are lower risk than other companies and rewards them accordingly".[37]

Reduced cashflow volatility

Sustainability programs can play an important role in corporate risk management by reducing exposure to legal, environmental, financial and reputational risks. The primary benefit is lower volatility cashflow as negative impacts are avoided or mitigated.[38]

[37] Deutsche Bank Climate Change Advisors, Deutsche Bank Group (2012), *Sustainable Investing: Establishing Long-term Value & Performance*. Available at: https://institutional.deutscheam.com/content/_media/Sustainable_Investing_2012.pdf [29 March 2016].
[38] Clark, G., Feiner, A., and Viehs, M. (2015), *From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance*. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2508281, [29 March 2016].

Responses to Senate Committee's Terms of Reference (ToR)

ToR 1: Current and emerging international carbon risk disclosure frameworks

There is currently a patchwork of carbon risk disclosure frameworks that operate at an international, regional and national level. These frameworks, developed in response to growing demands from investors and other stakeholders for climate change information, are designed to help:

- → Companies disclose a more complete picture of what climate change means for their business to their shareholders and other stakeholders, and
- → Investors measure and disclose the carbon exposure of their investments.

However, there is a growing global awareness of the need to understand the implications for business of climate change in order to the accurately assess of corporate performance, which promises to lead to standardisation of these various frameworks. In particular, Mark Carney, Chairman of the Financial Stability Board (FSB) and Governor of the Bank of England, acknowledged the increased risks to financial stability posed by delayed transition to limit global warming to 2ºC,[39] and in December 2015 the FSB announced the establishment of an industry-led Task Force on Climate-related Financial Disclosures under the chairmanship of Michael R. Bloomberg, the former Mayor of New York and Founder of Bloomberg LP.[40] This Task Force promises to transform the status of climate reporting from a sub-set of sustainability reporting to a mainstream reporting requirement.

International frameworks

There are a number of international frameworks for reporting climate change and carbon risk information.

a) CDP's climate change program

CDP's climate change program offers companies the opportunity to participate in and be benchmarked by the largest climate change reporting platform in the world. CDP collects this climate change information on behalf of its 800+ signatory institutional investors and 70+ purchasing companies by issuing a standardised questionnaire to companies, to which companies respond to online through CDP's online response system. The questionnaire requests companies to provide climate change related information, including:

- → Climate change governance
- → Climate change strategy
- → Emissions reduction targets & initiatives
- → Climate change risks
- → Climate change opportunities
- → Greenhouse gas emissions – Scope 1, Scope 2 and Scope 3
- → Energy consumption
- → Emissions performance – history, indicators
- → Emissions trading

In particular, the questionnaire requests information from companies about both the climate change-related risks and opportunities that have the potential to generate substantive change in business operations, revenue or expenditure. It also requests information about whether those risks and opportunities are driven by changes in regulation, physical or other climate-related developments. The full CDP climate change questionnaire can be downloaded online.[41]

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[39] Carney, M. (2015), Breaking the tragedy of the horizon - climate change and financial stability - speech by Mark Carney. Available at: http://www.bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx [29 March 2016].
[40] Financial Stability Board (2015), *Press Release: FSB to establish Task Force on Climate-related Financial Disclosures*. Available at: https://www.fsb-tcfd.org/wp-content/uploads/2016/01/12-4-2015-Climate-change-task-force-press-release.pdf [29 March 2016].
[41] CDP (2016), *CDP 2016 climate change questionnaire*, Available at: https://www.cdp.net/CDP%20Questionaire%20Documents/CDP-Climate-Change-Information-request-2016.pdf, [31 Mar 2016]

b) CDSB frameworks

The Climate Disclosure Standards Board (CDSB) is leading the standardisation of climate change-risk reporting in mainstream financial reports through the development of reporting frameworks that draw on the most widely used and tested reporting approaches from around the world. The first of these frameworks, the Climate Change Reporting Framework, was released in 2010 and enables organisations to evaluate the impacts of climate change on their operations, identify options to mitigate those risks and incorporate climate change-related information into mainstream financial reports.

The Framework for Reporting Environmental Information and Natural Capital (the CDSB Framework), released in 2013, is a broader framework that builds on the Climate Change Reporting Framework. It is designed to assist organisations to prepare environmental information for mainstream financial reports and to enable investors to assess the relationship between specific environmental issues and the organisation's activities. It establishes a reporting framework of 12 environmental information reporting requirements to be incorporated into an organisation's annual mainstream reporting package. These requirements are:

