

# DOLLARS & SENSE: MITIGATING CLIMATE RISK IN A WARMING WORLD



# Thank you for supporting the Climate Council.

The Climate Council is an independent, crowd-funded organisation providing quality information on climate change to the Australian public. If you'd like to support more reports like this, head to [www.climatecouncil.org.au/donate](http://www.climatecouncil.org.au/donate).

The Climate Council acknowledges the Traditional Owners of the lands on which we live, meet and work. We wish to pay our respects to Elders past and present, and recognise the continuous connection of Aboriginal and Torres Strait Islander peoples to Country.

Published by the Climate Council of Australia Limited.

ISBN: 978-1-922404-88-6 (print)  
978-1-922404-89-3 (ebook)

© Climate Council of Australia Ltd 2023.

This work is copyright the Climate Council of Australia Ltd. All material contained in this work is copyright the Climate Council of Australia Ltd except where a third party source is indicated.

Climate Council of Australia Ltd copyright material is licensed under the Creative Commons Attribution 3.0 Australia License. To view a copy of this license visit [creativecommons.org.au](http://creativecommons.org.au).

You are free to copy, communicate and adapt the Climate Council of Australia Ltd copyright material so long as you attribute the Climate Council of Australia Ltd and the authors in the following manner:  
Dollars & Sense: Mitigating Climate Risk in a Warming World.

Authors: Hollie Cheung, Dr Jennifer Rayner and Dr Martin Rice.  
Thank you to Nishtha Aggarwal, Greg Bourne, Tim Buckley, Axel Dalman and Nicki Hutley for their inputs and technical guidance.



Cover image: Coin stack with young green sprout on top.  
Photo by Piyawat Nandeenoparit purchased via Adobe Stock.

This report is printed on 100% recycled paper.



**Hollie Cheung**  
Researcher



**Dr Jennifer Rayner**  
Head of Advocacy



**Dr Martin Rice**  
Research Director



**Danielle Veldre**  
Director Climate Media Centre



[facebook.com/climatecouncil](https://facebook.com/climatecouncil)



[instagram.com/theclimatecouncil](https://instagram.com/theclimatecouncil)



[twitter.com/climatecouncil](https://twitter.com/climatecouncil)



[youtube.com/user/climatecouncil](https://youtube.com/user/climatecouncil)



[tiktok.com/tag/climatecouncil](https://tiktok.com/tag/climatecouncil)



[info@climatecouncil.org.au](mailto:info@climatecouncil.org.au)

# Contents

<b>Key findings</b> .....	<b>i</b>
<b>Introduction</b> .....	<b>1</b>
<b>1. Climate change threatens the stability of the financial and economic systems</b> .....	<b>3</b>
Climate risks create and worsen financial risks	6
Climate financial risks are interconnected	10
How Australian regulatory bodies are addressing climate change	14
<b>2. Lending by our major banks is driving climate change and worsening climate financial risk</b> .....	<b>17</b>
Australian banks are still bankrolling fossil fuels	21
Bank divestment promises have too many loopholes	26
Financing fossil fuel expansion worsens climate change	30
How to strengthen bank balance sheets and improve our climate and financial systems	32
<b>3. Better visibility of climate financial risks won't drive change far or fast enough on its own</b> .....	<b>36</b>
Mandated climate risk disclosures are an important first step	37
Defining sustainable investment and green bonds can better direct capital over time	39
Our window for climate action is narrow and closing, and we need to go further and faster	41
<b>4. Regulating bank lending that drives climate change is the next step for a strong financial system and a safe future</b> .....	<b>42</b>
Using disclosure to drive action	43
> Banks	43
> Australian Government	45
> Regulators	46
<b>Conclusion</b> .....	<b>49</b>
Appendix A: Summary of the Basel Framework	50
<b>References</b> .....	<b>52</b>
<b>Image credits</b> .....	<b>56</b>

# Key findings

## 1

**Climate change has the potential to become a systemic risk to our financial system, with grave consequences for our economy and society.**

- › Australia's biggest financial institutions are highly exposed to escalating climate risks. What's more, their ongoing investment in expanding polluting sectors like coal, oil and gas are making this problem worse.
- › Extreme weather events like the flooding on the east coast of Australia in 2022 are costing Australian lives, livelihoods and challenging the business model of financial industries like insurance.
- › Nearly one in eight homes face home insurance affordability stress. This adds to cost of living pressures already squeezing Australians, and in some cases results in insurance being dropped altogether. For mortgaged properties without insurance, the risk then sits with the bank, adding more climate risk onto bank balance sheets.
- › Banking - and the finance sector more broadly - will be heavily affected by risks due to climate change, so they can't continue with business as usual. Banks should be lending and investing in a way that is consistent with limiting global warming as close as possible to 1.5°C, as a key risk mitigation strategy for their own operations, as well as the financial system.

## 2

**Banks can enable enormous social good, but are bankrolling fossil fuel expansion and driving the climate crisis instead. This is compounding climate risks in the broader financial system.**

- › Since countries around the world united on an international agreement to address climate change in 2015, through the Paris Agreement, Australia's "Big Four" banks have lent \$57.5 billion to companies and projects that expand fossil fuel supply. This includes \$19.2 billion to companies with plans to expand fossil fuel production and \$9.5 billion directly for new or expanded projects that undermine efforts to invest in zero emissions alternatives.
- › As of December 2022, Australia's 15 largest superannuation funds had at least \$25.1 billion invested in coal, oil, and gas expansion.
- › In addition to directly financing coal, oil and gas expansion, banks are also funding fossil fuels through a range of investment vehicles. Their corporate finance and bond arrangements enable even more harmful emissions that worsen climate change - a far cry from their sustainability marketing claims.
- › The Big Four banks have pledged to invest hundreds of billions of dollars into climate solutions and green assets. However, these efforts are being undermined by the billions of dollars that banks and other financial service companies, such as superannuation and investment banks, keep pouring into the expansion of fossil fuels.

## 3

**Improving the visibility of climate risk is welcome, but isn't enough on its own to drive capital out of fossil fuels and into clean energy at the speed and scale needed now to tackle the climate crisis.**

- › Customers and investors require transparency in order to make informed decisions but better visibility of risks isn't enough on its own - action is required to reduce these risks. For example, banks need a fit-for-purpose strategy and plan to transition their company and clients away from fossil fuels, towards renewable energy.
- › Shifting capital towards sustainable investments that enable Australia's transition to a decarbonised economy is also critical. In the first half of 2023 around \$13 billion worth of green bonds were issued.
- › The Australian Sustainable Finance Institute's Taxonomy, the Treasury's Sovereign Green Bonds Program and Sustainable Finance Strategy are positive developments underway to support allocation of capital to the transition.
- › New mandatory climate-related disclosures will provide consistent and clear detail of banks' exposure to climate risks, emissions, future scenarios and transition plans; highlighting where fossil fuel lending is intensifying climate risks. But steps to hold banks accountable for their decisions are still missing.

## 4

**A coordinated effort involving banks, the Australian Government and financial regulators is needed to protect our financial sector, and enable every part of our economy to rapidly phase out the use of coal, oil and gas.**

- › Australian banks benefit from strong government regulation, which guarantees the funds of deposit-holders and allows the banks to market themselves as having an increased level of security. From this privileged position they choose to keep investing in the expansion of fossil fuels, contributing to harmful climate change and threatening this protective regulatory framework.
- › Every investment in fossil fuel expansion is a diversion and delay from the necessary transition of our entire economy, and undermines Australia's decarbonisation. Instead, all financial institutions - including the Big Four banks - need to be encouraging and enabling zero-emission solutions at speed and scale.
- › New fossil fuel projects are incompatible with limiting global warming and must not be approved. Careful planning by governments, regulators, and financial institutions is also required to transition out of remaining coal, oil and gas in an orderly manner.
- › Without this, the Australian public will not only continue to face escalating climate impacts, but also foot the bill of a dying industry. The cost of decommissioning Australia's offshore oil platforms alone could reach \$60 billion over the next 30 years.
- › This moment calls for decisive action to strategically realign our entire economy. Requiring more disclosure and then crossing our fingers for a rational market response does not cut it. We need to take the opportunity created by these new climate financial risk management tools to take the next essential step: holding banks more directly accountable for their lending to projects and companies that drive harmful climate change.

# Introduction

Climate change impacts every part of our lives – from our health, wellbeing and the safety of our communities, to the stability and security of the financial and economic systems on which we depend. Unless we take strong action this decade to address its drivers by rapidly cutting emissions, Australians face escalating and compounding risks now and for decades to come.

Australia's Council of Financial Regulators has officially recognised climate change posing a financial risk since 2017. The Council is made up of our three key regulatory agencies - the Reserve Bank of Australia, the Australian Prudential Regulation Authority and the Australian Securities and Investment Commission, alongside the Federal Treasury. Together, these regulators have acknowledged that the risks climate change poses to the Australian economy are "first order" and have knock-on implications for the functioning of our economic system as a whole (RBA 2021).



Figure 1: As extreme weather events increase in frequency and severity due to worsening climate change, so do the costs and suffering of communities and ecosystems. The Black Summer bushfires are estimated to have cost Australian agriculture between \$4-5 billion (WWF and Nature-Australia 2021); with total tangible and intangible costs estimated at \$230 billion (Read and Dennis 2020).

Because climate change exacerbates and creates new financial risks, there is strong potential for these to build up within the financial system and tip into systemic risk which would have potentially devastating consequences for us all. We need coordinated action across the whole financial system to reduce its exposure to these risks- from banks, superannuation funds, insurers, investors, governments and regulators. We only need to recall the Global Financial Crisis to appreciate how disruptions to our financial system cause massive social and economic harm. This is why governments and financial regulators work very hard to avoid them.

Yet despite our ability to see climate risks brewing on the near horizon, actions by some financial institutions are still making the problem worse, not better. In the face of clear scientific consensus on the urgent need to phase out the use of coal, oil and fossil gas as quickly as possible, our banks are in fact enabling the opposite: lending billions of dollars to expand the fossil fuel industry. Australian banks have lent tens of billions to expand coal, oil and gas supply since the Paris Agreement was signed in 2015.

Bank lending to fossil fuel expansion drives climate change and, therefore, exacerbates climate risks. While the banking sector and debt financing are the focus of this report, others are also complicit - for example through equity financing via the share market, and superannuation funds. If our leaders have the courage to make bold steps in financial systems regulation, Australia has a golden opportunity to safeguard the health, sustainability and stability of our society before it is too late.

This report outlines current financial system risk arising from fossil fuel investment, focusing on bank lending to fossil fuel expansion and the potential to reform prudential regulation to ensure bank lending is aligned with a decarbonised future. The report also explores the loopholes our banks are exploiting that undermine their strong sustainability commitments. The report outlines global best practices and the positive potential effects of mechanisms such as the Task Force on Climate-Related Financial Disclosures / International Sustainability Standards Board mandate (effective from 2024), forthcoming Sovereign Green Bond program, and Australian sustainable finance taxonomy; and makes recommendations to strengthen the financial system and better protect it against climate change risks.

# 1. Climate change threatens the stability of the financial and economic systems

The financial system underpins a prosperous and thriving society. Whether we realise it or not, much about our daily life relies upon it— from buying the groceries with a digital payment or cash, securely storing our salaries in a bank, financing our homes to setting aside a nest egg for retirement through superannuation. Banks and other investment institutions also provide the capital for innovators to create new businesses and products, for farmers to manage the ups and downs of life on the land, and to deliver major public infrastructure we all rely on.

When the financial system experiences times of stress or major disruption, this ripples out across our entire community. During the Global Financial Crisis major banks around the world saw a sudden and massive drop in the value of their assets, which led to a global credit crunch. Businesses could not borrow, investors lost or withdrew their money, global trade was undermined and millions of people lost their jobs. Governments, including in Australia, had to bail out the banks by spending hundreds of billions of dollars in public money to get the financial system— and our economy— back on track.

