

STOCK	BID	OFFER	LAST	VOL
MIRVAC GRP STAP	2.260	2.270	2.270	6M
MISSIONNEW	0.000	0.000	0.000	0
MITCH SERV	0.038	0.039	0.039	1HT
MTIFIL	0.003	0.004	0.003	3M
MTULA	0.585	0.600	0.585	54T
MMADOFFSHOR	0.175	0.185	0.185	1M
MMJ PHYTD	0.375	0.380	0.375	5HT
MFGROUP	5.220	5.260	5.230	2HT
MOBECOM	0.000	0.000	0.000	0
MOBEMBRACE	0.078	0.079	0.079	1HT
MOBILAFM	0.000	0.000	0.000	0
MOBILCOM	0.135	0.150	0.150	0
MOBRES	0.059	0.060	0.059	30T
MOBISALUS	5.200	5.300	5.200	2M
MOB MEDIA	0.000	0.000	0.000	49T
MOBLOPO	0.000	0.000	0.000	0
MOB AB INV	0.755	0.780	0.750	0
MOBACEL	15.18	15.21	15.18	0
MOBASH IVF	1.585	1.570	1.585	42T
MOBMAX	0.005	0.005	0.005	0
MOBNEY3	1.400	1.400	1.400	0
MOBTEZUMA	1.400	1.400	1.400	0

CEO Guide to Climate Action Series

Climate Action in 2017

Insights into the readiness of Australian business to disclose climate-related financial risks and opportunities

August 2017



Foreword – Andrew Petersen

Impacts from climate change cause systemic risks - threatening the global economy, peace and political stability. These challenges represent an unprecedented opportunity to finance sustainable business solutions and channel trillions of dollars of investment into the low-carbon economy.

The evolution of Australia's corporate culture and practice are key to addressing climate risk. They require corporate leaders to be proactive in both thinking and attitude.

Very soon Australian businesses will have to have a coherent and comprehensive approach as the Financial Stability Board's climate disclosure recommendations will be posing two critical questions:

- What is your plan for a scenario where full decarbonisation occurs over the coming decades?
- What is your plan for coping with anywhere from 1.5 to 6 °C of warming?

Incremental environmental improvement strategies will look increasingly dated.

Carbon-intensive operations need to be treated like the soon-to-be-stranded assets they must, and will, become. Australian corporate strategies need to begin with science-based evaluation; evolve into a transition strategy and result in net zero emissions based on 100% clean energy.

The strategy needs to be embedded in every part of the organisation, sponsored, announced and led by the chief executive, and become a defining part of a company's DNA. Anything less is not worth the digital annual sustainability report it is written on.

By embracing the recommendations, Australian business will provide an important step in reaching the Paris Agreement and keeping global warming well below a +2°C average temperature increase.

Given the urgency and scale of transformation needed to safeguard the future of business and society, Australian business leaders must send a clear and strong political message to the Australian community reaffirming their commitments to implement the Paris Agreement. The Sustainable Development Goals (SDGs) will not be achieved unless climate change is addressed.

Andrew Petersen

Chief Executive Officer, Sustainable Business Australia

Foreword – Tony Cooper



Over the past year or so, Energetics has seen demand for strategic energy and climate management advice rise significantly across our client base. The drivers are largely commercial – upheaval in our energy markets, opportunities as the costs of renewable energy and storage technologies fall, and more recently, the focus on climate-related financial risk disclosure from the global investment community.

The most urgent issue has been the escalation in energy costs. As energy budgets have blown out, businesses are seeking to hedge against the persistent volatility in our east coast energy markets. Some of the most attractive options come from the boom in renewables, with a number of large energy users investigating corporate renewable power purchase agreements or on-site generation projects.

Australia's energy mix is changing and decarbonising. The energy investment landscape has shifted dramatically: outdated, inefficient, carbon-intensive energy generation is giving way to renewable energy and innovative storage solutions.

The investment landscape will further shift to support low carbon assets across all sectors of the economy. With the guidance set by the global Financial Stability Board, echoed in Australia by the Australian Prudential Regulatory Authority (APRA) and the Senate Economics Reference Committee, business is increasingly recognising the critical signals sent by investors.

SBA's Climate Action in 2017 report provides both insights into how well large emitting businesses are positioned for disclosure, but perhaps more fundamentally, their understanding of the management challenges, particularly the business risks and opportunities in the transition to a low carbon economy.

Tony Cooper

Chief Executive Officer, Energetics

Foreword – Paul Simpson



The Paris Agreement and the adoption of the SDGs marked the start of a new strategy for the world, with a clear message for businesses: the low-carbon revolution is upon us.

The choice facing companies and investors has never been clearer: seize the opportunities of a carbon-constrained world and lead the way in shaping our transition to a sustainable economy; or continue business as usual and face serious risks.

Meaningful action on climate change starts with understanding our impact. When CDP launched the concept of environmental disclosure in 2002, our request for climate information was backed by just 35 investors, with 245 companies responding.

Fast forward 15 years and our annual request has helped bring disclosure into the mainstream. Today, nearly 6,000 companies, representing 60% of global market capitalization, disclose through CDP at the request of over 800 investors with combined assets of US\$100 trillion.

The steep rise in the number of Australian companies taking part – from just five in 2003 to 98 in 2016 – mirrors this upward trend. Among them are some of the leading lights in corporate environmental action globally, with six Australian companies making it onto CDP's Climate A List last year in recognition of their leadership on climate change.

As more and more companies realise that doing good for the planet and the bottom line go hand in hand, we are getting ever closer to a tipping point that will mainstream climate action. CDP's vision – that of a thriving economy that works for people and planet in the long term – is well within reach.

Paul Simpson

Chief Executive Officer, CDP

Contents

1. Introduction: The growing importance of climate risk disclosure.....6	
Landmark developments: globally and within Australia.....7	
2. Insights from CDP reporters.....8	
Who's reporting?.....9	
Drivers for disclosure.....10	
Barriers to disclosure.....11	
Identified risks and opportunities.....12	
3. Comparing the CDP insights to TCFD's core recommendations.....16	
Governance.....17	
Strategy.....18	
Risk management.....21	
Metrics and targets.....22	
Disclosing in Annual Financial Filings.....23	
Is Australian business ready?.....25	
4. Actions for business26	
Appendix:	
Climate risk and opportunity definitions.....34	
References.....37	

1. The growing importance of climate risk disclosure

In Australia and internationally there is increased mainstream corporate momentum towards climate risk and opportunity disclosure. Understanding and disclosing climate risks and opportunities are complex.