- **Management's environmental policies, strategy and targets** – disclosures shall report management's environmental policies, strategy and targets, including the indicators, plans and timelines used to assess performance.
- **Risks and opportunities** – disclosures shall explain the material current and anticipated environmental risks and opportunities affecting the organisation.
- **Governance** – disclosures shall describe the governance of environmental policies, strategy and information.
- **Sources of environmental impact** – quantitative and qualitative results, together with the methodologies used to prepare them, shall be reported to reflect material sources of environmental impact.
- **Performance and comparative analysis** – disclosures shall include an analysis of the information disclosed in REQ-04 compared with any performance targets set and with results reported in a previous period.
- **Outlook** – management shall summarise their conclusions about the effect of environmental impacts, risks and opportunities on the organisation's future performance and position.
- **Organisational boundary** – environmental information shall be prepared for the entities within the boundary of the organisation or group for which the mainstream report is prepared and, where appropriate, shall distinguish information reported for entities and activities outside that boundary.
- **Reporting policies** – disclosures shall cite the reporting provisions used for preparing environmental information and shall (except in the first year of reporting) confirm that they have been used consistently from one reporting period to the next.
- **Reporting period** – disclosures shall be provided on an annual basis.
- **Restatements** – disclosures shall report and explain any prior year restatements.
- **Conformance** – disclosures shall include a statement of conformance with the CDSB Framework.
- **Assurance** – if assurance has been provided over whether reported environmental information is in conformance with the CDSB Framework, this shall be included in or cross-referenced to the statement of conformance of REQ-11.

The CDSB Framework also establishes the following overarching guiding principles to assist in implementing the reporting requirements:

- → Environmental information shall be prepared applying the principles of relevance and materiality
- → Disclosures shall be faithfully represented
- → Disclosures shall be connected with other information in the mainstream report
- → Disclosures shall be consistent and comparable
- → Disclosures shall be clear and understandable
- → Disclosures shall be verifiable
- → Disclosures shall be forward looking.

CDSB, in partnership with the not-for-profit financial think tank Carbon Tracker Initiative (CTI), has prepared a discussion paper setting out the following proposals for reporting on carbon asset stranding risks, which will inform the second edition of the CDSB Framework:

- → Identify the most effective intervention points for bringing about reporting changes necessary to reveal carbon asset stranding risk,
- → Agree on language for classifying and communicating fossil fuel energy resources in mainstream corporate reports,
- → Define the scope of fossil fuel energy resources to be reported to as to provide a complete picture of risk beyond the balance sheet,
- → Specify content and structure of reporting,
- → Incorporate carbon asset stranding risk in impairment testing,
- → Disclose carbon asset stranding risk in notes and sensitivity analysis, and
- → Support and adopt relevant complementary activity.

c) GRI

The Global Reporting Initiative (GRI) is an international non-profit organisation that has formulated a set of guidelines, the G4 Sustainability Reporting Guidelines, to help businesses, governments and other organisations understand and communicate the impact of businesses on critical sustainability issues such as climate change. The CDSB Framework complements the G4 Guidelines by explaining how environmental/natural capital information disclosed in a report made using GRI sustainability reporting guidelines can be presented in a mainstream financial report. The Framework provides the supporting architecture to link non-financial and financial information in companies' mainstream reports. This enables companies and investors to minimise risk and identify opportunities by disclosing and reducing impacts on the environment.

CDP and GRI have signed a memorandum of understanding (MoU) that is further aligning areas of their reporting approaches and guidance for companies. This is bringing consistency to the requirements of companies disclosing climate change and water data, as well as those including material climate information in mainstream reports. This is also improving the quality and comparability of environmental data in the global marketplace, helping to accelerate the transition to a resource-efficient economy. Together, GRI and CDP reach over 6,000 organisations with their programs and sustainability reporting guidelines respectively.

Both CDP and CDSB are GRI Organisational Stakeholders, a program which connects 600 organisations from over 60 countries, committed to advancing sustainability reporting. By identifying and developing common disclosures, GRI, CDP and CDSB aim to increase the efficiency of sustainability reporting.

National and regional frameworks for reporting of carbon and climate risk

The following national and regional frameworks require companies, investors and insurers to report on their carbon risk in relation to their global operations.

Framework	Reporting requirements
Article 173 of France's 2015 *Law for the Energy Transition and Green Growth*[42]	→ **Listed companies** must disclose, in the annual report subject to the vote of the shareholders: • the financial risks related to the effects of climate change and the measures adopted by the company to reduce them, and • the consequences on climate change of the company's activities and of the use of goods and services it produces; → **Government** must submit a report to Parliament on the implementation of a scenario of regular stress-tests reflecting the risks associated with climate change by 31 December 31 2016; and → **Institutional investors** must identify in their annual reports how their investment decision-making process takes the following into consideration: • Social, environmental and governance criteria, • Exposure to climate-related risks, • GHG emissions of financial assets, and • Contribution to the international goal of limiting global warming and achieving energy and ecology transition. **Audience for reported information**: Investors and Policymakers
US Securities & Exchange Commission's rules on non-financial disclosure	→ **US public companies** must disclose to investors the following information:[43, 44] • Costs of complying with environmental laws, • Legal proceedings in relation to environmental matters, • Discussion of most significant risk factors that make investment in the registrant speculative or risky, and • Management's discussion and analysis of material information concerning both climate risks and opportunities, if climate change is considered to be a material issue for the company. → **Foreign private issuers** must provide disclosure of climate change matters that are material to its business, including: • Effects of government regulation on its business, • Environmental issues that may affect the company's utilization of its assets, and • Factors that have affected the company's financial condition.[45] **Audience for reported information**: Investors