Because disruptions to our financial system cause massive social and economic harm, governments and regulators work very hard to avoid them. An enormous framework of laws and rules has been created to manage risks to the financial system and ensure that our biggest financial institutions can be 'unquestionably strong' (APRA 2021a). But these laws and rules are not fully prepared to deal with one of the biggest sources of financial risk now emerging in Australia and around the world: climate change.



## Climate change represents one of the biggest sources of emerging financial risk, and our laws and regulation must be strengthened to address this.

Systemic risk is 'the potential for a threat or hazard to propagate disruptions or losses to multiple nested or otherwise connected parts of a complex system' (OECD 2020). In the financial system, it describes the risk of multiple and cascading failures across financial institutions, leading to a severe economic downturn affecting the daily lives of communities and businesses.

Right now, systemic risk is building up in our financial system due to climate change. Our biggest financial institutions are already exposed to escalating climate risks; further, their ongoing investments in harmful polluting sectors like coal, oil and gas are making the problem worse. This section explores how climate risks already being realised around Australia create risks in the financial system we all depend on.



**Figure 2:** From withdrawing cash, using debit or credit cards, to paying by phones, banking institutions ensure the money in savings accounts can be readily accessed for all our needs.

### THE AUSTRALIAN FINANCIAL SYSTEM

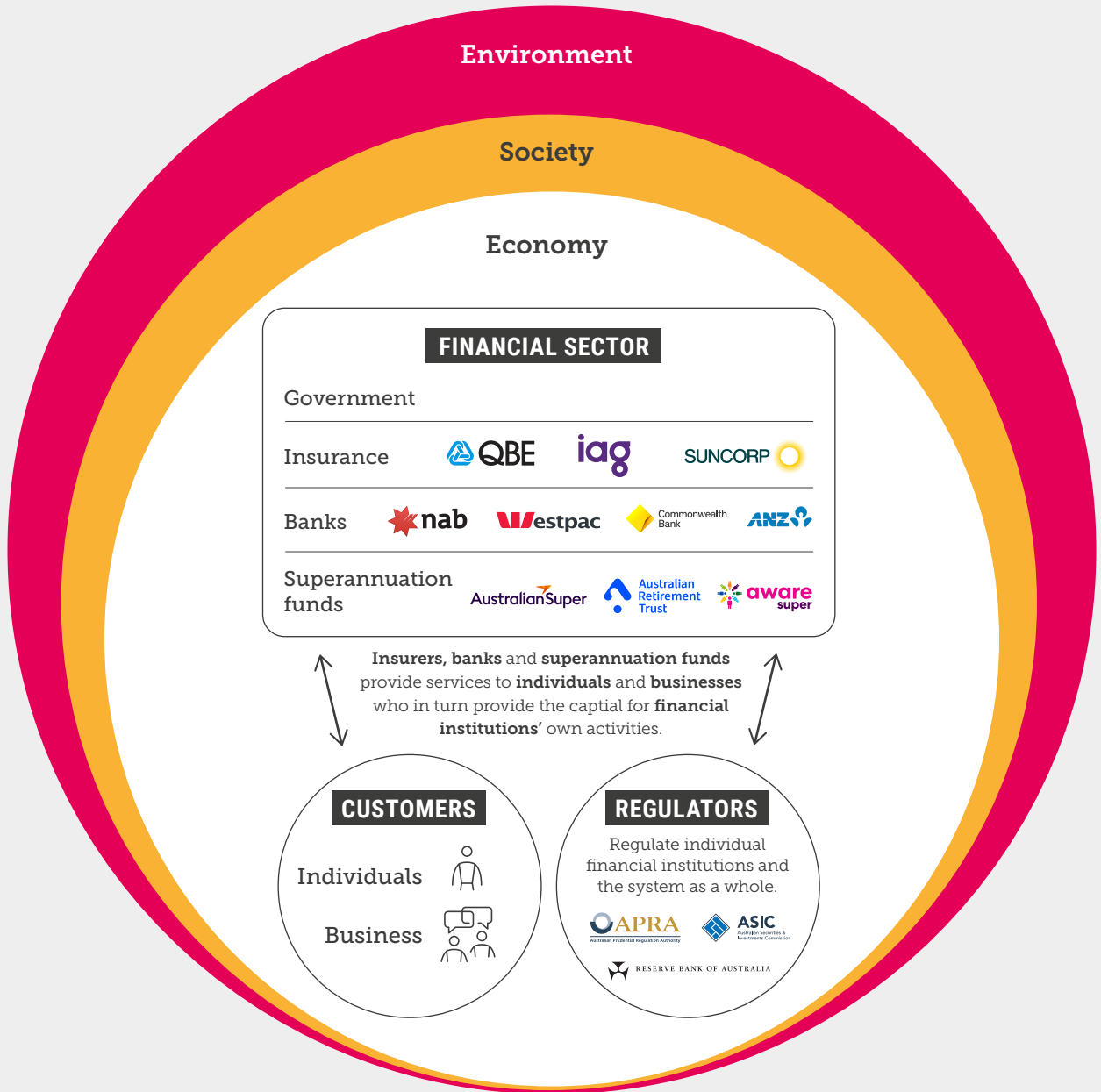


Figure 3: The Australian financial system.

# Climate risks create and worsen financial risks

The world has already warmed by around 1.2°C since the Industrial Revolution—primarily due to the burning of fossil fuels like coal, oil and gas (IPCC 2023a). Australia has warmed by 1.47°C since records began (CSIRO 2022). At this level of global warming, we are already experiencing devastating impacts across Australia and around the world. This is a clear and present danger— from record breaking heat to unprecedented floods and fires, climate change is threatening lives and livelihoods here and now. Unless we can rapidly and steeply cut emissions this decade, the world is on track to well exceed 1.5°C of warming, which has been recognised internationally as a threshold that should be avoided lest we trigger irreversible tipping points and unleash climate chaos. Already six out of nine planetary boundaries are showing signs of instability (Richardson et al. 2023). Disaster recovery funding by the government is projected to at least triple over the next 40 years, to \$140 billion<sup>1</sup> in today's dollars if global temperatures rise to 3°C, while labour productivity under a 3°C of warming could decrease by 0.2 percent annually and cost \$135 billion by 2063 (Commonwealth of Australia 2023). Note, these estimates are likely to be conservative (Neal 2023).

Climate risk is divided into two primary categories - physical and transition - that affect our environment, communities and, by extension, businesses and financial institutions.

**Physical risk** arises from the increasing severity and frequency of climate-related events. This can include the *acute risk* of more frequent and severe extreme weather events like heatwaves, floods, cyclones and bushfires (Bellrose et al. 2021). From the 2019-2020 Black Summer bushfires to 2022's 'Great Deluge' of major flooding across the east coast, Australia is particularly vulnerable to acute climate risks and our communities are already bearing the brunt. Climate change also creates *chronic risk* through longer term changes in climatic patterns such as temperature rises, changes in rainfall levels, and rising sea levels. Risks to nature from climate change are also beginning to be captured in this category, such as the loss of biodiversity and natural systems we depend on for life's essentials, like clean water and food production (NGFS 2023).

---

<sup>1</sup> All dollar amounts within this report are in Australian dollars unless specified, and where necessary converted via the XE converter on 27 November 2023.

**Transition risk** relates to the pace and extent of change needed to mitigate, manage and adapt to the impacts of harmful climate change. Individuals and communities experience transition risks in the need to build their homes differently or move to safer areas in the face of climate-induced physical risks. Businesses and investors also face significant transition risks as we seek to rapidly shift away from fossil fuels and towards clean, renewable energy sources to help tackle climate change. These can arise due to policy change, shifts in consumer sentiment and

demand, or large movements in capital out of certain industries and into others (Chenet et al. 2021). Transition risks related to nature can result from the negative impact economic actors have on nature, and that businesses may face additional costs in the face of new regulation to restore and protect nature (NGFS 2023). Litigation or liability risk can also arise out of transition risks, due to liability claims, policy and regulatory changes, and the perceived or actual failure of responsible actors to respond at the speed and scale the climate crisis now demands.

**Figure 4:** Flooding of the Hawkesbury river over farmlands in Sackville, New South Wales, March 2022. The Hawkesbury region is one area that has been inundated by floods multiple times over 2021-2022, with devastating impacts on the community. This is one example of acute physical risk, where worsening climate change means such disasters are becoming more frequent and more intense.



These climate risks directly overlay onto traditionally-recognised financial risks. Some key examples include:

- › **Credit risk – risk of loss when a borrower, counterparty or issuer cannot repay their loan.** Families devastated by floods or fires may be left unable to service their mortgages on destroyed homes, and businesses which cannot trade after these extreme weather events may have reduced capacity to service their loans.
- › **Market risk – risk of losses due to factors that affect overall financial market performance.** A company's value may drop due to the transition away from fossil fuels toward clean technologies and renewable energy, for example the uptake of renewable energy negatively impacting the performance of coal-fired power generation assets.
- › **Underwriting risk – risk held by the underwriter, where an asset has been underpriced.** More frequent extreme weather events cause damage to property and other assets for households and businesses, leading to increased insurance claims, where some insurance settlements may not provide full coverage for sustained damages, and families and business owners suffer losses as a result. Nearly one in eight homes are facing home insurance affordability stress (Actuaries Institute 2023).
- › **Operational risk – risk of loss from inadequate or failed processes or systems, from human factors or external events which can disrupt the flow of business operations.** Businesses affected by floods, fires, or other extreme weather events may have their facilities damaged or destroyed and be forced to shut down, or experience disruptions from other suppliers which lead to delays and increased costs in their own product and service delivery.
- › **Liquidity risk – risk of loss resulting from the inability to meet payment obligations in full and on time when they become due.** Businesses may face additional costs in transitioning to renewable energy or clean technologies, penalties due to their emissions intensity, or losses from destroyed property and facilities. If these costs outweigh the value of their assets, they may be unable to repay their debts when they are due. (Morgan Stanley 2022; NGFS 2022; Feriden and GÜngör 2021)

**Figure 5 on following page:** demonstrates how climate physical risks and transition risks can morph into traditional financial risks that impact families, communities, businesses, and in turn banks' own balance sheets and stability.

# TRANSMISSION CHANNELS

## CLIMATE TO FINANCIAL RISK

Burning of Fossil Fuels



Accumulation of greenhouse gases driving climate change



### CLIMATE RISKS

Physical Risk

Acute

Natural disasters and extreme weather (fire, floods, cyclones)



Chronic

Longer term climate changes (temperature rise, sea level rise, precipitation changes)



Transition Risk

Policy & Regulation



Technology Development



Consumer Preferences



Climate & Economy feedback effects

Economy & Financial system effects

### ECONOMIC TRANSMISSION CHANNELS

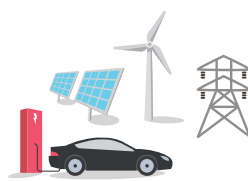
Property Damage



Stranded Assets



New Investment Costs



Labour Market Changes



### FINANCIAL RISKS

Credit Risk

- Defaults on loans
  - Collateral depreciation

Market Risk

- Repricing of equities, fixed income, commodities etc.

Underwriting Risk

- Increased insured losses
  - Increased insurance gap

Operational Risk

- Supply chain disruption
- Forced facility closure

Liquidity Risk

- Increased demand for liquidity
- Refinancing risk

Financial System Contagion

# Climate financial risks are interconnected

The problem is far bigger than any individual climate financial risk affecting specific banks or investment firms. Climate financial risks are a source of broader financial risk because they are highly interconnected. A climate-fuelled major flood event does not just affect one home or business– it can devastate suburbs and regions. Increasingly, global insurance firms are excluding areas under greatest threat, leaving both individuals and our governments to carry this growing risk. An extended drought can

hit the viability of agricultural producers in multiple sectors across huge swathes of the country. Policy changes which seek to reduce our reliance on high-emitting energy sources or activities can drive rapid and far-reaching changes in the value of assets across entire market segments or industries. When multiple financial institutions experience rapid, massive and highly correlated shocks to their asset portfolios all at once, this is a recipe for system distress that can quickly spiral into financial and economic crisis.