In June 2017, the Financial Stability Board's Task Force on Climate Related Financial Disclosure (TCFD) published a standardised international framework of recommendations to assist organisations to identify and assess how climate related impacts can and may affect the financial performance of their business¹.

The recommendations have been referenced within the G20 Action Plan for Growth² and supported by nearly 400 global investors with over US\$22 trillion in assets³, providing a clear signal to governments, business and markets that climate risks require the same level of due diligence as other significant business and financial risks.

Investors are taking notice. Financial regulatory authorities, fund managers and shareholders are asking for better information to help them understand complex climate related investment risks. Dissatisfied investors are increasingly launching shareholder resolutions and legal challenges⁴.

Business needs to be on the front foot and Australia's corporate culture is key for addressing climate risk, as it requires leaders to be proactive. In particular, climate risk management is now the functional responsibility of the CFO and business, if it hasn't already, needs to adapt accordingly.

Proactive climate risk and opportunity disclosure and management will generate insights for the reappraisal of business models in view of the realities of physical impacts of climate change and the transition to a low carbon economy. Making this change will lead to more efficient markets and a more stable, resilient and sustainable economy⁵.

Insights and guidance for Australian business on climate-related financial risk disclosure

This report is intended to support business leaders in their response to growing disclosure requirements. It is split into the following sections:

Insights from CDP reporters looks at the current status of climate reporting in Australia

Comparing the CDP insights to TCFD core recommendations considers how ready Australian business is to meet the disclosure requirements

Actions for business sets out our recommended steps for preparation for disclosure, as part of the SBA CEO Guide to Climate Action series.

Our aim is to encourage CEOs, Boards of Directors and senior management to take part in disclosing climate risks and opportunities and join other businesses in making the transition to the low carbon economy.

Landmark developments: globally and within Australia

2015 was a seminal year. The Sustainable Development Goals (**SDGs**), identifying 17 critical areas of sustainable & equitable growth, were adopted in September 2015. Three months later, **the Paris Agreement** was signed to formally start the transition to net zero carbon emissions mid century. Australia formally ratified this agreement in November 2016

Both the Paris Agreement and SDGs set the boundaries of operation for business. Following this transformational momentum, four subsequent landmark events have significantly increased the business case for climate risk disclosure in Australia. This report considers the readiness of Australian business to respond to these developments.

1

In October 2016, **Noel Hutley SC** issued a legal opinion stating that carbon risks “are capable of representing risks of harm to the interests of Australian companies”. It also stated that “directors who fail to consider ‘climate change risks’ now could be found liable for breaching their duty of care and diligence in the future” and that “to consider climate change risks actively, and disclose them properly, will reduce exposure to liability”⁶.



2

In February 2017, **Geoff Summerhayes**, Executive Board Member of Australian Prudential Regulatory Authority (APRA), stated that “some climate risks are distinctly ‘financial’ in nature. Many of these risks are foreseeable, material and actionable now”⁷.



3

In April 2017, **the Senate Economics References Committee** published its findings and recommendations from an inquiry into carbon risk disclosure in Australia. It recognises that climate change has material risks for businesses and “there should be better disclosure of carbon risks by more Australian firms”⁸.



4

In June 2017, the **Task-Force on Climate-related Financial Disclosures (TCFD)**, established by the Financial Stability Board (FSB), finalised its recommendations to help business identify and disclose the information needed by investors, lenders and insurance underwriters to appropriately assess and price carbon risks and opportunities¹. The recommendations are anticipated to become the “Gold Standard” of disclosure⁹.



2. Insights from CDP reporters

As Australian business begins to weigh the implications of the TCFD guidance on climate-related financial disclosure, how well is Australian business, particularly those in sensitive sectors, currently managing the issue of climate change? Are they ready to disclose their climate-related financial risks to the standard outlined by the TCFD?

We know that different sectors of the economy have different motivations to pursue measures around sustainability performance, often driven by brand and reputational value, especially in the commercial property and finance sectors. However, policy uncertainty over the past decade has undermined the focus on climate change, the need for a strategy to decarbonise and the will to implement energy efficiency opportunities. A carbon price was established in 2012 and then repealed two years later, removing an important signal to business and consumers for action. Today, national emissions are on the rise¹⁰.

What can we learn from the 2016 CDP reports?

This report seeks to extract insights on business readiness for climate-related financial disclosure from the CDP's submissions (2016), in which participating Australian companies revealed their carbon management goals, activities, identified risks and opportunities. We examined (including interviewed) who's reporting, what is being reported, intentions and frameworks in place for disclosure. We also look at business feedback on the benefits and challenges of disclosing.

At the end of the report is a series of practical actions that businesses can take to improve their understanding, management and disclosure of climate risks in light of both the TCFD recommendations and growing shareholder scrutiny.

Information for this report is derived from the following sources:

- Submissions made by ASX200 companies to CDP as part of their 2016 climate questionnaire.
- Interviews with seven leading companies, six in the ASX200 and an ethical investment company, to gain greater understanding and observations from their experience in disclosure.

What is CDP?

CDP is the most widely used voluntary carbon disclosure framework and the largest source of carbon emissions data in the world¹¹. In 2016, over 1,000 companies responded to the climate change questionnaire, representing 12% of global greenhouse gas emissions¹². In Australia, 80 ASX200 companies made climate submissions to CDP in 2016, of which 68 are public¹³. This report focuses on these disclosures. CDP data was used in this SBA research as it is the most comprehensive source of corporate carbon data in Australia. SBA views CDP reporting as a valid and important step in the right direction by companies who are on the journey of implementing the TCFD recommendations.

Who's reporting?

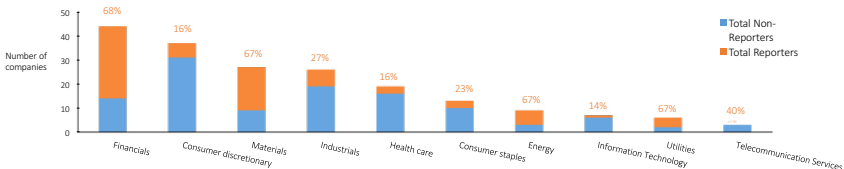
In 2016, 41% of the ASX200 made a CDP submission¹⁴. The chart below shows the number of ASX200 CDP reporters and non-reporters.

The largest proportional representation of disclosing companies from each sector were from the financial, materials, energy and utilities sectors and the lowest proportional representation from each sector was from IT, healthcare and consumer discretionary sectors.