[42] 2º Investing Initiative (2015), *Decree Implementing Article 173-VI of the French Law for the Energy Transition*, p.7. Available at: http://2degrees-investing.org/IMG/pdf/energy_transition_law_in_france_-_briefing_note_final.pdf [29 March 2016].
[43] US Securities and Exchange Commission, (2010) *Commission Guidance Regarding Disclosure Relating to Climate Change*. Available at https://www.sec.gov/rules/interp/2010/33-9106.pdf, pp.12-20. [30 March 2016]
[44] CERES (2011), *Disclosing Climate Risks and Opportunities.* Available at: http://www.ceres.org/resources/reports/disclosing-climate-risks-2011/view [29 March 2016].
[45] US Securities and Exchange Commission, (2010) *Commission Guidance Regarding Disclosure Relating to Climate Change*, pp. 201-21. Available at: https://www.sec.gov/rules/interp/2010/33-9106.pdf [30 March 2016].

UK's *Companies Act 2006 (Strategic and Director's Report) Regulation 2013*	**Certain UK incorporated companies** must:[46] → Report on GHG emissions for which they are responsible, and → Report on environmental matters to the extent it is necessary for an understanding of the company's business within their Annual Report, and, if this information is not included, explain the reason why. The accompanying *Environmental Reporting Guidelines* recommend that companies include an evaluation of climate risks in their overall assessment of business risks.[47] **Audience for reported information**: Investors
EU Directive on Disclosure of Non-financial and Diversity Information	Certain large undertakings and groups must disclose, in their management reports, information on policies, risks and outcomes regarding environmental matters, social and employee aspects, respect for human rights, anticorruption and bribery issues, and diversity in their board of directors. **Audience for reported information**: Investors
US Insurer Climate Risk Disclosure Survey (modelled on CDP's climate change questionnaire[48])	Insurers in participating US States are required to provide information about insurer strategy and preparedness in the areas of: → Investment → Mitigation → Financial solvency (risk management) → Emissions/carbon footprint → Engaging consumers **Audience for reported information**: Regulators and Policymakers

Mandatory greenhouse gas reporting schemes

A number of countries have mandatory reporting requirements in relation to GHG emissions, including Australia, France, Japan, the UK, European Union, Canada and the US.[49] These systems are usually designed to help policymakers to collect and track emissions data from individual emitters, rather than help investors or other stakeholders understand climate risk exposures at a listed company level. However, reporting on emissions alone does not give a complete picture of a company's exposure to climate risk.

While the specifics of these systems differ from country to country, they typically:

- → Have a legislative underpinning,
- → Require facilities and/or companies to report,
- → Set a threshold, such as annual CO_2 emissions, above which the requirement to report is triggered,
- → Prescribe the emissions calculations methodology to be used to ensure standardisation, consistency and comparability,
- → Publish the reported data in some form, and
- → Incorporate some level of third party verification of the date reported.

[46] Department for Environment, Food and Rural Affairs (2013), *Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting guidance,* p.2. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/206392/pb13944-env-reporting-guidance.pdf [30 March 2016].
[47] Ibid.
[48] National Association of Insurance Commissioners (2015), *Climate Change and Risk Disclosure.* Available at: http://www.naic.org/cipr_topics/topic_climate_risk_disclosure.htm [30 March 2016].
[49] World Resources Institute (2013), *Designing Greenhouse Gas Reporting Systems: Learning from Existing Programs*. Available at: www.wri.org/sites/default/files/designing_greenhouse_gas_reporting_systems.pdf [29 March 2016].

Investor frameworks for voluntary reporting of carbon exposure

Investor frameworks aim to assist institutional investors to measure and periodically disclose their carbon exposure or 'footprint', ie the carbon intensity of their capital.

d) Portfolio Decarbonization Coalition

The Portfolio Decarbonization Coalition (PDC) is a multi-stakeholder initiative to drive GHG emissions reductions on the ground by mobilizing a critical mass of institutional investors to gradually reducing the carbon intensity of their investment portfolios. The PDC was co-founded by CDP, the United Nations Environment Programme Finance Initiative (UNEP FI), Amundi Asset Management and the Swedish Pension Fund AP4[50] and is now overseeing the decarbonization of $600bn Assets under Management.[51]

e) Montreal Carbon Pledge

By signing the Montréal Carbon Pledge, investors (asset owners and investment managers) commit to measure and publicly disclose the carbon footprint of their investment portfolios on an annual basis and allows investors to formalise their commitment to the goals of the PDC.[52] The Pledge is supported by the Principles for Responsible Investment (PRI) and the UNEP FI. Overseen by the PRI, it has attracted commitment from over 120 investors with over US$10 trillion in assets under management as at December 2015 from investors across Europe, the USA, Canada, Australia, Japan, Singapore and South Africa.

f) Asset Owners Disclosure Project

The Asset Owners Disclosure Project, originally auspiced by The Climate Institute of Australia, is an independent not-for-profit global organisation whose objective is to protect retirement savings and other long term investments from the risks posed by climate change by improving disclosure and industry best practice. It does this by working with pension funds, insurance companies, sovereign wealth funds, foundations and universities to improve the level of disclosure and industry best practice.[53] Despite its similar-sounding name, the Asset Owners Disclosure Project is not related to CDP.