Climate-induced financial catastrophes are likely to be more serious than other systemic financial crises as they will combine physical impacts and losses in the real economy with economic losses in the financial world.

This has led some commentators to warn of potential 'green swan' events for the financial system, given the Australian financial system and economy are heavily exposed to global markets; heightening our exposure to global financial contagion. The concept draws on 'black swan' crises which emerge suddenly with massive impact, and are difficult to predict under normal circumstances but appear inevitable with the benefit of hindsight (Taleb 2007). While the specific climate change impacts that will be experienced in any given location or time period are uncertain, scientific expert consensus provides a high degree of certainty that some combination of climate risk events will happen in the future if global warming continues. Climate-induced financial catastrophes are also likely to be more serious than other financial crises because they will combine physical impacts and losses in the real world with economic

losses in the financial world. These financial impacts may then reduce capacity to respond to the physical impacts, leading to spiralling loss and risk (Bolton et al. 2020).

As evident during the Global Financial Crisis - particularly in developed countries in the Northern hemisphere that were the hardest hit by the financial crisis - the cost of a potential green swan event would fall on taxpayers through government bailouts of failing financial institutions and on shareholders of high-emissions companies (directly or through superannuation). Global insurance firms will not carry the vast majority of Australia's systemic financial risks ahead, as their exposures are mostly only short term in nature, and their key risk exclusions are already rapidly expanding now, well before the full impacts of climate risks hit over the coming decades.



Figure 6: Extreme weather related disasters, driven by climate change caused global economic losses of US\$313 billion in 2022 (Reuters 2023).



 **BOX 1: WHO IS RESPONSIBLE FOR MANAGING FINANCIAL SYSTEM RISK?**

Australia has a well-established framework for regulating the financial system, including for monitoring and preventing traditional risks both within individual financial institutions and across the system as a whole. These frameworks have been significantly updated since the Global Financial Crisis in an effort to prevent the kind of structural risks which led to that economic catastrophe.

Our three key regulatory agencies work closely with the Australian Government to oversee the financial system's stability and smooth functioning:

- › **The Australian Prudential Regulatory Authority (APRA)** – is an independent statutory authority in charge of prudential regulation, which maintains the safety and soundness of financial institutions (including banks, superannuation and insurance), so the community can have confidence these institutions will meet their financial commitments.
- › **The Australian Securities and Investments Commission (ASIC)** – is an independent body which regulates Australia's integrated corporate, markets, financial services and consumer credit. ASIC ensures the performance of the financial system and entities within it, administers the law and, where necessary, enforces it.
- › **The Reserve Bank of Australia (RBA)** – is Australia's central bank, charged with contributing to the stability of the currency, full employment and the economic prosperity and welfare of the Australian community. It does this through managing and implementing monetary policy, and providing selected banking services to Australian government bodies and overseas central banks.

These three regulators jointly participate in the Council of Financial Regulators, which also includes the Australian Federal Treasury. Collectively, the Council develops the rules that Australian financial institutions must work within, and monitors their implementation. Australia's financial system is strong, as demonstrated during, and in the aftermath of, the Global Financial Crisis when Australia's economy performed better than other developed countries in the Northern Hemisphere (CEDA 2012). The strength of Australia's financial system is in part due to a resilient, well-capitalised and profitable banking sector that has strong liquidity coverage (RBA 2023a). This is under constant revision, with APRA's 'unquestionably strong' capital framework taking effect in January 2023 to more closely align Australia's regulatory regime with Basel III standards (RBA 2023a).

These Australian regulatory agencies work within an international framework led through the G20 intergovernmental forum and supported by the Bank of International Settlements. The Bank of International Settlements' mission is to support central banks' pursuit of monetary and financial stability through international cooperation, and to act as a bank for central banks. The Financial Stability Board is an association of the Bank of International Settlements which oversees global standard-setting bodies across all parts of the financial sector. The Basel Committee on Banking Supervision is the global standard setter for the regulation of banks, with its full standards set out in the Basel Framework (Appendix A) which is then implemented by individual countries like Australia.

**BOX 1 CONTINUED**

This complex, interlocking system of rules and regulations means that changing how financial system risks are managed can be a gradual process. For example, changes to the Basel Framework arising from the Global Financial Crisis in 2008-09 were only fully agreed to in 2017, and are being rolled out around the world until 2028 (FSB 2022). However, because changes in this global regulatory system filter out across all domestic financial institutions, they can drive improvements systematically throughout the entire global system.

We are already in the age of climate consequences, when the devastating impacts of climate change are hitting home for communities and nations right around the world. The climate crisis will not wait a decade or more for regulators to take the next, necessary steps to tackle the risks it creates.



Figure 7: During the Global Financial Crisis over six million American households lost their homes due to foreclosure. While Australian banks escaped a major spike in mortgage defaults during the Global Financial Crisis, Australian properties face significant risks from climate change and will not escape these costs.

# How Australian regulatory bodies are addressing climate change

In 2017 the Council of Financial Regulators established a Working Group on the Financial Implications of Climate Change and acknowledged that ‘climate risks are distinctly financial in nature ... [and] also have potential system-wide implications that APRA and other regulators are paying much closer attention to’ (Summerhayes 2017). Since then a steady stream of work has been undertaken by the Council to understand, assess and manage climate risk (as outlined in Box 2).

*“Climate change has macroeconomic implications that are relevant for the setting of monetary policy and the Reserve Bank’s financial stability remit. There are some familiar elements ... But some are new – the heightened uncertainty around how the climate will change and how this will impact the economy and financial system [where] these changes are occurring over a prolonged time frame... and there is uncertainty around the evolution of technology and the speed with which climate, economic and social systems can adapt.”*

- Michelle Bullock,  
Governor of the RBA, 2023

However, there is greater work that needs to be done in the face of climate change. The 2022 Green Central Banking Scorecard of the G20 for example, ranks RBA and APRA at 15<sup>th</sup> with a grade of D minus ahead of only the United States, Türkiye, South Africa, Argentina and Saudi Arabia (Eames and Barmes 2022). Further,

in August 2023 the Federal government agreed to settle a world-first class action court case accusing it of misleading investors by failing to disclose the risk climate change poses to government bonds. The government agreed to publish a statement acknowledging climate change is a systemic risk that may affect the value of its bonds. “[Statement on O’Donnell v Commonwealth](#)” is now available on the Treasury’s website.

*“Climate change is a systemic risk that presents significant risks and opportunities for Australia’s economy, regions, industries, and communities.”*

- The Treasury, Statement on O’Donnell v Commonwealth, October 2023

It is clear that climate change exacerbates and creates new financial risks, with strong potential for these to build up within the financial system with potentially devastating consequences for us all. Despite our ability to see this risk brewing on the horizon, actions by financial institutions, governments and regulators are not going far enough. Financial institutions largely operate on a day-to-day and year-to-year basis, but the decisions made today will affect whether we can hold global warming as close as possible to 1.5°C. Continued bank funding to expand the supply of coal, oil and gas will worsen climate change and heighten the severity of physical and transition risks across the financial system. We need to do far more, and much faster, to prevent these risks ripping through the Australian and global economies in the years ahead.

## BOX 2: SUMMARY OF CLIMATE RISK ACTIONS BY REGULATORS SO FAR

**The RBA:** examined the risks climate change poses to banks' housing and business exposures (Bellrose et al. 2021); highlighted climate change as a focus of financial institutions and regulators in the Financial Stability Review (RBA 2022); conducted climate scenario analysis to complement Climate Vulnerability Assessments by banks (Kurian et al. 2023) and new Governor of the RBA, Michelle Bullock, used one of her first speeches to discuss climate change and central banks (RBA 2023b).

**ASIC:** provided an information paper on avoiding greenwashing when offering or promoting sustainability-related products in June 2022 (ASIC 2022) and has since been pursuing companies making unsubstantiated green claims about their financial products, resulting in civil penalty proceedings against Active Super, Vanguard Investments Australia and Mercer Super (ASIC 2023).

**APRA:** conducted an 'Awareness to action' climate change survey on 28 large financial institutions under their supervision (APRA 2019); released a Prudential Practice Guide for Climate Change Financial Risks (APRA 2021b); and commenced Climate Vulnerability Assessments (CVA) on financial institutions under their supervision, with assessments on Australia's five largest banks completed in November 2022 (APRA 2022a; APRA 2021c) and forthcoming assessments on insurance and superannuation.



## CLIMATE VULNERABILITY ASSESSMENTS

Climate stress testing and scenario analysis of the financial system is increasingly recognised as critical in understanding and responding to the risk climate change poses to financial stability. Central banks around the world have been applying this approach, including the Bank of Canada, the European Central Bank, the Bank of England and the United States Federal Reserve (Acharya et al. 2023). APRA has conducted climate stress testing through such assessments on ANZ, Commonwealth Bank, Macquarie bank, NAB and Westpac. This assessed transition and physical climate risks arising in Australia against a 'delayed transition scenario' - with a delayed but rapid reduction in emissions by 2050, and a 'current policies scenario' - which sees a continuation of business as usual. Banks were required to quantitatively assess residential mortgages and corporate and business lending exposures, which together account for approximately 75 percent of their Australian lending exposure. The banks were also required to qualitatively assess their operational, market and liquidity risks (APRA 2021c).

The assessments found that physical and transition risks would increase overall bank lending losses in the medium to long term, although there was significant variability in lending losses across banks due to the different modelling approaches adopted and climate risk impacts are likely to be concentrated in specific regions and industries. APRA concluded that climate-related data remains a challenge but should not be a barrier to climate analysis and further stress testing now (APRA 2022a).

The focus of this report is on lending which expands fossil fuel supply (both new fossil fuel projects and expansion to existing projects) by the Australian banking sector, due to its role in driving climate change. However, these vulnerability assessments highlight that climate change creates other significant material physical and transition risks across bank portfolios. For example, the five major banks assessed have an aggregate \$1.7 trillion in Australian mortgage loans which is 52 percent of their total Australian lending exposure (APRA 2022a).

## 2. Lending by our major banks is driving climate change and worsening climate financial risk

Australia's banks are crucial to our economy, each of our lives, and the country's well-being now and into the future. Banks are trusted places for our savings, to house our transaction accounts that pay for rent and food, provide loans for cars and homes, and for businesses to start up and expand.

Banking is a big business in Australia, with 73 banks managing \$6 trillion worth of assets under APRA's supervision (APRA 2023a). It is also an incredibly profitable industry, where banks' profits as a percentage of Australia's GDP is the highest of all developed countries (The Australia Institute 2016). As a pillar of Australia's economy and society, it is critical that banks safeguard the individual financial wellbeing of their customers, and that of the nation.

Australia's banking system is relatively concentrated compared to international standards (RBA 2017), highlighted by the fact that 80 percent of mortgage borrowers have a loan with one of the Big Four banks - Commonwealth Bank, ANZ, NAB and Westpac (ABC 2019). The Big Four are so central to our financial and economic system that they are classified as 'systemically important banks' by APRA (APRA 2013). This means that they are subject to a special set of regulatory requirements and stricter capital rules than other financial institutions.

# The banking sector has the potential to do enormous social good - or finance further public harm - and are doing both when it comes to climate change.