"Companies must improve reporting on their management of carbon risks and opportunities for their shareholders and banks to make more informed decisions. We are doing our part by being an earlier adopter of the TCFD recommendations, joining this initiative and thus signalling we will be seeking greater disclosure from our customers about their climate related risks and opportunities." **ANZ**

Source: SBA Interviews

Figure 1. Number of reporting and non-reporting ASX 200 companies by sector, with percentage of each sector reporting shown



Source: CDP Australian Climate Leadership Report 2016, sectors determined by CDP

Drivers for disclosure

We interviewed a select group of reporters to the 2016 CDP on what they thought were the drivers, benefits and opportunities to disclosure. The results are summarised below.

The results show that active management of climate risks and opportunities is recognised as valuable. Not only in anticipation of greater government-mandated requirements and increased investor scrutiny, but for the opportunities to innovate, reduce costs and engage more closely with business stakeholders such as suppliers and communities.

“Acknowledging that the transition to a decarbonised economy is required, and this likely means decarbonisation of the energy system by 2050, disclosure enhances consideration of, and support for, sensible, long term policy to incentivise that transition.” **AGL**

Source: SBA Interviews

Drivers for disclosing	Value of disclosing	Opportunities of disclosing
<ul style="list-style-type: none"> Physical impacts of recent extreme weather events on business operations and supply chains Increase in emissions and risks due to acquisition of new assets Paris Agreement and increased certainty of national actions to keep temperature rise below 2°C Sector wide progression towards increased disclosure Mandatory National Greenhouse and Energy Reporting 	<ul style="list-style-type: none"> Increases knowledge within the business: disclosing risk forces business understanding Demonstrates appropriate risk management to investors and other stakeholders Allows informed business decisions Provides a basis to interact with policy-makers Identifies exposure to carbon intensive sectors 	<ul style="list-style-type: none"> Identify where regulatory changes are likely to lead and respond quickly to these changes Plan investments for the long term Cost reduction and innovation Work with supply chain to reduce carbon intensity Greater stakeholder engagement and positive community perception

Source: Interviews

Barriers to disclosure

We also asked the interviewees what they thought were the barriers to disclosure and how they manage those barriers. The results are summarised below.

Across the group of interviewees we see some concerns expressed for the integrity of their data and systems. Ahead of improving the disclosure of climate risks and opportunities, the management fundamentals need to be right. Companies need confidence in the accuracy of their energy and carbon data; management and reporting systems must be robust, and engagement with staff across all levels of the company is critical.

Barriers of climate risk disclosure	Managing barriers
<ul style="list-style-type: none"> Ensuring everyone in the business is aligned Commercial sensitivity in carbon intensive sectors for own business or supply chain Ensuring accuracy of data Comparability and clarity of carbon reporting within and between sectors Business forecasting, including policy and market changes 	<ul style="list-style-type: none"> Engage with all levels of the organisation and build awareness and understanding of the importance of disclosure Engage with customers to ensure a balanced public position Improve, expand and automate systems to ensure data accuracy Use industry accepted reporting requirements and certifying science-based targets

Source: SBA Interviews

Climate change is gaining the attention of shareholders

September 2014, the Commonwealth Bank of Australia was pressured by shareholders to disclose climate risks in its lending and investment portfolios¹⁵

April 2015, BP shareholders voted for the company to increase its climate change disclosure, in light of concerns for potential stranded assets¹⁶

May 2017, pressure from shareholders led Oil Search to commit to conducting a 2 degree and a 1.5 degree scenario analysis, as well as to adopt the TCFD recommendations¹⁸

May 2016, a shareholder resolution was passed requesting Rio Tinto to disclose their strategy relating to the risks and opportunities posed by climate change¹⁷.

May 2017, ExxonMobil investors voted for the company to report on the financial implications of climate change¹⁹.

August 2017, shareholders launch an action against the Commonwealth Bank over 'inadequate' disclosure of climate change risks²⁰

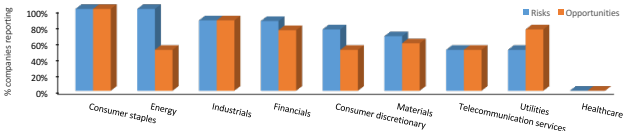
Identified risks and opportunities

The chart below shows the percentage of disclosing companies by sector that identified all three types of CDP classified risk and opportunities types: physical, regulatory and other climate risks (see **Appendix** for definitions and how they correspond to TCFD defined risks).

The table on the right summarises the top risks and opportunities identified across all reporting companies. Examples are presented in graphs on the following pages. Opportunities are mostly focused around product and service innovation as well as cost reduction. Risks are more varied and include increased costs, physical damage as well as changing customer behaviour and supply chain impacts.

Whole of sector risks were also noted by individual reporters for the financial and energy sectors. We note that sector or cross-sector opportunities were not disclosed, with no discussion of the potential for collaboration or co-operation leading to overall positive systemic market change.

Figure 2: Percentage of companies by sector that identified carbon risks and opportunities from every CDP risk and opportunity category

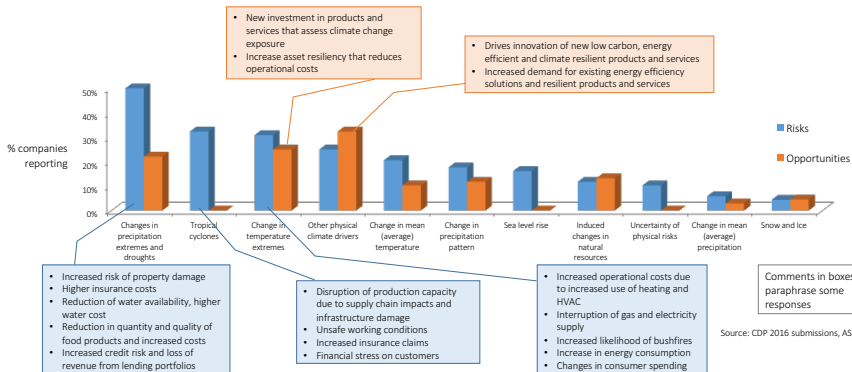


Risk type	Top risks	Top opportunities
Transition (regulatory and other)	<ul style="list-style-type: none"> Emission reporting obligations Uncertainty surrounding new regulations Reputation Changing consumer behaviors 	<ul style="list-style-type: none"> Emission reporting obligations Other regulatory drivers Reputation Changing consumer behaviors
Physical	<ul style="list-style-type: none"> Changes in precipitation extremes and droughts Tropical cyclones Changes in temperature 	<ul style="list-style-type: none"> Other physical climate opportunities Change in temperature extremes

Climate opportunity: 62% of ASX CDP Reporters have goods and/or services classified as low carbon products or as enabling a third party to avoid GHG emissions.