[50] Portfolio Decarbonization Coalition (2016), Members. Available at: http://unepfi.org/pdc/members/ [29 March 2016].
[51] Portfolio Decarbonization Coalition (2016). Available at: http://unepfi.org/pdc/ [29 March 2016].
[52] Montreal Pledge (2016). Available at: http://montrealpledge.org/ [29 March 2016].
[53] Asset Owners Disclosure Project (2016), Our Objectives. Available at: www.aodproject.net/about/our-objective.html [29 March 2016].

ToR 2: Current carbon risk disclosure practices within corporate Australia

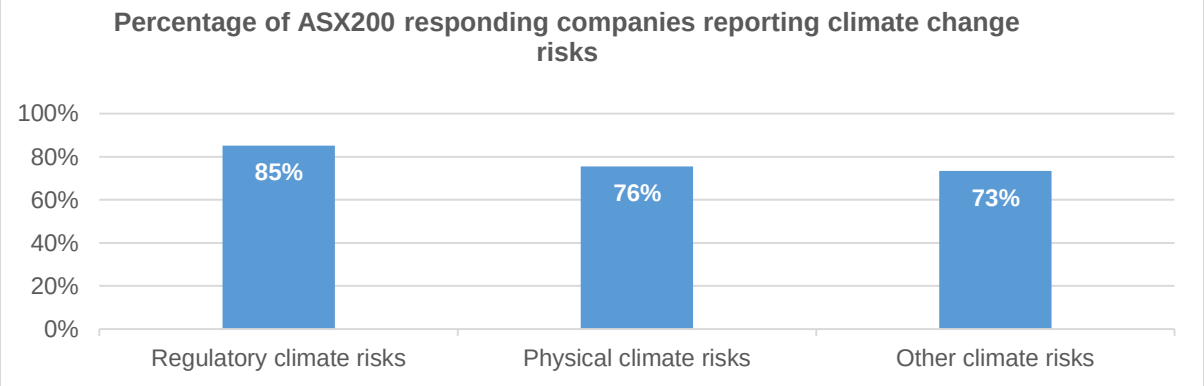
Net Balance Foundation (NBF) published an analysis of climate risk disclosures by ASX200 companies in 2014, and found that the amount and detail of climate risk disclosures made through CDP is far greater than through mainstream company reports.[54] The key findings of this NBF report were:

- → Leaders in sustainability reporting [they defined these as companies obtaining independent assurance of sustainability reports] are typically also the high performers in climate risk disclosure.
- → Extreme weather events are a focus for many of the climate-related disclosures. There is limited discussion of how climate change may modify the likelihood or consequences of such events in future.
- → High-performing sectors include property, utilities, and the food, beverage and tobacco sector.
- → Differences between CDP and sustainability reporting could indicate that companies do not identify climate risk as material risk.
- → There is little reporting on climate risk management actions implemented and even less disclosure of assessment and refinement of actions or strategies undertaken.
- → The findings of this study are fairly consistent with studies from the UK and America. However, Australian companies are much less frequently identifying supply chain risks compared to UK companies. This could represent a blind spot for Australian companies.

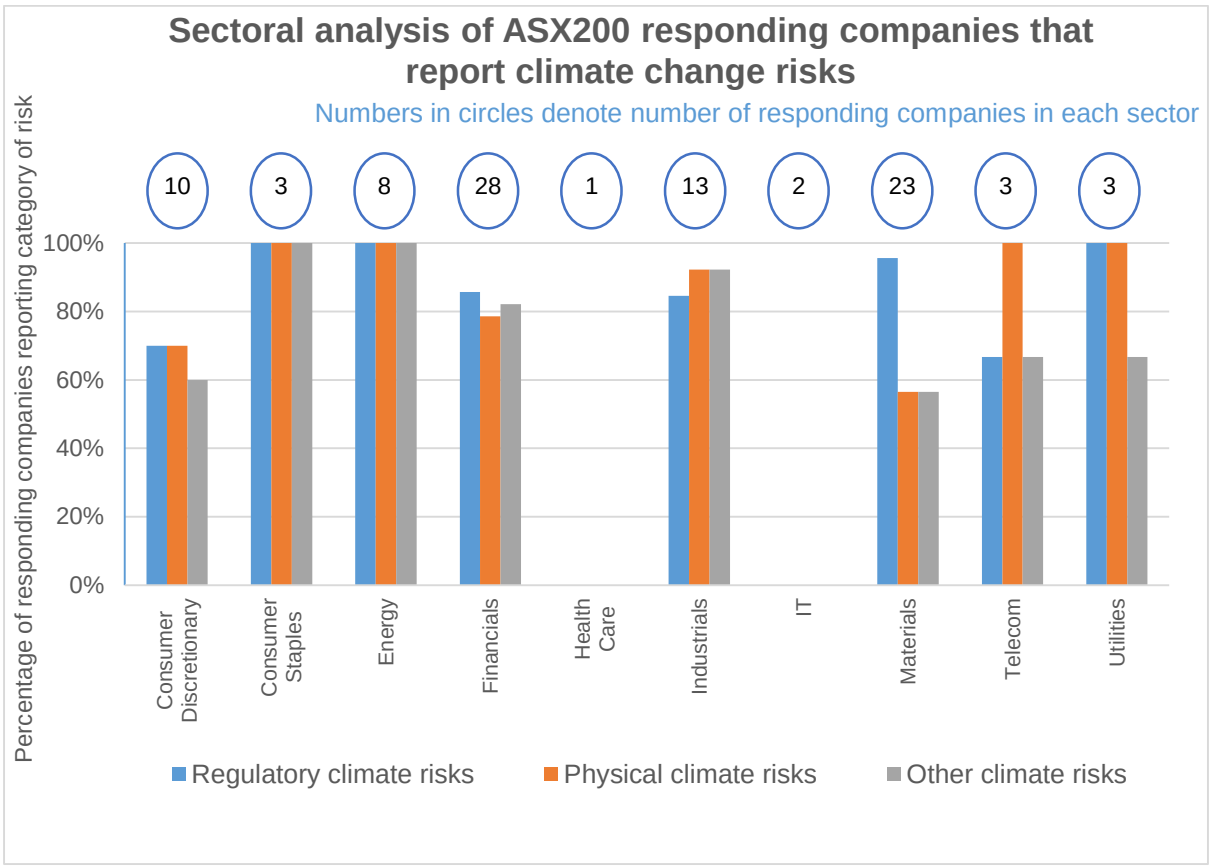
Analysis of disclosures made through CDP's climate change program