These special regulations and stricter capital requirements are designed to ensure the Big Four do not fail and trigger a broader financial crisis. These banks have been identified as systemically important because of their size, their broad lending across both the individual and commercial banking markets, and their interconnectedness with each other as well as other parts of the economy.

The entire banking sector has the potential to do enormous social good. When banks finance our dream homes, new businesses or future-focused projects in renewable energy and clean industry, they help us build an even better Australia. Unfortunately, these institutions have also bankrolled a lot of climate harm by funding fossil fuel supply when the effects of these industries on driving global warming are well known. Too often, that finance continues to flow today. As we seek to rapidly decarbonise Australia's economy to avoid the worst impacts of harmful climate change, this must stop.



## THE BANKS ARE NOT ALONE IN FINANCING FOSSIL FUELS

This report focuses on debt through bank lending but other parts of the financial sector also finance fossil fuel supply, such as equity through superannuation funds and investment in shares. Australia's top 200 listed companies on the Australian Securities Exchange (ASX200) feature a number of fossil fuel companies, where passive investment in the ASX 200 exposes investors to around twice the carbon exposure per dollar invested than in other major markets (Investor Group on Climate Change 2022). Australia's 15 largest superannuation funds have at least \$25.1 billion invested in expansionary coal, oil, and gas as of December 2022 (Australian Conservation Foundation 2023a). It is equity holders who are exposed to stranded asset risk, if financial institutions do not cease expanding fossil fuel investment and ensure clients' transition plans are aligned with limiting global warming as close as possible to 1.5°C.



Figure 8: The Stop Adani movement was successful in ensuring more than 100 companies ruled out financing or working on the Adani Carmichael coal mine. This included the biggest financial institutions in Australia - ANZ, Commonwealth Bank, NAB and Westpac.

By expanding coal, gas and oil supply and driving climate change, banks are weakening their own financial resilience as our economy decarbonises.



The burning of coal, oil and gas is by far the largest contributor to climate change, accounting for over 75 percent of global greenhouse gas emissions and nearly 90 percent of all carbon dioxide emissions (IEA 2019). Similarly in Australia, 80 percent of emissions are due to some form of fossil fuels (DCCEEW 2022). The most comprehensive assessment of the science ever undertaken, by the Intergovernmental Panel on Climate Change, has shown that we must act quickly to phase out fossil fuels if we are to secure a liveable future (IPCC 2023a). The International Energy Agency (IEA) has concluded there can be no new coal, oil and gas projects if we are to have any chance of limiting warming to as close as possible to 1.5°C (IEA 2021). This is the shared goal that 195 countries have signed up to under the Paris Agreement.

When financial institutions finance fossil fuels projects that result in more pollution being released into the atmosphere, this exacerbates the risks we are already facing from major climate disruptions to our communities and economy. By keeping these assets on their books – and adding new ones – banks are also weakening their own financial resilience as our economy decarbonises. Globally, a rapid reduction in demand for fossil fuels has been estimated to prompt economic losses of \$1.52-6.08 trillion by 2035 (Mercure et al. 2018). This is between four and 16 times the losses as a result of the Global Financial Crisis.<sup>2</sup> Other studies have estimated the value of oil and gas assets at risk of being stranded at \$2.13 trillion, with potential losses hitting the financial sector as high as \$1.04 trillion (Semieniuk and Holden 2022). To lower the risk, we must address banks' involvement with the fossil fuel industries which are fuelling dangerous climate change, and accelerate their shift into financing the zero emissions industry solutions at speed and scale.

---

<sup>2</sup> In the GFC the subprime mortgage market value loss was US\$0.25 trillion, leading to a global market capitalisation decline of US\$25 trillion (Mercure et al. 2018).

# Australian banks are still bankrolling fossil fuels

Banks support the fossil fuel industry in two main ways: direct financing for individual projects, like a new coal mine or gas processing facility; and corporate financing for fossil fuel corporations, like Woodside or Chevron, through loan or bond arrangements.

A look inside Australia's biggest banks, the Big Four, shows that despite a lot of public rhetoric about their climate action plans, these financial institutions are still heavily bankrolling fossil fuels. Since the Paris Agreement was signed in 2015, the Big Four banks have lent \$57.5 billion to fossil fuels. This includes \$19.2 billion to companies with plans to expand fossil fuel production and \$9.5 billion directly to new or expanded projects (Market Forces 2023a).

**Figure 9:** Australia ranks as the world's third largest exporter of fossil fuel pollution; one of the world's top exporters of fossil gas and a major coal producer and exporter (Oil Change International 2023).





## WHAT ARE OUR BIGGEST BANKS INVESTING IN?

### Commonwealth Bank

In 2021 Commonwealth Bank contributed to a \$16.7 billion loan to the global coal mining giant Glencore, together with ANZ, NAB and other international banks. This loan was funded through corporate finance, a deal which otherwise would have been ruled out under the bank's policy banning project finance for new and expanded thermal coal mines. Glencore currently operates 17 coal mines across NSW and Queensland, and has a further three additional coal mines under assessment which would see it continue to produce this harmful fossil fuel for decades to come. Outside of China and India, Glencore is the largest coal mining corporation in the world.

### NAB

Not only are the Big Four bankrolling fossil fuels projects within Australia's borders, but also in other major fossil fuel-producing countries. In July 2022, NAB was involved in refinancing a \$1.86 billion loan to the Coastal Gaslink Pipeline in British Columbia, Canada. Over its lifetime this pipeline would enable the release of at least 610 million tonnes of CO<sub>2</sub>.

The project also faces fierce opposition by the Wet'suwet'en First Nations people who have not provided free, prior and informed consent to the project. This violates both international human rights law and NAB's own human rights policy.

### Westpac

In February 2020, Westpac contributed to a \$1 billion loan to Whitehaven Coal. Whitehaven operates four coal mines across NSW, and plans to start another two major projects by 2025; Winchester South and the Vickery Extension Project. Relative to its ongoing coal expansion, Whitehaven has invested next to nothing in decarbonisation projects or zero-emission projects.

### ANZ

In August 2022, ANZ contributed to a \$1.8 billion loan to Santos, related to the company's major Barossa gas project. Commonwealth Bank, Westpac and ANZ were also involved. Concerningly, none of the Big Four banks have restrictions on lending to gas for export, even as modelling forecasts a 75 percent decline in Australian LNG exports by 2040 to meet climate goals (Australian Industry Energy Transitions Initiative 2023).

*Data and case studies sourced from Market Forces analysis.*

Between 2021 and 2022, ANZ was among 15 global banks that increased their financing of fossil fuels. Over this period ANZ increased fossil fuel financing by almost 150 percent (Rainforest Action Network 2023). Overall, as Australia's largest commercial and industrial bank, ANZ has contributed the most to the

fossil fuel sector in recent years. The bank has loaned a total of \$18.6 billion to the fossil fuel industry between 2016 to 2022, followed by Commonwealth Bank (\$15.8 billion), NAB (\$14.1 billion), and Westpac (\$9 billion) (see Figure 10).

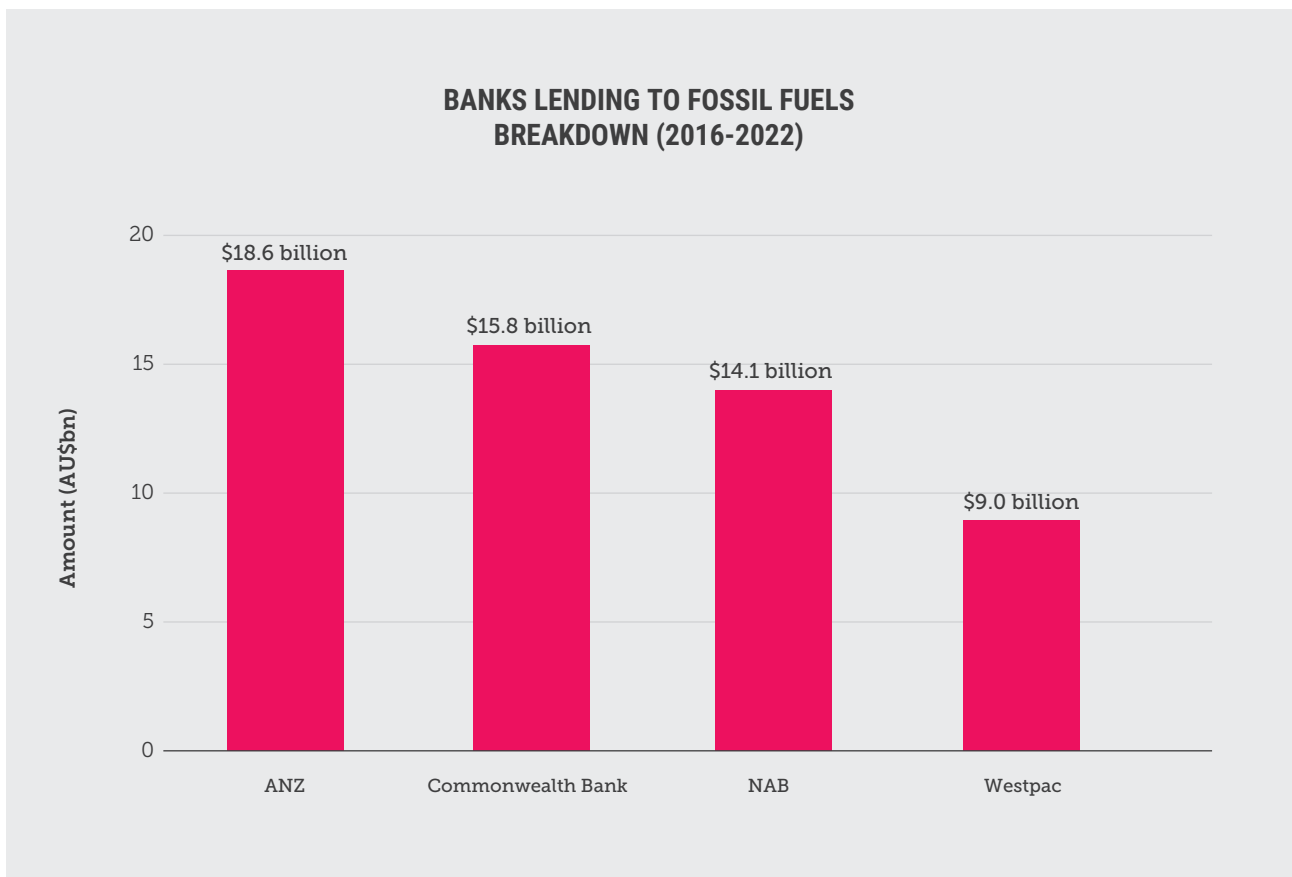


Figure 10: Bank lending to fossil fuels (2016-2022). Source: Market Forces (2023a).

The Big Four banks are not the only Australian banks funding expanded fossil fuel supply. However as the biggest and most systemically important banks, they warrant special scrutiny. While Macquarie Group is more a global asset manager and investment bank than a commercial bank like the Big Four, it is likewise systemically important, given its market capitalisation is now nearly as big as ANZ. Macquarie Group has directly loaned \$1.2 billion to fossil fuels since 2016, including \$202 million in 2022 alone (Market Forces 2023b). It also has significant advisory and 'off balance sheet' exposures to fossil fuel firms and trading activities (Climate Energy Finance 2023a). When taking into account broader investments through shares and bonds, the Macquarie Group invested \$4.9 billion in fossil fuels (IEEFA 2023).