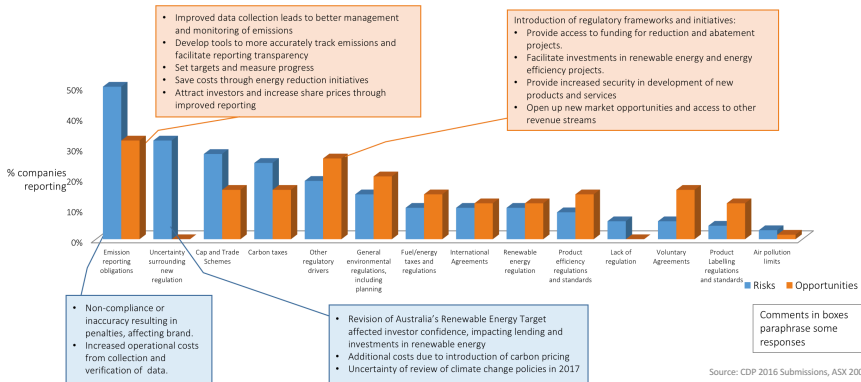
Source: CDP 2016 submissions, ASX200

Top disclosed physical risks and opportunities

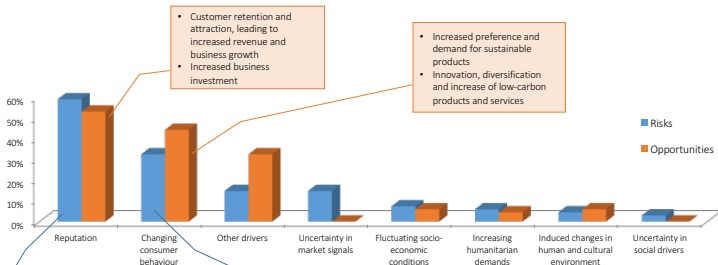


Source: CDP 2016 submissions, ASX200

Top disclosed transition risks and opportunities



Top disclosed other risks and opportunities



- Customer retention and attraction, leading to increased revenue and business growth
- Increased business investment

- Increased preference and demand for sustainable products
- Innovation, diversification and increase of low-carbon products and services

- Consumers avoidance, impacting sales, credibility and brand value
- Undermined investor confidence decreasing market valuation and exclusion from ethical / green funds
- Decreased workforce morale, impacting talent attraction and retention

- Consumers stop purchasing insurance products due to price increases caused by increased frequency of extreme weather events or go to competitors for lower prices (insurance sector risk)
- Consumers stop using centralised energy demand and generate their own through distributed energy solutions (energy sector risk)
- Customers switch to renewable energy alternatives and the demand for fossil fuels decreases (O&G sector risk)
- Inability to meet customer demand for alternative, low carbon products

Comments in boxes paraphrase some responses

Source: CDP 2016 submissions, ASX200

3. Comparing CDP insights to TCFD's core recommendations

The primary objective of the TCFD's recommendations is to encourage organisations to assess and disclose material climate risks and opportunities. To make informed financial decisions, investors, lenders and the businesses themselves need to understand how climate risks and opportunities are likely to impact an organisation's future financial position and the resilience of its strategy²¹.

The TCFD's work is also motivated by the need for a standardised framework for climate-related financial disclosures across jurisdictions and sectors²¹. The core recommendations are divided into four areas: governance, strategy, risk management and metric and targets as shown to the right.

Using the insights gained from undertaking the CDP analysis and interviews, we have compared current Australian practice with the TCFD core recommendations, asking a series of questions that focus on areas of key difference or change between the recommendations and previous disclosure norms.

In addition, the TCFD recommendations also state that climate disclosures should be included in mainstream annual financial filings. This is the first time that a climate risk framework has been so definitive as to where disclosures are published. As such, we have also looked at whether Australian disclosing companies are reporting their climate related information in Annual Reports or other investor focused publications and what sort of information they are reporting there.

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the organization's governance around climate-related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's business, strategy, and financial planning where such information is material.	Disclose how the organization identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
Recommended Disclosures	Recommended Disclosures	Recommended Disclosures	Recommended Disclosures
a) Describe the board's oversight of climate-related risks and opportunities.	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	a) Describe the organization's processes for identifying and assessing climate-related risks.	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
b) Describe management's role in assessing and managing climate-related risks and opportunities.	b) Describe the impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning.	b) Describe the organization's processes for managing climate-related risks.	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Figure 6: TCFD Core Recommendations²¹

Governance

Governance

Disclose the organization's governance around climate-related risks and opportunities.

Recommended Disclosures

- a) Describe the board's oversight of climate-related risks and opportunities.
- b) Describe management's role in assessing and managing climate-related risks and opportunities.

Where does responsibility for climate related risks and opportunities ultimately sit in Australian business?

CDP reporters cited the drivers for managing climate risks as including regulation, international agreements, risks already being realised through the impacts of climate change from extreme weather, as well as a general shift towards reporting becoming the norm.

There is also recognition that there are benefits in managing climate risk such as reduced costs, the opportunity to pursue innovative thinking and more robust planning.

From the broader CDP results we see that the highest level of direct responsibility for managing climate issues rests with the board, while other reporting companies cite senior management as responsible.

We see too that attention is being given to a supportive organisational culture in which employees and managers are incentivised to drive initiatives that lower emissions.

Governance among CDP disclosing companies

Of the ASX200 disclosing companies:

- 94% have climate change integrated into their business strategy
- 87% have the board as the highest level of direct responsibility for climate change management
- 77% provide incentives for the management of climate change issues, including:
 - Sustainability performance related remuneration, such as achievement of greenhouse gas emission reductions
 - Employee sustainability awards
 - Employee rewards for sales of sustainability products and services
 - Mechanisms to encourage employee adoption of low-carbon behaviours

Source: CDP 2016 submissions, ASX200

Strategy

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.

Recommended Disclosures

- a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.
- b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.
- c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Are Australian businesses appropriately describing the impacts of climate risks and opportunities so that investors can make informed decisions?

A primary objective of the TCFD recommendations is to encourage organisations to evaluate and disclose the material climate risks and opportunities that are most relevant to their business activities²¹. To make informed financial decisions, investors, lenders and the businesses themselves need to understand how climate risks and opportunities are likely to impact an organisation's future financial position and the resilience of its strategy against such impacts.

As shown earlier in this report, all Australian CDP reporters identify at least some climate risks and opportunities to their business and many also provide an overview of the impacts of those risks and opportunities on their business. For example, they may state that a risk may "decrease sales" or "increase costs" in certain areas.