Analysis of disclosures made through CDP's climate change program in 2015 reveals that 390 companies operating in Australia, including 94 ASX200-listed companies, reported GHG emissions (Scope 1 and/or Scope 2) and other climate change information through CDP in 2015.

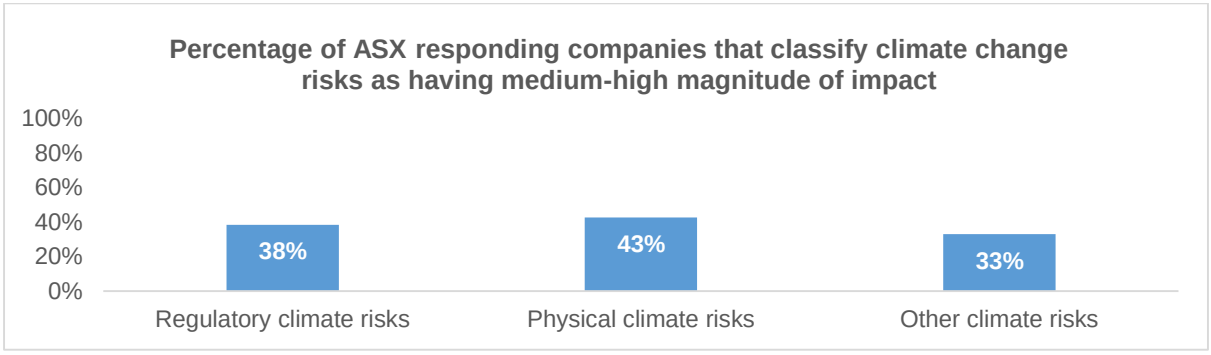
Of the ASX200 companies that reported through CDP, the following percentages reported climate risks:



[54] Net Balance Foundation (2014), *Disclosures on climate risk: A review of ASX top 200 companies*, Available at: www.netbalance.com.au/our-reports/2014/9/30/disclosures-on-climate-risk



Only 33-43% of ASX responding companies however classified these climate risks as having a medium, medium-high or high magnitude of impact on their operations – see chart below.



ToR 3: Australian involvement in the G20 Financial Stability Board discussions on carbon risk impacts for financial stability

The Financial Stability Board (FSB), which was established to monitor and address vulnerabilities in the global financial system, promotes global financial stability by coordinating the development of financial sector policies. Australia is represented on the FSB by the Treasury and the Reserve Bank. The FSB works closely with the G20, of which Australia is also a member.

In April 2015, following the G20 Finance Ministers and Central Bank Governors meeting in Washington D.C., the G20 submitted a communique to the FSB requesting that it convene a review of how the financial sector can take account of climate-related issues.[55] In the communique, the members also undertook to work to reach favourable outcomes in the Climate Finance Study Group's work in relation to climate finance. In response, on 9 November 2015 the FSB put a proposal to the G20 to establish an industry-led task force to develop voluntary, consistent climate-related disclosures designed to assist lenders, insurers, investors and other stakeholders in understanding material risk.[56]

On 4 December 2015, FSB Chair Mark Carney announced the Task Force on Climate-related Financial Disclosures, chaired by Michael R. Bloomberg. The Task Force is comprised of 25 industry members across a range of industries, countries and areas of expertise, and includes Fiona Wild, BHP Billiton's Vice President, Environment and Climate Change who is based in Melbourne. Its mandate is to:

- → consider the physical, liability and transition risks associated with climate change and what constitutes effective corporate financial disclosures in this area, and
- → develop a set of recommendations for voluntary, consistent, comparable, reliable, clear and efficient climate-related disclosures.