In addition to their direct financing for fossil fuel projects and companies, Australia's major banks continue to fund, advise on, and facilitate the use of coal, oil and gas through complicated investment vehicles which may themselves be financing or enabling fossil fuel projects. For example, in 2022 NAB, ANZ and Westpac joined a consortium of 18 global banks, which financed Global Infrastructure Partners in its purchase of a 49 percent stake in Woodside's Pluto 2 LNG train— part of the massive proposed Scarborough gas project. Woodside indicated that the financing from Global Infrastructure Partners, a leading infrastructure fund manager, would allow it to meet the \$8.5 billion construction cost of Pluto 2 and lower Woodside's capital expenditure (Woodside 2022). The Scarborough gas project will unleash more than 1.69 billion tonnes of CO<sub>2</sub> over its lifetime (Conservation Council of Western Australia and The Australia Institute 2021). This approach can allow fossil fuel funding to fly under the radar for big banks, even when the capital is fundamental to projects like these going ahead and the release of over a billion more harmful emissions.

In addition to directly financing coal, oil and gas projects and companies, Australia's major banks also fund fossil fuels through a range of investment vehicles which are driving harmful climate change.

## COMMONWEALTH BANK'S NEW OIL AND GAS POLICY PRESENTS A WAY FORWARD

In a welcome move, in mid-2023 Commonwealth Bank announced it would rule out project finance for new and expanded oil and gas extraction and associated infrastructure (CBA 2023). This aligns the bank with global best practice in oil and gas policies, and sets a new benchmark for the region. Indeed, it has sparked a race to the top with Westpac ruling out project financing to new and expanded oil and gas projects (Westpac 2023). From previous commitments the bank has indicated it would no longer provide project finance to new or expanded thermal coal mines or new coal-fired power plants, or provide corporate finance or arrange bonds for companies expanding their coal-fired power generation capacity (CBA 2023). Commonwealth Bank will now require its corporate clients to publish 'Paris-aligned' transition plans by 2025, which include Scope 1, 2 and 3 emissions (CBA 2023). This enables the bank to have better visibility over the carbon intensity of its lending book.

While the policy is a big step forward for Australia's banking sector, Commonwealth Bank's policy still allows for direct financing of LNG terminals and metallurgical coal mines; and financing fossil fuel clients where the Australian Government or regulator has deemed that a certain fossil fuel project is 'necessary to energy security' (CBA 2023; Climate Energy Finance 2023b; Market Forces 2023c). These exclusions give Australia's biggest home lender significant scope to keep financing fossil fuels, particularly for export projects whose Scope 3 emissions fall outside of Australia's emissions accounting. Australia and the banking sector should be leading by example, not doing the bare minimum.

### **All the major banks will require transition plans from fossil fuel companies**





















From October 2025, all of the Big Four banks will require transition plans from fossil fuel companies as a condition of financing. However the requirements differ between banks on how much of the sector is captured, types of financing, alignment with different scenarios of warming, and scope of emissions. All of the banks will require transition plans for oil and gas companies; Commonwealth Bank and NAB extend this, also requiring transition plans for metallurgical coal and power generation which has 25 percent or more of its electricity from coal. These transition plans are conditional for the provision of corporate finance for all banks, with Commonwealth Bank and Westpac going further to include bond facilitation. All transition plans need to be at least consistent with the Paris Agreement "well below 2°C" target, while Westpac goes further requiring 1.5°C aligned transition plans. Regarding emissions, Commonwealth Bank and Westpac require plans to reduce Scope 1, 2 and 3 emissions, NAB will consider including Scope 3 emissions and ANZ requires the disclosure of Scope 3 emissions but not reduction targets (ANZ 2023; CBA 2023; NAB 2023; Westpac 2023). Transition plans should encompass the whole sector; be aligned with climate science and limiting warming to as close to 1.5°C as possible; include bond facilitation and trade financing, and include Scope 1, 2 and 3 emissions. A best practice guide on transition planning for the banking sector has been recently released by the United Kingdom Transition Taskforce - [Banks Sector Guidance](#) (Transition Plan Taskforce 2023) to support the sector.

# Bank divestment promises have too many loopholes

As scrutiny of lending to fossil fuels has grown in recent years, Australia's major banks have made a range of public commitments to clean up their portfolios. Unfortunately, these are often rich in rhetoric poor in delivery, and have to-date failed to align with what the climate science concludes is necessary. Adoption of Commonwealth Bank's new oil and gas policy by Westpac is commended, and should similarly be adopted by ANZ and NAB and considered a minimum domestic benchmark.

Even taking new policies into account, an analysis of the fossil fuel lending policies of the Big Four found all continue to support some expansion of coal, oil and/or gas (see Table 1). Banks which have committed to end *project* finance for thermal coal expansion are not completely walking away from *corporate* finance of the companies which own and operate these fossil fuel assets. This is one of three key loopholes banks use to obscure their fossil fuel lending, as discussed below.

Table 1: Big Four's fossil fuel lending policies.

				
No project finance - thermal coal expansion				
No corporate finance - thermal coal expansion				
No project finance - oil and gas expansion				
No corporate finance - oil and gas expansion				

 Yes    No    Partly

Source: Australian Conservation Foundation (2023b); ANZ (2023); Commonwealth Bank (2023); NAB (2023); Westpac (2023). Note that Commonwealth Bank has no restrictions on new LNG projects, while Westpac does.

## LOOPHOLE #1

### Funding fossil fuel *companies* rather than *projects*

---

While some banks have promised not to lend to fossil fuel projects, the majority of fossil fuel financing is done through corporate finance to the company which is delivering a given project. Globally, almost 80 percent of finance for planned fossil fuel projects comes from corporate loans (Global Energy Monitor 2022). Market Forces (2023a) estimates that 69 percent of overall lending to the fossil fuel industry by the Big Four has been through corporate finance. The loan to Global Infrastructure Partners for its stake in the proposed Woodside Pluto 2 LNG project is a clear example of the problem. The project would be excluded from NAB and Westpac's lending policies if a loan had been provided directly to the project rather than through this investment vehicle (Market

Forces 2023a). Financing of fossil fuel corporations with expansion plans is also undertaken through bond arrangements, where the Big Four have arranged \$2.2 billion worth of fossil fuel bonds in 2021-2022 (Market Forces 2023a).

Commonwealth Bank's updated policy still maintains a corporate finance loophole, where the bank can continue offering corporate finance and bond facilitation for new oil and gas clients who derive 15 percent or more of their revenue from the sale of oil and gas; provided the client has publicly committed to the goals of the Paris Agreement, and following an assessment of the environmental, social and economic impacts (CBA 2023; Climate Energy Finance 2023b).

Corporate finance loopholes enable banks to continue financing the fossil fuel industry.



## LOOPHOLE #2

### Financed emissions can obscure pollution that bank financing still allows

---

Banks are increasingly setting targets for reducing their *financed emissions*— this means the carbon pollution that is linked to their investment and lending activities. For example, Commonwealth Bank has a financed emissions target for its overall portfolio of net zero by 2050. This includes a target to reduce thermal coal mining financed emissions to zero, oil extraction by 27 percent, and gas extraction by 17 percent, all by 2030 (CBA 2022; 2023). NAB has the same commitment for its overall financed emissions and financed emissions for coal, alongside a target of reducing financed emissions for oil and gas by 21 percent by 2030 (NAB 2022). Banks calculate their financed emissions by assessing the total greenhouse gas emissions produced by an asset, proportional to their ownership share; only keeping emissions on their books while a loan is active.

This is a welcome step in measuring client's emissions and reducing lending to emissions intensive sectors, such as the fossil fuel sector. However, it does not reflect the total project emissions a bank is enabling. Banks are in a unique position where withholding finance may mean that a project and its associated emissions might not go ahead, or may face greater difficulty obtaining alternative funding. For example, if new projects under development by Woodside, Santos, and Whitehaven Coal -companies which have all received Big Four funding - all go ahead, the cumulative impact would be 4.2 billion tonnes of CO<sub>2</sub> (Market Forces 2023a). Meanwhile, each bank will only formally account for their share of any emissions, relative to the amount of project finance provided. Recent sustainability reports from large international banks also highlighted the flaws within financed emissions methodologies; where the attribution factor for each loan is a ratio of the outstanding borrowing and the value of the company being financed (expressed at the enterprise value including cash of the respective client). With higher energy prices pushing up valuations of fossil fuel companies, banks appear to be doing less damage as the loan amount remains the same (Bloomberg 2023a). Financed emissions alone may not accurately reflect the efforts of companies or financial institutions to do the right or wrong thing, and should not be taken at face value.

### LOOPHOLE #3

#### The true costs of fossil fuel projects are not accounted for on a timeframe consistent with limiting warming as close to 1.5°C as possible

---

When a fossil fuel plant is decommissioned, the cost of remediating these polluting projects can be significant. Abandoned coal mines and oil and gas wells that have not been remediated can contaminate groundwater and soil, release dangerous air pollutants, reduce the value and usability of surrounding land, and continue to release greenhouse gas emissions (World Resources Institute 2021). Fossil fuel companies should pay for the cost of restoring these sites, and account for this within their balance sheets. While fossil fuel corporations do record remediation liabilities this is done over a project lifetime that spans multiple decades making the liability appear miniscule. This is a loophole being taken advantage of in the banking sector, as well as the broader financial sector and in corporate reporting.

Multi-decade lifetimes for fossil fuel projects are out of line with the climate-science that requires no new fossil fuel projects to be built from 2021 onwards (IEA 2021) as well as a *rapid* phase out of existing fossil fuel supply. The cost of decommissioning Australia's 65 offshore oil platforms alone, for example, could reach \$60 billion over the next 30 years (Wood Mackenzie 2020). A test of ability to provide for total remediation within a 10-year timeframe would more accurately reflect the cost of remediation within timeframes aligned with rapidly phasing out fossil fuel supply aligned as close as possible to 1.5°C of global warming. Banks and regulators that require this would gain a far more accurate understanding of the financial risks associated with fossil fuels, on top of the risks created by their emissions.

**Figure 11:** Aerial view of the Tarrawonga coal mine operated by Whitehaven Coal. Morningstar Sustainalytics' Low Carbon Transition Rating found that no Australian-listed top 300 company is on track to reach net zero by 2050, primarily due to supply chain and Scope 3 emissions (Morningstar 2023). Whitehaven Coal is one of the most misaligned companies, with an implied average global temperature rise of 6.3°C by 2100. Meaning that if every company mismanaged their emissions like Whitehaven, the world would warm by 6.3°C.



# Financing fossil fuel expansion worsens climate change

There is an urgent need to redirect capital towards the energy sources and industries that will power our prosperity into the future - with massive investment, employment and export opportunities for Australia if we do. An estimated \$3.5 trillion of annual investment is needed in our global energy systems between 2023 and 2052 to limit rises in global temperatures to 1.5°C (IPCC 2023b). Energy investments must accelerate to a minimum four to one ratio of renewables to fossil fuels by 2030 (Bloomberg 2023b).

In Australia, we will need to invest an estimated \$1.2 trillion by 2030 to decarbonise our energy system while scaling up the electrification of all other sectors (Net Zero Australia, 2023). There

are also growing calls among the energy sector, unions, community and investor groups for a major climate industrial policy package to underpin the transition to renewables, clean energy technologies and infrastructure and decarbonisation of Australian industry. A \$100 billion investment by the government to kickstart this transition is expected to unlock \$200 to \$300 billion of private capital or more (Climate Energy Finance 2023c). Where decarbonisation opportunities are available for sectors such as transport, industry and agriculture, there needs to be an equitable transition for high-emitting industries and prioritisation of clean technologies, and banks and their leadership can be a critical lever in this (see Box 3 for an example in shipping).

## BOX 3: ALIGNING SHIPPING FINANCE WITH SOCIETY'S GOALS

The Poseidon Principles for Financial Institutions are a framework for assessing and disclosing the climate alignment of lending to shipping, contributing to international shipping's decarbonisation over time. In June 2019, 11 leading banks came together to establish the principles representing US\$100 billion in loans. The Principles now have over 30 signatories across 13 countries representing US\$200 billion in loans and 65 percent of the global ship finance portfolio - setting an example for the rest of the industry (Poseidon Principles 2022).