However, to date, companies have not provided comprehensive descriptions of the impact of climate risks and opportunities on organisations' strategy and financial planning or their resilience to those impacts. In addition, they generally do not state whether the information that is provided is considered to be material. This makes it hard for investors to make informed decisions using the current level of climate disclosures.

"Businesses often start reporting their operational emissions - that's always important but it's also important to look at the material risks upstream in your supply chain and downstream in the use of your products. If you're a coal company, you're already emissions intensive by digging coal out of the ground, but if you're not also counting the emissions when your customers burn your coal then you're missing the main game. Similarly, with the financial sector, the equivalent is lending - you can be running a tight ship on your operational emissions but your customers, your projects, the new infrastructure that you facilitate - what are the climate consequences of that?"

Australian Ethical Investment

Source: SBA Interviews

Strategy – continued

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.

Recommended Disclosures

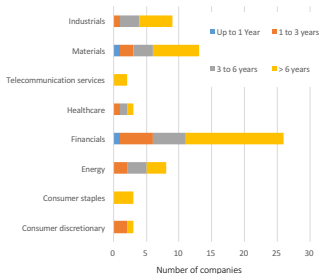
- Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.
- Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.
- Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Over what timeframes are Australian businesses identifying climate risks?

Unlike most other frameworks, the TCFD specifically asks organisations to describe their climate risks and opportunities as identified over the short, medium, and long term. The guidance notes, however, that while definitions of time horizons differ between industries, geographies and companies, it is expected that long-term horizons align to the investment horizons of the company, which are usually determined by the number of years that financial resources are applied to assets¹.

CDP asks reporting companies to reveal how far into the future climate risks and opportunities are considered. The options presented in the survey are up to one year, one to three years, three to six years, and greater than six years. As can be seen in Figure 7, nearly 30% of companies are assessing risks and opportunities for less than six years into the future. As several are in the energy, materials and financial sectors, this timeframe is considerably shorter than these organisations' investment horizons.

Figure 7: How far into the future are climate risks and opportunities considered by ASX CDP Reporters



Source: CDP 2016 responses

Strategy – continued

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.

Recommended Disclosures

- a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.
- b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.
- c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Are Australian businesses using scenario analysis?

There is often a high degree of uncertainty and complexity identifying and assessing climate impacts, from a physical, regulatory and market-response perspective. The TCFD recommends that companies use scenario analysis to strategically plan and adapt to this uncertainty.

The TCFD has provided detailed guidance on scenario analysis including provision of a technical supplement. It states that all companies should undertake a basic level and those with high transition risks should consider a more in depth investigation¹.

Climate scenario analysis is still in its infancy in Australia. In 2016, only 15% of ASX CDP reporters made mention of the tool in their submission. One of the previous challenges of undertaking scenario analysis was the lack of a standardised methodology and framework. With the TCFD recommendations and guidance we anticipate seeing a significant increase in its uptake over the next few years.

Two of the interviewees currently utilise scenario analysis and one of these used scenarios of 2°C or lower (with the other planning to in the next reporting year). Another interviewee was in development phase and expected to release the results of the analysis in the near future. Most, but not all, of the remainder were considering its use.

Noted benefits included strategic alignment, enhanced risk and opportunity identification, stakeholder (and investor) engagement, as well as the ability to highlight impact of non controllable influences. Challenges include modelling policy certainty, allocation of budget and understanding which uncertainties are the most critical to your business and where to draw the line on the types of scenarios to consider.

Source: SBA Interviews

Risk management

Risk Management

Disclose how the organization identifies, assesses, and manages climate-related risks.

Recommended Disclosures

- Describe the organization's processes for identifying and assessing climate-related risks.
- Describe the organization's processes for managing climate-related risks.
- Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

What tools are Australian companies using to identify risk?

Analysis of ASX CDP disclosures shows that 96% of reporters state that they integrate climate change risk management procedures into multi-disciplinary company wide risk management processes.

Despite this high level of integration, business has concerns about the accuracy of data and the robustness of management and reporting systems²². It is also acknowledged that emerging and strategic climate risks and opportunities can be challenging to identify and manage using traditional enterprise risk management frameworks²³.

Interviewees reported a range of tools to help identify and assess risks as shown in the box. These include the TCFD recommendations, scenario analysis and internal carbon pricing.

Across all ASX200 CDP reporters, an internal price on carbon is also used by 34% of companies, with a further 16% anticipating to introduce internal carbon pricing in the next two years.

Tools to identify and assess risks, as recommended by interviewees:

- Carbon disclosure frameworks such as CDP
- Carbon Portfolio Initiative
- Enterprise Risk Management (ERM)
- Green buildings certifications
- Internal carbon price*
- Portfolio analysis of exposure to fossil fuels
- Scenario analysis**
- Science-based targets
- Stakeholder engagement
- TCFD recommendations
- True cost carbon foot printing

* Including the use of an internal price on carbon which is consistent with limiting warming to below two degrees

** Including the UN's IPCC scenarios, Moody's Environmental Impacts Heat Map, 2° Investing Initiative

Metrics and targets

Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

Recommended Disclosures

- a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
- b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
- c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Targets – are Australian businesses doing enough?

There has been significant improvement in recent years in the numbers of companies setting targets for emissions reductions. Of those providing data, 85% of companies globally and 60% of Australian companies have already set targets to reduce their greenhouse gas emissions.

While we are seeing huge momentum globally behind the setting of long-term, ambitious targets – with hundreds of companies committing to science based targets in line with what's required to avoid dangerous levels of global warming – many companies are still not thinking far enough ahead.

Globally, a slight majority of 55% of companies have targets for 2020 and beyond, however just 14% set goals for 2030 or beyond, a situation that must change to achieve a transition to well-below 2°C.

Companies can move much faster than governments and have an opportunity to demonstrate their leadership, agility and creativity in curbing emissions.

Greenhouse gas reduction targets in Australia

60% of reporters to the 2016 CDP had either absolute or emissions intensity targets.

13% of reporters have a science based target.

32% of reporters anticipated setting a science based target some time within the next two years.

Seven Australian organisations have committed to set emissions reduction targets consistent with the global effort to keep temperatures well below the 2°C threshold through the **Science Based Targets initiative** of CDP, UN Global Compact, World Resources Institute (WRI) and WWF.

Source: CDP ASX200 2016 responses, Science Based Targets Initiative

Disclosing in annual financial filings

“The Task Force recommends that organisations provide climate-related financial disclosures in their mainstream (i.e., public) annual financial filings.”

Page 17, Final Report Recommendations of the Task Force on Climate-related Financial Disclosures
June 2017

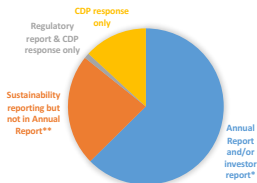
Are climate disclosures being reported in Annual Reports?