The Task Force will conduct outreach with a wide range of stakeholders and conduct public consultations to ensure that it receives the necessary input into the development of its final recommendations, which are expected in the first quarter of 2017.

[55] Communique, G20 Finance Ministers and Central Bank Governors Meeting, 16-17 April 2015, Washington D.C. Available at: http://g20.org.tr/wp-content/uploads/2015/04/April-G20-FMCBG-Communique-Final.pdf [29 March 2016].
[56] Financial Stability Board (2015), *Proposal for a disclosure task force on climate-related risks,* 9 November. Available at: https://www.fsb-tcfd.org/wp-content/uploads/2016/01/FSB_Disclosure-task-force-on-climate-related-risks.pdf [29 March 2016].

ToR 4: Current regulatory and policy oversight of carbon risk disclosure across government agencies

The major regulatory and market-based schemes for reporting environmental information currently operating in Australia are discussed below. However, these schemes are piecemeal and there is presently no effective regulatory and policy oversight of carbon risk disclosure by Australian government agencies.

National Greenhouse & Energy Reporting Scheme

The National Greenhouse and Energy Reporting Scheme (NGERS), established by the *National Greenhouse and Energy Reporting Act 2007* (NGER Act), is a mandatory reporting scheme, backed by civil and criminal penalties, that requires the biggest Australian energy users and emitters to register with and report annually to the Clean Energy Regulator on their greenhouse gas (GHG) emissions, energy production and energy consumption.[57] The methods by which emissions and energy production and consumption are to be measured are prescribed by the legislation.[58] Data reports are analysed and audited by the Clean Energy Regulator to ensure compliance with the legislation and the reported data is made publicly available.

The NGER Act requires registered companies to keep "adequate records" sufficient to enable the Clean Energy Regulator to determine whether the company has complied with its obligations under the Act. In particular, reporters are encouraged to record decision-making processes and details of the calculation and data analysis methods used.[59]

NGERS does not require companies to disclose carbon risks or opportunities information. Unlike the UK and some other international systems, NGERS also does not require Australian companies to disclose emissions, energy use or production, or other climate change information outside Australia. This is a shortcoming, as many Australian companies have significant carbon emissions and risk exposure from their operations or investments outside Australia.

Corporations Act

The *Corporations Act (Cth) 2001* contains some reporting provisions that may extend to environmental matters. Section 299(1)(f) requires the director's report for a financial year to:

> *"if the entity's operations are subject to any particular and significant environmental regulation under a law of the Commonwealth or of a State or Territory – give details of the entity's performance in relation to environmental regulation."*

This requirement would apply in situations where a reporting entity holds an environmental licence or is otherwise subject to regulatory operating conditions, or has been prosecuted under environmental legislation. However, the information contained in these reports is likely to be fairly general and non-technical,[60] and not extend to reporting on carbon risk.

Section 299A of the Corporations Act requires directors' reports to "*contain information that members of the listed entity would reasonably require to make an informed assessment of:*

(a) the operations of the entity reported on; and
(b) the financial position of the entity reported on; and
(c) the business strategies, and prospects for future financial years, of the entity reported on."

[57] Section 19 of the *National Greenhouse and Energy Reporting Act* 2007. Available at: www.legislation.gov.au/Details/C2014C00813 [29 March 2016].
[58] Section 10 of the NGER Act.
[59] Australian Government: Clean Energy Regulator, *Complying with NGER* (2015). Available at: www.cleanenergyregulator.gov.au/NGER/Reporting-cycle/Complying-with-NGER [29 March 2016].
[60] Clayton Utz (2013), *Environmental, social and sustainability risks to be highlighted in corporate reporting.* Available at: www.claytonutz.com/publications/edition/12_september_2013/20130912/environmental_social_and_sustainability_risks_to_be_highlighted_in_corporate_reporting.page, [29 March 2016].

Under this provision, the operating and financial review component of a directors' report should include:

> *"A discussion of environmental and other sustainability risks where those risks could affect the entity's achievement of its financial performance or outcomes disclosed, taking into account the nature and business of the entity and its business strategy. For example, environmental risks that may affect an entity's achievement of its financial prospects would be more likely for an industrial entity than for a financial services entity."*[61]

ASX requirements for sustainability risk disclosure

The ASX Corporate Governance Council publishes Principles and Recommendations setting recommended corporate governance practices for ASX-listed companies. The Principles and Recommendations are not mandatory; however, it is mandatory to explain the reason for any decision not to adopt a recommendation.

In March 2014, the Council released a new recommendation requiring entities to disclose whether they have any material exposure to economic, environmental and social sustainability risks and how they manage those risks. Environmental sustainability refers to the ability of a listed entity to continue operating in a manner that does not compromise the health of the ecosystems in which it operates over the long term. Material exposure arises where there is a real possibility that a particular sustainability risk could substantively impact on the listed entity's ability to create or preserve value for security holders over the short, medium or long term.

The Council also replaced most references in the Principles and Recommendations to 'financial reporting' with the wider concept of 'corporate reporting'. This concept is broad enough to incorporate sustainability reporting.