The Poseidon Principles consist of four principles: 1) assessment of climate alignment, measuring carbon intensity of shipping portfolios on an annual basis, 2) accountability where signatories

support and rely on mandatory regulation requirements within the sector, 3) enforcement where signatories commit to making compliance with the Principles contractual in new business activities, and 4) transparency where signatories are required to report their portfolio alignment score on an annual basis, these are published annually by the Poseidon Principles.

The Poseidon Principles demonstrate the critical role that the financial sector can play in catalysing sectoral decarbonisation. Indeed, they have inspired other sectors with the Poseidon Principles for Marine Insurance in 2021 and the Sustainable STEEL Principles in 2022 (Poseidon Principles 2022).



## CONSIDERATIONS FOR THE CHAIRS AND CEOS OF AUSTRALIA'S BIG FOUR BANKS

Climate risk should be embedded in the executive leadership and governance of corporations, including banks. As outlined in Section 1, climate change poses a material financial risk to banks' operations and portfolios and must be accounted for and addressed. This includes decisions related to expanding fossil fuel supply, and transitioning out of coal, oil and gas in an orderly manner. Legal opinions by Noel Hutley SC and Sebastian Hartford Davis in 2016, 2019 and 2021 highlight that Australian corporate law requires company directors to take climate change into account when making decisions about company strategy, performance and risk disclosure (Centre for Policy Development 2016; 2019; 2021).

The decisions made now will determine our future. Every fraction of a degree of avoided warming matters, and will be measured in lives, species and ecosystems lost or saved. The major banks have considerable power, reach and resources in Australia, with their actions carefully scrutinised by the public. Bank CEOs and board chairs steer the direction of the company and have a key role in financing the decarbonisation of our economy, or further fuelling the climate crisis - and need to ponder:

- › **As leaders, what is your role in accelerating the transition to Net Zero?**
- › **The climate science is stark, there can be no expanded coal, oil or gas. How can you rationalise continued finance to the industry driving the climate crisis?**
- › **What will be your bank's legacy, how are you ensuring a safe and prosperous future for generations to come?**



Paul O'Sullivan, Chair Shayne Elliott, CEO



Paul O'Malley, Chair Matt Comyn, CEO



Philip Chronican, Chair Ross McEwan, CEO



Steven Gregg, Chair Peter King, CEO

# How to strengthen bank balance sheets and improve our climate and financial systems

If coordinated global action limits temperature increases as close as possible to 1.5°C, the associated reductions in global demand for thermal coal could reduce Australia's exports to less than 1 percent of existing levels by 2063 (Commonwealth of Australia 2023). Demand for gas and oil are expected to be 50 percent and 75 percent lower, respectively, in a net zero world (IEA 2021)– and smaller again if technologies like renewable hydrogen and biofuels are delivered at scale. Our top global export position in coking coal will similarly be dramatically diminished if projects like H<sub>2</sub> Green Steel in Sweden are replicated. These changes will slash the value of fossil fuel corporations and projects, leaving their financial backers to take the hit, as well as potentially leaving the Australian public with a \$60 billion unfunded decommissioning and rehabilitation cost for offshore gas alone (Wood Mackenzie 2020).

There is a growing swell of action to understand and mitigate climate risks within the banking sector. The climate stress testing undertaken by APRA was a useful exercise, which accelerated the development of climate scenario analysis capacity development and risk awareness among participant banks during the process (APRA 2022). However, data within the Climate Vulnerability Assessment was aggregated and anonymous for participating banks. In addition to participating in regulatory stress testing, banks should also conduct and publish their own firm level climate stress tests on a regular basis to keep abreast of updated or newly available data. This would also inform investors, customers and the public on an individual firm level, rather than as a sector (as in the Climate Vulnerability Assessment). Regulatory stress tests often reflect the concerns and needs of regulators to deliver on supervisory and financial stability objectives, which may differ from the objectives of a financial institution (UNPEFI 2021).

Individual bank portfolio stress testing is already underway by Australian banks to varying degrees. Again, Commonwealth Bank is leading having tested the resilience of 89 percent of their lending portfolio to potential transition risks and 45 percent of their lending portfolio to potential physical risk and public reporting with significant detail in their 2023 climate report (CBA 2023). Westpac has conducted 1.5°C (in 2019), 2°C (in 2016) and 4°C scenario analysis (in 2018), the physical risk scenario analysis of their mortgage portfolio is updated every six months, and more detailed scenario analysis will be undertaken in 2024 (Westpac 2023). Portfolio scenario analysis has also been undertaken by NAB (2022), but with less detail disclosed, and this in development at ANZ (2022). Portfolio-level

climate stress testing should be expanded by all major banks as soon as possible, reported with sufficient detail, and updated annually as new and updated information becomes available.

If we fail to take strong action this decade and global warming accelerates beyond 2°C, \$1.2 trillion in economic costs over the years to 2060 is projected (Deloitte Access Economics 2021). This encompasses the direct and indirect costs of increasingly frequent and severe extreme weather events – affecting communities, businesses and our environment.

Fossil fuel lending is no longer a safe bet for Australia's banks. At a time where continued extraction of fossil fuels sends us closer to climate catastrophe, further expansion of coal, oil and gas is incredibly reckless. It is time to address this through concerted regulatory action, which builds on the important steps already being taken to boost financial system transparency and accountability. Sustainable banks in Australia and internationally demonstrate that banking on values and delivering positive economic, social and environmental outcomes is both preferable and possible today (see Box 4).



Figure 12: Bank Australia is one of 88 Australian banks with no record of fossil fuel lending since 2016 (Market Forces 2023b).

 **BOX 4: IT CAN BE DONE: SUSTAINABLE BANKS HERE AND GLOBALLY**

There are banks already showing it is possible to adopt a sustainable model which prioritises people and the planet. The Global Alliance for Banking on Values is a network of more than 70 independent banks using finance to deliver positive economic, social and environmental outcomes. Some examples include:

- › **Bank Australia** (total assets \$10.5 billion as at June 2023 (Bank Australia 2023)) refuses to invest in fossil fuels, gambling, tobacco, live animal export and the arms industry; is a certified B Corp bank; it is the first Australian bank to aim for net zero by 2035; the first bank to switch to 100 percent renewable electricity; is ceasing car loans to new fossil fuel cars from 2025 and electrifying their corporate car fleet; offers Clean Energy Home Loans with discounted interest and has launched an Electrify your Home pilot program; provides a Low-Emissions Vehicle car loan; and supports First Nations voices to lead the way on climate action. Bank Australia has a 2030 target – validated by the Science-Based Target initiative (SBTi) – to track progress towards reaching net zero by 2035, and is in line with limiting global warming to 1.5°C, which is essential to avoid the worst impacts of climate change. Its science-based target covers its Scope 1, 2 and 3 emissions, including its financed emissions. The financed emissions target covers 82 percent of its total lending and investment activities. Bank Australia uses the Partnership for Carbon Accounting Financials (PCAF) methods to calculate the emissions from its mortgages and commercial real estate. For more information about its climate target see [Bank Australia 2023](#).
- › **Teachers Mutual Bank Limited** (total assets \$10.7 billion as at June 2023 (TMBL 2023)) is one of Australia's largest customer-owned banks with over 234,000 members nationally. Teachers Mutual does not directly invest in or source money from the fossil fuel industry, and is committed to cutting Scope 1 and 2 emissions as the business grows, including with a 100 percent EV corporate car fleet by 2027. The bank's retail mortgages, deposits and Wholesale Debt Investment Programme and Short Term Deposits are certified socially responsible products by the Responsible Investment Association Australasia. The bank also has a number of green accolades - named One of the World's Most Ethical Companies for 10 years in a row, a Certified B Corp Bank, Green Bank of the Year 2022 in Finder Green Awards, the only bank named as a Responsible Investment Leader by the RIAA.

#### BOX 4: CONTINUED

- › Canada's **Vancity** (total assets \$38.2 billion (Vancity 2023)) and the Netherlands' Triodos bank (total assets \$37.6 billion) demonstrate ethical banking at a larger scale.
  - **Vancity** aims to be net zero by 2040 across all its mortgages and loans. The bank does not invest capital or assets in oil, gas or coal companies. It does not provide investment banking services to facilitate access to capital for those companies. The bank provides banking and other solutions to help people who are affected by the climate crisis, as well as those seeking support in leading cleaner and more sustainable lives. Recognising that a decarbonised future needs more professionals in green construction and diversity in trades Vancity has partnered with the Electrical Joint Training Committee to fund 250 apprentices – especially women and Indigenous workers – to get ready for careers in the renewable energy sector that include solar power and electric vehicle technology (see more at [Vancity 2023](#)).
- **Triodos bank** calls on climate change risks and management to become an active topic in boardrooms. It urges all stakeholders to focus on climate mitigation and more specifically on asset and project finance and infrastructure, because this is where the biggest financing need exists in terms of volume. Triodos bank sees financing opportunities for saving energy and energy efficiency; production of renewable energy; and infrastructure investments in grid, off-grid systems, smart grid and storage.



### 3. Better visibility of climate financial risks won't drive change far or fast enough on its own

In recent years, the Australian Government and financial system regulators have taken some important first steps to address climate financial risk and promote system stability in the face of escalating climate change.

The global Financial Stability Board's work on the Task Force for Climate-Related Financial Disclosures (TCFD) and its amalgamation into the International Sustainability Standards Board in 2024, is in the process of being translated into a practical mandatory disclosure regime for Australia. This will give regulators, investors and communities new visibility of the climate risks held on the balance sheets of our biggest banks and major corporations. The development of an Australian sustainable finance taxonomy and creation of an Australian Sovereign Green Bond program also aim to direct capital towards sectors, industries and projects which will contribute to decarbonisation and be sustainable in the long term.

Transparency alone is unlikely to drive enough capital out of fossil fuels and into clean energy and industry sectors at the speed and scale needed now to tackle the climate crisis.

These and other current initiatives are premised on the idea that improved transparency and better information about climate financial risks will lead to the efficient reallocation of capital away from risky investments. This is what economic theory says should happen; in practice there is no guarantee markets will behave as intended in the face of new information. The war in Ukraine resulted in hyperinflation in fossil fuel prices and a resurgence in investment activity during 2022 and 2023 (IMF 2023). This highlights the willingness of financial

markets and corporations to keep making short-term bets, even when these events have actually accelerated the global energy transition. Transparency alone is also unlikely to drive capital out of fossil fuels and into clean energy and industry sectors at the speed and scale needed now to tackle the climate crisis. So while recent developments in financial regulation to improve transparency and information are very welcome, these should be considered only the foundations for more and stronger action.

## Mandated climate risk disclosures are an important first step

From 1 July 2024, a wide range of large Australian public and private corporate entities will be required to disclose significant new information about their climate-related plans and risks. This work builds on the baseline global standards for climate disclosure developed from the recommendations of the TCFD (2017). In doing so, Australia's government and regulators are aiming to ensure that mandatory new domestic reporting requirements align directly with disclosure requirements being put in place in other countries, for the best comparability across markets.

At the time of writing, the exact format and content required for these climate-related disclosures was still under development by Treasury and the Australian Accounting Standards Board.

In principle, climate-related disclosures should: "enable investors (and future investors) to understand and assess the climate-related financial risks and opportunities faced by reporting entities and how entities are managing, planning for and adapting to these risks and opportunities. Disclosures will also support policy makers and regulators to better understand and assess broader systemic risks to Australia's financial system" (Treasury 2023b).