The TCFD recommendations make it clear that disclosure is required to enable investors to make appropriately informed investment decisions regarding the company, rather than being intended for a broader group of stakeholders. The TCFD also notes that in most G20 jurisdictions, such as Australia, those companies with public debt or equity have a legal obligation to disclose material information in their financial filings, including material climate-related information¹.

As shown in Figure 8, our analysis shows 64% of Australian CDP reporters (57 companies) provide climate information within their Annual Reports and/or investor focused publications such as shareholder reviews. A further 24% do not publish any climate related information in investor focused reporting and instead publish it within sustainability reports. Some 13% of reporters do not publish the information anywhere other than in their CDP response – noting a third of this category also do not make their CDP response public.

The analysis shows that a significant proportion of the ASX are providing some climate related information within publications for investors. However, there is little consistency in the type, quantity or quality of information being released.

Figure 8. Where climate disclosure information is being reported by ASX CDP Reporters



*Many of these companies also published climate related information in sustainability and regulatory reporting

**Many of these companies also published climate related information in regulatory reporting

Source: CDP ASX200 2016 responses;

Disclosing in annual financial filings - continued

“The Task Force recommends that organisations provide climate-related financial disclosures in their mainstream (i.e., public) annual financial filings.”

Page 17, Final Report Recommendations of the Task Force on Climate-related Financial Disclosures June 2017

How comprehensive is the information being published?

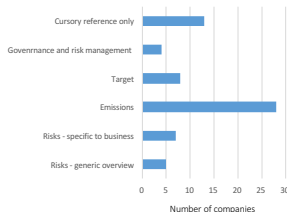
Of the 51 companies that included climate related information in their Annual Reports, only seven included a description of their identified climate risks. Only one of these included a statement regarding the materiality of these risks to the organisation (stating that there were no material risks). A further five companies provided a generic overview of climate risks in general but did not provide any information as to whether or how they were relevant to the organisation. Very little information was provided on climate opportunities.

Twenty eight companies provided their cumulative emissions data, often with a summary of recent reductions. Targets were reported by eight companies, with some, but not all, providing progress against these targets, while four companies provided a summary of their governance and risk management processes.

Only one company reported comprehensive information in all category areas – governance and risk management information, targets, emissions and identified risks as well as information on the impact of climate risks on their businesses, strategy, and financial planning and the resilience of their strategy.

A total of 13 companies provided a cursory reference to their management of climate related issues but did not provide any information on its management or performance.

Figure 8. What climate related information is being reported in 2016 Annual Reports by ASX CDP Reporters



Is Australian business ready?

The core recommendations of the TCFD require focus on governance, strategy, risk, metrics and targets. The information presented throughout this document from the 2016 CDP ASX200 responses and follow up interviews, indicates an uneven level of preparedness across Australian companies.

SBA's key findings :

- While CDP offers one reporting framework, it is globally recognised and well established. At a response rate of 41% (with even less choosing to disclose publicly), arguably all could lift their level of reporting.
- The CDP 2016 results also show that some sectors across the ASX200 are distinctly lagging. The financial, energy and utility sectors had the highest levels of proportionate representation (averaging around 67%). Whilst this is relatively high, it is noted that these sectors are the most carbon sensitive. IT, healthcare consumer discretionary sectors were poorly represented with only some 14 to 16% reporting to CDP.
- We see a significant proportion of those reporting who are providing some climate related information within publications for investors, and 64% include climate risks in annual reports, which is in step with TCFD recommendations. However, there is little consistency in the type, quantity or quality of information being released.
- The majority of CDP reporters anticipate developing science based targets within two years. Many have little knowledge and experience of scenario-based planning tools.
- Climate risks need to be assessed over time periods that equate to investments and the life of the business' financing arrangements. We also see some concerns about the accuracy of data and the robustness of management and reporting systems.
- Across the assessment of climate risks there is a good understanding of physical risks, while the transition risks are less well articulated with little expressed beyond carbon pricing.
- Reporting suggests that business is more strategic when identifying climate risks compared to climate opportunities. Of note, sector or cross-sector opportunities were not disclosed, with no discussion of the potential for collaboration or co-operation leading to overall positive systemic market change.
- Currently, within annual reports, companies have not provided comprehensive descriptions of the impact of climate risks and opportunities on organisations' strategy and financial planning or their resilience to those impacts. In addition, they do not state whether the information that is provided is considered to be material. This makes it hard for investors to make informed decisions using the current level of climate disclosures.

4. Actions for business

In SBA's first **CEO Guide to Climate Action**, we identified six (6) steps businesses can take to manage their carbon risks, identify new market opportunities and prepare for the shift to a low carbon economy. These actions are just as relevant today as when we wrote them in 2015.

CEO Guide to Climate Action (2015)

1. Base your actions on science
2. Advocate efficient market mechanisms
3. Disclose carbon liabilities and be transparent about emission reduction strategies
4. Integrate climate response strategies into your core business
5. Join other leading businesses
6. Stay up to date on key developments

Based on the work in this updated guide, we have expanded actions three and four and provided five more detailed actions on disclosing carbon risks and opportunities and integrating response strategies into core business.

This Report (2017)

- a) Understand the gaps between the TCFD recommendations and your current climate disclosures and map out an implementation pathway
- b) Identify and assess transition and physical climate change risks to your business, suppliers and markets over the short, medium and long term
- c) Enhance the application of existing enterprise risk management frameworks, to better identify and manage emerging or strategic carbon risks and opportunities
- d) Work out how you manage the risk and opportunities within your business model
- e) Determine how to integrate material carbon risks and opportunities into financial reporting

Understand the gaps and map out implementation pathway

Understand the gaps between the TCFD recommendations and your current climate disclosures