In addition, the ASX's Listing Rules require mining entities to include mineral resources and ore reserves statement in their annual reports, but does not require any reporting in relation to the risks associated with climate change.[62]

[61] Australian Securities and Investment Commission (2013), *Regulatory Guide 247: Effective disclosure in an operating and financial review,* RG 247.63, p.19. Available at: http://download.asic.gov.au/media/1247147/rg247.pdf, [29 March 2016].
[62] Rule 5.21 of the *ASX Listing Rules*, pp.510-11. Available at: www.asx.com.au/documents/rules/Chapter05.pdf [29 March 2016].

ToR 5: Any other related matters

Analysis of climate risks should be accompanied by an analysis of climate change opportunities

While much of the Australian debate around climate change has focussed on:

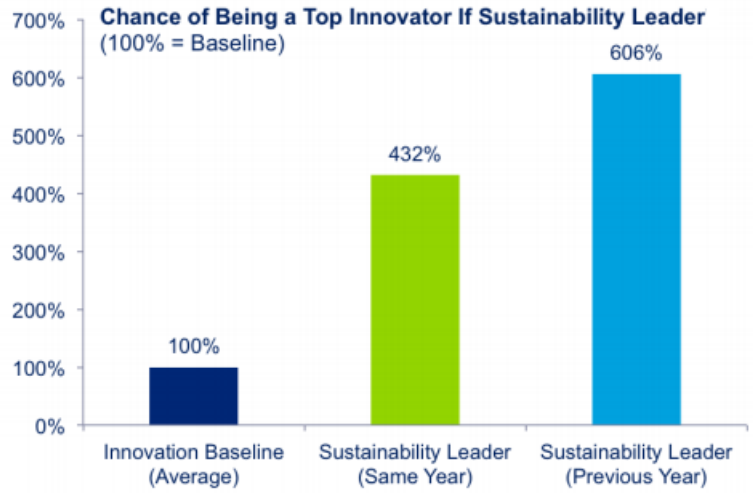
- → the risks posed by climate change to Australian society, the economy and the environment, and
- → the risks that action on climate change may pose to economic growth, as argued by some

there has been insufficient attention given to the extensive opportunities for innovation, growth, profit and improved access to emerging markets that it presents.

Effective corporate sustainability programs analyse the sustainability (including climate) risks and opportunities that a company is exposed to. It is becoming more and more widely recognised that this analysis helps companies innovate and identify new business opportunities:

> *"Sustainability drives innovation, and it does so in a very significant way… sustainability leaders are more than 400% more likely to be considered innovation leaders…*
>
> *Why are we seeing such a strong link from sustainability to innovation? Sustainability can provide a different "lens" for thinking: it helps companies to approach situations differently, either thinking about different subjects (e.g., emissions) or thinking differently about existing subjects (e.g., thinking about supply chains from the perspective of making suppliers more sustainable). Thinking differently can unlock companies' innovative potential—they may see situations from a different point of view, they may re-examine their perspective of what's important, and they can tap into new ideas.*
>
> *Sustainability can also help drive innovation by adding constraints. While constraints are often seen as reducing the ability to be creative, that is frequently not the case. The constraints imposed by sustainability can actually serve as an impetus for companies to think differently and therefore innovatively. For instance, viewing emission standard*s as a new constraint may lead to ideas for improving energy efficiency and reducing use."[63]
>
> Daniel Aronson
> Director
> Deloitte Consulting

The correlation that Deloitte Consulting identified between innovation and sustainability leadership is shown in the following chart:[64]



[63] Aronson, D. (2013), *Sustainability Driven Innovation: Harnessing sustainability's ability to spark innovation*, Available at: www.greenprof.org/wp-content/uploads/2013/12/Sustainability_Driven_Innovation_102513.pdf, [31 March 2016].
[64] Ibid, p2.

*"…**The low-carbon economy is the biggest opportunity of our lifetimes, and businesses that fail to recognise this fact risk being left behind**.*

The new climate economy is becoming a reality, and businesses worldwide are realising they not only have a crucial role to play in the fight against climate change, but they also have a lot to gain — including billions in cost reductions or fuel savings, or a piece of the growing [US]$5.5 trillion global market for low-carbon goods and services."[65]

Paul Polman
CEO
Unilever

"Innovation and entrepreneurial business activity is vital across all sectors of the Australian economy, especially in growth sectors such as clean energy, energy efficiency, and low emissions solutions."[66]

Oliver Yates
CEO
Clean Energy Finance Corporation

Other recent international developments relating to carbon risk

- A number of US states have begun investigating fossil fuel companies including Exxon-Mobil as to whether they have committed corporate fraud and misled investors and the public about the dangers of climate change.[67]
- In 2015, Norway's sovereign wealth fund divested most of its holdings in pure-play coalmining companies.[68]
- In 2016, the Dutch central bank, DNB, surveyed a number of Dutch institutions to determine whether there was any evidence of a carbon bubble. The survey found that Dutch banks, insurers and pension funds have low exposure to carbon risk, and some are already taking divestment measures.[69]
- Sweden's Minister for Financial Markets has said that he wants global pension funds to "*publish their carbon footprint*".[70] Six buffer funds for the Swedish state-run pension system have announced that they will begin using three standard indicators to calculate and report on their carbon footprints. [71]
- Brazilian banking regulations now require banks to account for environmental risk,[72,73] which includes climate and carbon risk.