This will be achieved through mandatory reporting on the following key issues:

- › Scenario analysis in both qualitative and quantitative forms against at least two possible future states. One of these must be consistent with reducing emissions 43 percent by 2030 and reaching net zero by 2050.
- › Transition plans including information about offsets, mitigation strategies, target setting and any progress towards these targets.
- › Disclosure of material climate-related risks and opportunities, including how these will be identified, assessed and managed.
- › Disclosure of Scope 1, 2, and 3 emissions for the reporting period.
- › Information about climate-related governance processes and disclosure according to industry-based metrics once well established and understood.

Noting that Scope 3 emissions, industry-based metrics, and quantitative scenario analysis are not required in the initial stage of the TCFD (Treasury 2023c). However, the International Sustainability Standards Board / International Financial Reporting Standards' S2, which will include TCFD monitoring from 2024, does include these aspects and Australia is committed to aligning with S2.

The inclusion of Scope 3 emissions reporting requirements has been a controversial part of the climate-related disclosure framework, but it is essential for regulators and investors to properly understand the climate risks that companies are running. For banks, Scope 3 will capture their financed emissions— the harmful greenhouse gas pollution which results from their lending to fossil fuel



**Figure 13:** Australia will join many other countries in mandating the TCFD, including Canada, New Zealand, the United Kingdom, Brazil, the European Union, Hong Kong, Japan, Singapore, and Switzerland.

companies and other big emitters. As with fossil fuel companies themselves, Scope 3 emissions are by far the largest share of a bank's emissions footprint and so represent its biggest contribution to climate risks. Globally, financed emissions of financial institutions are, on average, more than 700 times larger than direct emissions (Centre for Policy Development 2021b).

The mandatory climate-related disclosures regime will allow us to see banks' real exposure to climate risks for the first time, and how much they are intensifying these risks through their investment in fossil fuels. But this disclosure is where mandatory action will stop: there are no plans to require markets, regulators or governments to actually use these new insights to take action and reduce these risks.

# Defining sustainable investment and green bonds can better direct capital over time

There are additional developments under way to help shift capital towards sustainable investments and enable Australia's transition to a decarbonised economy. This includes the Australian Sustainable Finance Taxonomy, Treasury's Green Bonds Program and a recently announced Australian Sustainable Finance Strategy.

The Australian sustainable finance taxonomy has been in development since May 2022, a joint industry-government initiative coordinated by the Australian Sustainable Finance Institute (ASFI). The Taxonomy will provide a set of clear, consistent and common definitions for what activities or assets are considered sustainable, which can be used to define sustainable investments credibly and transparently (ASFI 2023). Better definitions matter as they help guide the transition of our economy away from fossil fuels and carbon-intensive activities and assets, while also preventing greenwashing and providing investors with confidence in sustainability claims. Recently the Australian Government announced it would co-fund the initial development of the Taxonomy in partnership with ASFI, with a public consultation process on all draft criteria expected in 2024. As the Taxonomy develops, greater transparency, independence and overt alignment with climate science should be incorporated to ensure the credibility of the Taxonomy is maintained.

Clearly and consistently defining what a sustainable investment is can guide our economy away from fossil fuels and carbon-intensive activities and assets, and preventing greenwashing.

There has been an active green bond market in Australia since its inception in 2014 and \$13 billion of green bonds were issued in the first half of 2023 (RBA 2023c). The main issuers of green bonds are state treasury corporations, major Australian banks and non-resident organisations that issue bonds into the Australian market (RBA 2023c). However, the Federal Government will also introduce a Sovereign Green Bonds Program, with the first issue of sovereign green bonds scheduled for mid-2024 (Treasury 2023c). The program will allow private capital from investors to flow towards public projects that are critical to Australia's transition. Globally, green bonds have experienced significant growth since the first issuance in 2008 by the World Bank, with a cumulative issuance of \$2.54 trillion to date (World Bank 2021; Climate Bonds Initiative 2023). By establishing a sovereign green bond program, Australia will join at least 19 other sovereign nations issuing green bonds, which make up over 20 percent of the green bond market (MSCI 2023; OECD 2021). The program will also increase transparency about climate outcomes and increase the scale of green investments available.

These are undoubtedly positive developments, but as with climate-related disclosures their effectiveness rests heavily on the assumption that markets and system actors will behave rationally by prioritising long-term public good over their own potential short-term financial gain. Even if this were the case on average over time, it is highly unlikely these steps will drive financing out of high-polluting industries and into sustainable ones at the speed and scale needed to transform our energy, transport and industrial systems within the next decade. Once the architecture is in place to clearly identify what sustainable projects, infrastructure and firms for funding look like, the next step is to unlock greater flows of capital towards them— reducing climate risks and increasing long-term financial system stability.

# Our window for climate action is narrow and closing, and we need to go further and faster

We are in the make-or-break decade for climate action. The actions and decisions we take now will determine whether we can hold global warming as close as possible to 1.5°C or tip over into unchecked climate chaos. This moment calls for strong action; requiring more than mandated disclosure and then crossing our fingers for a rational market response.

The environmental, economic and social cost of continued inaction and ignoring the climate science consensus for Australia is simply too high. While the opportunities for

Australia to transition our economy to being a zero emissions industry leader are simply too big and important to ignore. Creating and promoting sustainable investment options is an important signal for where capital should be going, but it does not go far enough to drive money out of the places that enable further climate harm. We need to take the opportunity created by these new climate financial risk management tools to take the next essential step: directly regulating bank lending for projects and companies that drive harmful climate change.



Figure 14: Major investments in transmission and storage are needed to ensure Australia reaches its renewable energy potential.

# 4. Regulating bank lending that drives climate change is the next step for a strong financial system and a safe future

Increased transparency through disclosure can be a flashlight in the hunt for climate financial risks, shining new light on the places across our financial system where these are too high.

Armed with this new tool, the Australian Government and financial regulators should use it to full advantage through a next phase of laws and regulatory actions which directly seek to *reduce* financial system climate risk. This report and recommendations are focused on banks' lending for fossil fuel expansion, however we recognise the need for all financial actors to play an important role in shifting capital towards our energy transition. Once climate risks are identified and measured, we must take meaningful action to mitigate these risks and seize the opportunities of transitioning to a green economy.

# Using disclosure to drive action

There are important steps banks, government and regulatory bodies can take to address the exposure of major financial institutions to coal, oil and gas. Doing so will strengthen our financial system in the years to come, while also playing a role in redirecting capital to industries and sectors that will help ensure a thriving and prosperous future. This section provides a series of recommendations for banks, government and regulators to address climate financial risk as we gain new and better visibility of it. This includes near-term actions which can be achieved within existing regulatory frameworks, together with actions which will require international cooperation and coordination— building on the existing foundations provided by global reform efforts to date.



## BANKS

Australia's banks are the frontline of our financial system, and their actions have the most direct impact on the level of risk within it. The introduction of climate-related financial disclosures will force banks to meaningfully and fully engage with the climate risks embedded in their loan books. Banks do not need to wait for regulatory change to act on reducing these newly visible risks. Their boards and shareholders should demand they take the following proactive steps to do so.

- › **Stop financing new and expanded coal, oil and gas immediately— inclusive of project, corporate and indirect finance.** To limit warming as close as possible to 1.5°C, there can be no new or expanded fossil fuel projects. Bank financing to such fossil fuel projects— however it is provided— enables the release of harmful greenhouse gas emissions which will fuel escalating climate damage. This is underway, as all of the Big Four banks have policies which restrict project finance to thermal coal expansion or set an exit date from the sector. Meanwhile, Commonwealth Bank's new policy, now shared by Westpac sets a new Australian standard in ceasing project finance for oil and gas expansion. The other major banks should adopt a similar policy, and all of the major banks must work to close loopholes within their lending policies that provide funding for fossil fuel expansion.



- › **Use refinancing opportunities to reconsider whether companies' transition plans are sufficient to limit warming as close as possible to 1.5°C.** When a loan for a fossil fuel company or project comes up for renewal, banks should use the opportunity to reexamine whether the company's transition plan and forthcoming projects are consistent with limiting warming as close as possible to 1.5°C. This should include the full costs of site remediation as outlined below. If they fail on these counts, the loan should not be renewed. A recent example of this is Westpac and NAB's loan of \$110 million each to Whitehaven coal which has been in place since 2013, and was refinanced in February 2020, but not renewed in July 2023.
- › **Banks should continue to conduct climate stress testing at an individual portfolio level regularly and publicly release the results in detail.** In addition to participating in regulatory climate stress tests, such as APRA's Climate Vulnerability Assessment, banks should conduct annual climate stress testing of their portfolios and release this information publicly. This has already been undertaken in part by Commonwealth Bank, Westpac and NAB, with ANZ committed to developing their own portfolio stress testing. These stress tests should be expanded to encapsulate the entire portfolio as soon as possible; and undertaken regularly, as more climate-related data becomes available or is updated. This practice is critical for banks to ensure proper climate risk mitigation within their portfolios and to inform the broader financial system.

Figure 15: Banks are increasingly facing pressure from bank customers, shareholders and community members to stop funding the expansion of coal, oil and gas.





## AUSTRALIAN GOVERNMENT

As the recent development of mandatory climate-related financial disclosure demonstrates, the Australian Government works closely with financial system regulators to set the rules of engagement for system participants. The Australian government has also recently acknowledged the systemic risk climate change poses to the value of the country's sovereign bonds. While a significant amount of domestic banking regulation is designed to mirror international standards to ensure market interoperability, there are key steps the Government can take to strengthen this within our borders.

- › **Stop approving new fossil fuel projects immediately.** Any new or expanded coal, oil or gas is incompatible with limiting global warming as close as possible to 1.5°C. The Federal Government should stop approving new fossil projects immediately. The government has already approved four coal mines since May 2022; this is four too many. Reforming Australia's national environmental law - the Environment Protection and Biodiversity Conservation Act - presents an important opportunity to pursue this (Climate Council 2023).

## WHAT'S AN AUTHORISED DEPOSIT-TAKING INSTITUTION?

An Authorised Deposit-taking Institution (ADI) is a financial institution licensed by APRA to carry out banking business (taking deposits and making loans) in Australia under the *Banking Act 1959*. ADIs include banks, building societies and credit unions.

The Act's main objects are: "to protect the interests of depositors in ADIs in ways that are consistent with the continued development of a viable, competitive and innovative banking industry" and "to promote financial system stability in Australia" (AustLII 2023).

The Act defines conditions financial institutions must meet to be licenced as an ADI, and sets out the role of APRA in supervising them. In the sixty years since the Act's establishment, governments have made numerous amendments (Australian Government 2023).

ADIs are backed by the Financial Claims Scheme (FCS), an Australian Government initiative which provides protection to deposit-holders in the event a financial institution fails. The scheme is a government-backed safety net for deposits up to \$250,000 per account holder, per ADI (APRA 2023b). This same safety net is only provided to ADIs, not other financial institutions like investment funds. Banks therefore gain a strong and direct benefit from the Australian Government by being licensed as an ADI- they can market themselves as having a degree of security and soundness which other financial services providers cannot.

In return for this benefit, it is fair that the Australian Government ensures ADIs are not taking unreasonable risks with their lending, which may leave them more exposed to the risk of failure- at the ultimate cost of taxpayers- in the foreseeable future.

- › **Use rules applying to all Authorised Deposit-taking Institutions (ADI) to mandate banks to conduct climate stress testing on their portfolios, to take into account climate risk and lending for climatic and financial stability.**

The Commonwealth *Banking Act 1959* defines what an ADI is and the conditions under which financial firms obtain their licence. The Australian Government should amend the Act to require ADIs to take appropriate direct steps to measure and manage their climate financial risks, by undertaking regular climate stress testing of their lending portfolios and then acting on the findings.

- › **Direct the Council of Financial Regulators to pursue international negotiations over improvements to the Basel Capital Framework addressing climate risk.** Because much of Australia's banking regulation reflects international standards, updating this to better deal with climate risk will require engagement with global bodies like the Bank for International Settlements, which oversees the Basel Framework. The Australian Government should direct the Council of Financial Regulators to explicitly pursue improvements to the Basel Framework relating to the introduction of additional risk weighting for assets with high climate risk, and the establishment of climate risk capital buffers. These are discussed further below under actions for regulators.