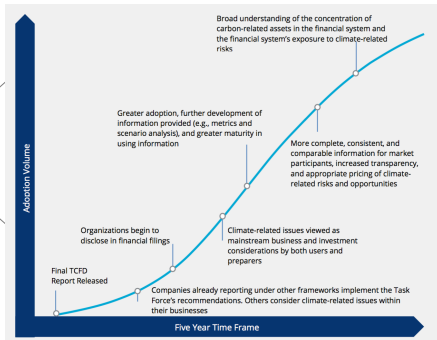


	Questions we hear:	What does this mean for you?
UNDERSTAND LEVEL OF MATURITY	<ul style="list-style-type: none"> - Is my company ready to implement and report on the TCFD recommendations? - To what extent do my company's disclosures already fulfill the TCFD recommendations? 	<ul style="list-style-type: none"> - Understand the TCFD recommendations and their implications across all aspects of governance, strategy, risk management and metrics and targets.
IDENTIFY & PRIORITIZE RISKS & OPPORTUNITIES	<ul style="list-style-type: none"> - Which climate-related risks and opportunities may impact my business and what are their financial impacts? - What do they mean and how can they be assessed? - Where in the value chain and in which countries is my company most exposed to physical and transitional climate-related risks? - How do they compare to other types of risks (e.g. operational, financial, strategic)? 	<ul style="list-style-type: none"> - Identify relevant climate risks and assess where they lie in your business - Prioritize the climate risks identified based on: <ul style="list-style-type: none"> ▪ External trends (e.g. the energy transition to a low carbon / renewable technology) ▪ Business environment (e.g. advice from regulators to disclose climate risks) ▪ The potential financial implications of the risks to your business.
TEST RESILIENCE OF STRATEGY	<ul style="list-style-type: none"> - What are relevant scenarios for my company to consider? - How will my strategy perform under different climate scenarios including a 2°C world? - Is my strategy resilient to climate-related risks and opportunities? - How can my company develop models that respond to the implications of each scenario? 	<ul style="list-style-type: none"> - Review strategies based on their relevance & usefulness under outcomes from various scenario analysis, including a 2°C scenario - Consider capital flexibility approach as a risk control measure - Define a set of 2 or 3 scenarios based on your geography and industry, including a scenario that assumes global warming of 2°C - Start with a qualitative assessment of how your organization's strategy and financial plans may be affected under the scenarios
MEASURE USING METRICS & TARGETS	<ul style="list-style-type: none"> - How to select and implement material indicators for effective monitoring of climate-related risks? - How robust are my processes including metrics measuring to manage & monitor relevant climate-related risks and opportunities? 	<ul style="list-style-type: none"> - Identify and assess existing climate-related risk indicators to select key material indicators – or identify gaps - Assess the current state of your processes for identifying and reporting climate-related risk - Adapt existing ERM/risk management processes to be effective in identifying and managing climate-related financial risk - Implement new reporting systems & controls

Reference TCFD¹, Source WBCSD

Understand the gaps and map out implementation pathway

Map out an implementation pathway



Source: Final Report Recommendations of the Taskforce on Climate-Related Financial Disclosures. TCFD, June 2017

Identify and assess risks and opportunities

Identify and assess transition and physical climate change risks and opportunities to your business, suppliers and markets over the short, medium and long term



'Corporate Responses to the 1.5-2°C Paris Agreement climate Objectives', The Climate Institute / Australia Institute: Looks at scenario analysis and how to enhance work in this area²⁴



'The global transition to a two degree economy has begun. Here's how you can prepare', Climateworks: Provides a series of steps to prepare for a transition to a low-carbon economy, with a focus on scenario analyses and decarbonisation strategies²⁵



'Recommendations of the Task Force on Climate-related Financial Disclosures', TCFD: Provides four recommendations on climate-related financial disclosures that can be applied across sectors¹



'Carbon risk: a burning issue', The Australian Senate: Consists of the findings of an inquiry launched by the Senate concerning climate risk disclosure in Australia³

Enhance existing applications

Enhance the application of existing enterprise risk management frameworks, to better identify and manage emerging or strategic carbon risks and opportunities

Risk management experts across academic and consulting institutions alike perceive that the impact of economic and legal risks on a business and society are steadily giving way to a raft of existing and emerging social and environmental risks. Yet there is evidence that the effectiveness with which organizations are identifying, managing and disclosing these risks is limited²².

Analysis conducted by SBA's Partner, the World Business Council for Sustainable Development (WBCSD) revealed that, on average, only 29% of the areas deemed to be "material" in reviewed sustainability reports were disclosed in a company's legal disclosure of risks. In addition, 35% of member companies did not disclose *any* of the sustainability risks identified in their sustainability reports in their legal filings²².

This guide seeks to be the first step towards integration between sustainability risks and enterprise risk management. It investigates factors driving the breakdown between the two risk systems and provides a series of steps to enable the process of integration



Sustainability and enterprise risk management: The first step towards integration. WBCSD, 2017²²

Manage within your business model

Work out how you manage the risk and opportunities within your business model

The TCFD provides clear guidance for both financial and non-financial businesses and recognises that a simplistic approach to the assessment of climate risks does not exist. There is not a single metric available – no ‘silver bullet’ – that adequately encapsulates climate risks.

Importantly, as the external market is changing, historical performance is inadequate to assess future performance. Resilience and robustness are increasingly important in a global environment where uncertainty and volatility abounds.

Assess and manage complexity. The value of scenario analysis

As such forward looking analysis is recommended to help investors and the financial sector understand and assess climate risks and opportunities. Scenario analysis is proposed by the TCFD as a useful tool to understand these issues. It requires a business to develop a number of divergent but plausible global scenarios over the medium to long term. Businesses and investors can then assess and explain how resilient they are to future climate and economic scenarios and change their strategy where relevant. Clear definitions and assumptions provide investors with an understanding of how robust businesses are to future challenges.



‘Climate change and good corporate governance’, Australian Institute of Company Directors: Provides further background on climate change risks and governance²⁶

Integrate into financial reporting

Determine how to integrate material carbon risks and opportunities into financial reporting

We anticipate that the financial sector will continue to seek information to price climate risks and opportunity for investment decision making and to disclose carbon exposure within their portfolios.

The TCFD disclosure requirements are voluntary. However there are clear benefits for companies who outline to the market their resilience under different low and high emissions futures. These benefits include:

- Demonstrating the ability to incorporate climate financial risks into corporate strategy and potentially capitalise on competitive advantage
- Reduced risk of mispricing of their equity
- Potential opportunities to attract debt financing and/or insurance at lower cost.

Early adopters of the TCFD recommendations will also have more time to improve internal buy in, refine their corporate strategy, and accelerate initiatives while expectations of the extent and complexity of financial disclosures are lower.

Companies actively improving and disclosing their response to climate change can also mitigate legal risks. A recent legal opinion from Noel Hutley SC concluded that Australian company directors “who fail to consider ‘climate change risks’ now could be found liable for breaching their duty of care and diligence in the future”⁶.



‘Climate Change and Directors’ Duties’, The Centre for Policy Development and The Future Business Council: Provides a legal opinion with regards to the liability of directors with regards to climate change risks⁶



‘Transparency in Transition: A Guide to Investor Disclosure on Climate Change’, Investor Group for Climate Change: Seeks to improve disclosure of climate change risks among investors²⁷

Appendix

What are climate risks and opportunities?