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[65] Polman, P. and Kidwai, N.L. (2015), 'In the new climate economy', *Indian Express*, 12 August 2015, Available at: http://indianexpress.com/article/opinion/columns/in-the-new-climate-economy Emphasis added [30 March 2016].
[66] Hill, J., (2016), 'Australian Government Establishes $1 Billion Clean Energy Innovation Fund', *Clean Technica*, Available at: http://cleantechnica.com/2016/03/29/australian-government-establishes-1-billion-clean-energy-innovation-fund/ [31 March 2016].
[67] Hardcastle, J. (2016), 'States Investigate Exxon, Launch Corporate Climate Fraud Crackdown', *Environmental Leader*, Available at: www.environmentalleader.com/2016/03/30/states-launch-corporate-climate-fraud-crackdown-investigate-exxon-and-other-fossil-fuel-majors/, [31 March 2016].
[68] Hovland, K. (2015), 'Norway's Norges Bank Investment Management ditches coal', *The Australian*. Available at: http://www.theaustralian.com.au/business/wall-street-journal/norways-norges-bank-investment-management-ditches-coal/news-story/ef89ae032492016f05cf965534e0f8d8?nk=c5eb505982eb46b8a00f36bc23607ac3-1459226209 [31 March 2016].
[69] Responsible Investor, *Dutch central bank latest regulator to tackle issue of climate risk in the financial sector,* 10 March 2016.
[70] Marriage, M. (2014), 'Pension funds urged to publish climate risks', *FT.com*. Available at: www.ft.com/cms/s/0/1c5e0b58-f795-11e3-90fa-00144feabdc0.html [29 March 2016].
[71] Responsible Investor, *Sweden's AP funds to coordinate the way they calculate and report carbon footprints,* 24 Nov 2015.
[72] Mayer Brown (2014*), Brazilian Central Bank Publishes Guidelines for the Social and Environmental Responsibility Policies of Financial Institutions*. Available at: http://reaction.mayerbrown.com/rs/vm.ashx?ct=24F76F1DD6E443A9CCDD89ACD12C9211DFF155B2DF8E0BD15EE5636069FFCB1CDB7A3A9C3 [29 March 2016].
[73] Bolund, P. (2015), *The sustainability revolution in finance*. Available at: www.government.se/opinion-pieces/2015/12/the-sustainability-revolution-in-finance/ [29 March 2016].

Recommendations

In light of the international scope and expertise of the Task Force on Climate-related Financial Disclosures, CDP and CDSB believe that it may be wise for the Committee to await the Task Force's recommendations before making any detailed recommendations in relation to an Australian carbon risk disclosure framework or scheme. However, we make the following general comments about the characteristics of robust and effective carbon disclosure frameworks.

The current examples of mandatory climate change and environmental reporting schemes, backed by legislation, have generally been more effective than voluntary reporting schemes and, on the whole, are driving the creation of more complete and consistent environmental information.

Incorporating climate and environmental information into mainstream annual corporate reports is critical to driving environmentally-responsible investment decisions, as separate sustainability reports are typically not prepared with the same rigour as mainstream reports and are often not considered by investors.

As Lois Guthrie, CDSB's Founding Director said following CDBS's participation at the World Economic Forum in Davos in 2016: "If climate change is a mainstream risk to financial stability, then it should be reported through mainstream filings just like equivalent risks. … Decision-makers and standard setters need to take a good look at the way in which climate, financial, governance and management disclosures work together to support effective decision-making."

CDP and CDSB recommend that carbon risk disclosure schemes should incorporate the following elements:

- → A clear objective for the reporting activity so that reporting organisations know why they are reporting and the purpose for which the information they report will be used. Such objectives should include:
    - Informing investors whether the main drivers of cash flows and/or the viability of the business model are at risk from climate change, and
    - Analysis of climate risks, including a sensitivity analysis, and/or low-carbon business plans against agreed science-based targets,
- → A requirement to deliver information set by an appropriate authority that specifies the purpose of reporting, the target or primary audience, the governance structure to enact reporting and mechanisms for enforcement of reporting requirements,
- → Clear content elements so that the reporting organisation knows what to report,
- → A standard for complying with the requirement, setting suitable criteria for assurance activities and explaining what constitutes useful information so that the reporting organisation knows how to report,
- → A system, process or reporting platform for storing and delivering climate-related financial information with the capacity for aggregating it with other data sources so that reporting organisations know where to report information and users know where to find and analyse it,
- → An assurance process for ensuring that assertions comply with the standard used to prepare them and that they do not include any material misstatements nor misrepresentations,
- → A review process and clarity on user expectations so as to facilitate a two-way dialogue between preparers and users of information and feedback to standard setters that support the continuous improvement of reporting requirements, and
- → Consideration of how the reporting scheme can harmonise with other national and international reporting requirements, in order to minimise the reporting burden on companies and maximise the likelihood of compliance with the scheme.