Climate risk is defined as “risks to a company from climate change”⁸, with the Task Force on Climate-related Financial Disclosures (TCFD) defining two categories¹:

- **Physical risks:** relating to the impacts of climate change on weather patterns and resource availability. *Acute* risks include increased severity of extreme weather events such as cyclones and floods. *Chronic* risks include sea level rises, changes in temperature extremes and in precipitation patterns.
- **Transition risks:** relating to changes resulting from a transition to a low-carbon economy, including policy, regulation and market changes; development of new technologies; and impacts on reputation and consumer behaviour.

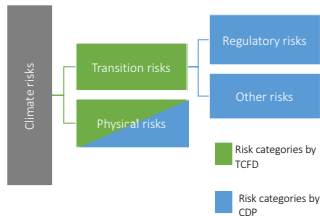
The TCFD divides climate opportunities into five categories: **resource efficiency, energy source, products and services, markets and resilience.**

TCFD climate risk and opportunity definitions are described in more detail in the tables below. In order to make more informed financial decisions, investors, lenders, and the business themselves need to understand how these climate risks and opportunities are likely to impact an organization’s future financial position as reflected in its income statement, cash flow statement, and balance sheet¹ as outlined in the figure below.

The CDP 2016 climate change questionnaire identifies three types of climate risks and opportunities²⁸:

- **Regulatory** - driven by changes in regulation;
- **Others** - resulting from changes in climate-related developments, such as consumer behaviour, reputation; and
- **Physical** - derive from changes in physical climate parameters.

Alignment of CDP risk categories to TCFD’s carbon risk and opportunity definition

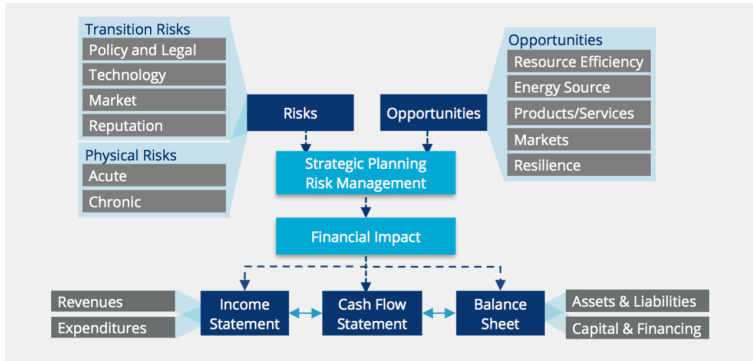


TCFD risk and opportunity definitions

Type	Climate-Related Risks	Type	Climate-Related Opportunities
Transition Risks	Policy and Legal	Resource Efficiency	- Use of more efficient modes of transport
	- Increased pricing of GHG emissions		- Use of more efficient production and distribution processes
	- Enhanced emissions-reporting obligations	- Use of recycling	
	- Mandates on and regulation of existing products and services	- Move to more efficient buildings	
	- Exposure to litigation	- Reduced water usage and consumption	
	Technology	Energy Source	- Use of lower-emission sources of energy
- Substitution of existing products and services with lower emissions options	- Use of supportive policy incentives		
- Unsuccessful investment in new technologies	- Use of new technologies		
- Costs to transition to lower emissions technology	- Participation in carbon market		
Markets	Products and Services	- Shift towards decentralized energy generation	
- Changing customer behavior		- Develop and/or expand low emission goods and services	
- Uncertainty in market signals		- Development of climate adaptation and insurance risk solutions	
- Increased cost of raw materials	- Development of new products or services through R&D and innovation		
Reputation	Markets	- Ability to diversify business activities	
- Shifts in consumer preferences		- Shift in consumer preferences	
- Stigmatization of sector	- Access to new markets		
- Increased stakeholder concern or negative stakeholder feedback	- Use of public-sector incentives		
Acute	Resilience	- Access to new assets and locations needing insurance coverage	
- Increased severity of extreme weather events such as cyclones and floods		- Participation in renewable energy programs and adoption of energy-efficiency measures	
Chronic	- Resource substitutes/diversification		
- Changes in precipitation patterns and extreme variability in weather patterns			
- Rising mean temperatures			
- Rising sea levels			

Source: Final Report Recommendations of the Taskforce on Climate-Related Financial Disclosures. TCFD, June 2017

Climate risk, opportunities and financial impact



Source: Final Report Recommendations of the Taskforce on Climate-Related Financial Disclosures. TCFD, June 2017

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SBA is a not-for-profit business organisation of progressive companies that by action, advocacy and raising awareness, galvanises Australian business leadership for sustainable development.

Through our members, SBA's purpose is to promote national and global efforts to advance corporate sustainability across leadership and management so as to generate constructive solutions and take responsible shared action. Our membership includes ASX 200 companies, SMEs, leading professional services firms, not-for-profit and government enterprises.

SBA's vision is for an economy that thrives within an inclusive and cohesive society and a healthy, sustainable environment.

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WBCSD is a global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world. We help make our member companies more successful and sustainable by focusing on the maximum positive impact for shareholders, the environment and societies. Our member companies come from all business sectors and all major economies, representing combined revenues of more than \$8.5 trillion and 19 million employees. Our global network of almost 70 national business councils gives our members unparalleled reach across the globe. WBCSD is uniquely positioned to work with member companies along and across value chains to deliver impactful business solutions to the most challenging sustainability issues. Together, we are the leading voice of business for sustainability: united by our vision of a world where more than 9 billion people are all living well and within the boundaries of our planet, by 2050. www.wbcsd.org



SBA acknowledges the contribution provided to the development of *Climate Action in 2017*, by Energetics. Represented on the SBA Board, Energetics advises Australia's largest greenhouse emitters and all levels of government on the maximum positive opportunities in a decarbonising economy. Energetics' technical and commercial insights support climate risk management strategies, renewable energy supply options, disclosure, energy and carbon data management, audit services and energy procurement advice at a time of market volatility.

A unique management consultancy established for 35 years, Energetics has offices in Sydney, Melbourne, Perth, Brisbane and Adelaide

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SBA acknowledges the contribution provided to the development of *Climate Action in 2017*, by CDP. CDP, formerly the Carbon Disclosure Project, runs the global disclosure system that enables companies, cities, states and regions to measure and manage their environmental impacts. It has built the most comprehensive collection of self-reported environmental data in the world.

CDP's network of investors and purchasers, representing over US\$100 trillion, along with policy makers around the globe, use its data and insights to make better-informed decisions. CDP has offices and partners in 50 countries and has driven unprecedented levels of environmental disclosure.

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