## REGULATORS

APRA, ASIC and the RBA are responsible for administering a powerful and extensive framework of rules and regulations. These regulators should use the powers already at their disposal to rapidly address the risks which will become more visible following the implementation of climate financial disclosure. At the same time, they should seek to steer the international design of further improvements to the Basel Framework so that these can flow through to stronger regulations in Australia in the years to come. The design of updates to this framework after the Global Financial Crisis took a significant amount of time and international coordination; Australia's regulators should focus on a specific and discrete set of improvements which can directly deal with climate financial risk.

- › **Require fossil fuel projects' remediation costs to be accounted for within corporate balance sheets on a time frame consistent with limiting warming close to 1.5°C - APRA.** Fossil fuel companies should pay for the total remediation of mining sites from general revenue and this should be included on their balance sheets as a liability due in the short to medium term. Currently, remediation liabilities are recorded, however project lifetimes span decades and the liability is significantly discounted. Regulators should require a test of ability for fossil fuel companies to provide for total remediation if it was required within a 10-year timeframe, consistent with science-based advice on the need to phase out fossil fuels within this period (IEA 2021; IEA 2023).

- › **Mitigate risk to the financial system by increasing minimum capital requirements for banks which have, and/or continue adding to, portfolios with significant exposure to fossil fuels – APRA.** Under the Basel Framework, regulators can increase minimum capital requirements beyond the base level, for banks which have significant risks. This is an existing prudential regulatory tool and APRA has previously used it to address other types of risk in the Australian financial system. For example, following findings of misconduct against Commonwealth Bank, ANZ, NAB and Westpac by the Royal Commission into financial services in 2019, APRA imposed additional minimum capital requirements on all four banks. Commonwealth Bank was required to hold an additional \$1 billion against its minimum capital requirement, and ANZ, NAB and Westpac were each required to hold an additional \$500 million (APRA 2019a). Using the insights of mandatory disclosures under the Australian climate finance regime commencing in 2024, APRA should impose additional minimum capital requirements on banks with significant reported risks through lending to fossil fuels.
- › **Continue to pursue enforcement action against any financial institutions engaged in greenwashing – ASIC.** Greenwashing is actively harmful to our shared efforts to reduce emissions and protect Australians from escalating climate harm. When financial system actors make environmental or sustainability claims without a real basis, it does not just mislead consumers, it obscures accountability for their ongoing contribution to harmful climate change, and continues the misallocation of capital in our economy. ASIC identified greenwashing as one of twelve enforcement priorities for 2023; this should be an enduring priority. The regulator should closely scrutinise the forthcoming climate-related disclosures and pursue strong regulatory action against any Australian bank whose claims are at odds with their real practices.
- › **Lead negotiations for an update to the Basel Framework to embed climate risk within it – APRA and RBA.** In close collaboration with the Australian Government, agencies should actively pursue emerging international proposals to update the Basel Framework to explicitly deal with climate risk. This should prioritise strengthening the capital requirements outlined in Pillar I of the framework to include:
  - Additional risk weights for any loan, bond or derivative exposure to new fossil fuel resources, infrastructure or company finance. Proposals for such additional risk weights been raised in the United Kingdom (as an amendment to the *Financial Services Act* by Lord Oates); Canada (through the *Climate-Aligned Finance Act* by Senator Rosa Galvez 2022); and the United States (through the draft *Climate Crisis Financial Stability Act*), among others. Finance Watch estimates that for the 60 largest global banks, a 150 percent risk weight would require additional capital in the range of US\$157 to \$210 billion, equivalent to three to five months of banks' 2021 net income (Finance Watch 2022).
  - Requirements for banks to hold a climate-risk capital buffer. This would take into account how banks facilitate emissions with the aim of improving resilience to systemic risk caused by the financial facilitation of emissions intensive activities. A bank's level of financed emissions could also be used as a proxy for its contribution to systemic risk. This is a measure being considered in Canada through the *Climate-Aligned Finance Act* (Senator Rosa Galvez 2022).

At a minimum, these two improvements to the Basel Framework would ensure that Australia’s banks remain ‘unquestionably strong’ in the face of escalating risks from climate change. They also provide a direct incentive for banks to reduce their exposure to fossil fuels and other high climate risk assets more quickly than they may otherwise do. Regulators could also pursue improvements under the Basel Framework’s other pillars, such as making more explicit directors’ duties in relation to climate risk and requiring banks to develop plans that align with climate commitments. These should be considered as parallel and complementary improvements to international banking regulation, but are not a substitute for the direct action under Pillar I of the Basel Framework.

Tackling climate financial risk calls for coordinated action from banks, the Australian Government, and financial regulators. Disclosure serves as an important initial step, helping these institutions to better understand and quantify the risks they are running. But we must use these insights to go further. Collectively, these recommendations aim to strengthen Australia’s financial system against climate-related risks so that it is more resilient and stable, while facilitating a stronger and faster flow of investment toward more sustainable sectors.



**Figure 16:** It is critical that capital flows toward our energy transition, rather than towards fossil fuels which are driving climate change. In Australia we will need to invest an estimated \$1.2 trillion by 2030 to decarbonise our energy system while scaling up the electrification of all other sectors (Net Zero Australia 2023).

# Conclusion

**UN Secretary General António Guterres has declared that the world needs climate action on all fronts– calling for nations to do “everything, everywhere, all at once” (Guterres 2023).**

Stronger regulation to address climate risk in our financial system may not seem like a high priority in the context of the massive transformations now underway across our energy, transport and industrial systems. But the finance sector underpins all of this. With the right policy and regulatory settings, it can rapidly channel capital to future-focused industries which will help decarbonise our economy, and address the risks of those which are fuelling the climate crisis. In that context, the actions recommended in this report are an important part of doing ‘everything, everywhere’ to tackle harmful climate change.

While mandated climate risk disclosures serve as an important first step for our financial system, they are not sufficient to drive the rapid change we need now. With the window for action already narrow and closing fast, we need a coordinated effort involving banks, the Australian Government, and financial regulators to address lending that drives further climate risk. Doing so will strengthen the balance sheets of our biggest financial institutions, the financial systems we depend on– and ultimately our chances of securing a safer future.

**With the right policy and regulatory settings, capital will be channelled to industries and companies that will transform key sectors of economy, and address the growing risks of corporations that are fuelling the climate crisis.**

# Appendix A: Summary of the Basel Framework

The Basel Framework is the full set of standards of the Basel Committee on Banking Supervision (BCBS), which is the primary global standard setter for the prudential regulation of banks. The membership of the BCBS has agreed to fully implement these standards and apply them to the internationally active banks in their jurisdictions.

The Basel Accords are designed to mitigate risk within the international banking sector by requiring banks to maintain certain leverage ratios and keep certain levels of reserve capital on hand. It is currently in its third iteration (Basel III) which was created in 2009 largely in response to the GFC. Portions of the Basel III agreement have already come into effect, with the rest set to begin implementation on 1 January 2023 and will be phased in over five years.

## **Basel III currently consists of three main pillars:**

**Pillar 1 – Minimum capital requirements** for credit, market and operational risk to ensure that banks can absorb unexpected losses and remain solvent. In Australia the minimum amount of capital required under Pillar 1 varies for the size of the bank. The four largest banks are designated as domestic systemically important banks and required to have a minimum capital ratio of 13.25 percent of risk-weighted assets made up of Tier 1 and Tier 2 capital including additional buffers. This minimum is increasing to 18.25 percent including additional buffers from 2026 (RBA 2023a).

*Risk weighting* of assets follows that more capital is required to be held by banks for riskier assets and less capital for less risky assets. *Tier 1* capital is a bank's core capital, equity and disclosed reserves which appear on a bank's financial statement, which provides a cushion to absorb stresses. *Tier 2* is a bank's supplementary capital, such as undisclosed reserves and unsecured subordinated debt instruments.

*Capital buffers* recognise systemic risk within the financial system, and risk can build up in the financial market and system over time and lead to financial contagion. The Pillar 1 capital buffer regime includes the counter-cyclical buffer and the capital conservation buffer. Basel III requires all banks to hold a 2.5 percent capital conservation buffer of RWAs and domestically systemically important banks are required to hold an additional 1 percent of risk weighted assets.

**Pillar 2 – Supervisory review and risk management process** ensures that banks have adequate capital and liquidity to support all the risks in their business, especially those not captured fully in Pillar 1. Supervisors are required to assess banks’ activities and risk profiles across capital, liquidity adequacy, financial, behavioural and operational risks.

This is used to determine whether a bank’s capital should exceed the minimum specified under Pillar 1.

Examples of specific increases in capital required include: in May 2018 following the Final Report of the Prudential Inquiry into Commonwealth Bank, APRA applied an additional \$1 billion add-on to CBA’s minimum capital requirement for poor management of non-financial risks and cultural issues; in July 2019 an additional \$500 million of capital requirements each were applied to ANZ, NAB and Westpac because of ‘heightened operational risk’ following the same inquiry; in August 2019 following Allianz Australia’s risk governance self-assessment, APRA applied an additional \$350 million capital requirement to strengthen risk management (APRA 2018; APRA 2019b; APRA 2019c).

**Pillar 3 – Market discipline through disclosure** requirements for banks. Banks must disclose certain qualitative and quantitative information publicly on a regular basis, which aims to encourage market discipline. This includes information regarding their capital structure and capital adequacy, risk management, remuneration practices and underlying risk metrics.

In addition to these three pillars, Basel III introduced new liquidity requirements aimed at safeguarding against excessive and risky lending, while ensuring that banks have sufficient liquidity during periods of financial stress. The Liquidity Coverage Ratio requires banks to have sufficient high-quality liquid assets to withstand a 30-day stressed funding scenario that is specified by supervisors. Another is the Net Stable Funding Ratio, designed to address liquidity mismatches. It covers the entire balance sheet and provides incentives for banks to use stable sources of funding.

While the Basel Accords do not currently take climate-risk explicitly into account, there have been growing calls for this to occur in light of the systemic risk climate change poses to financial stability which central banks and financial regulators serve to protect (see more detail in Section 5). (European Central Bank 2022; Moody’s Analytics 2011; BIS n.d.)



# References

- Acharya, V. Berner, R., Engle, R., Jung, H., Stroebel, J., Zeng, X. and Zhao, Y. (2023) Climate Stress Testing. Federal Reserve Bank of New York. Accessed at: [https://www.newyorkfed.org/medialibrary/media/research/staff\\_reports/sr1059.pdf](https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr1059.pdf)
- Actuaries Institute (2023) Nearly one in eight households now facing home insurance affordability stress. Accessed at: <https://www.actuaries.asn.au/Library/MediaRelease/2023/230814MRHOMEINSUR.pdf>
- Australasian Legal Information Institute (AustLII) (2023) BANKING ACT 1959 - NOTES. Accessed at: [https://www.austlii.edu.au/cgi-bin/viewdb/au/legis/cth/consol\\_act/ba195972/](https://www.austlii.edu.au/cgi-bin/viewdb/au/legis/cth/consol_act/ba195972/)
- Australia New Zealand Group (ANZ) (2023) 2023 Climate-related financial disclosures. Accessed at: <https://www.anz.com.au/content/dam/anzcomau/about-us/anz-2023-climate-related-financial-disclosures.pdf>
- ANZ (2022) ANZ 2022 ESG Supplement. Accessed at: <https://www.anz.com.au/content/dam/anzcom/shareholder/2022-anz-esg-supplement.pdf>
- Australian Broadcasting Corporation (ABC) by Janda, M. and Kroie, A. (2019) Banking royal commission report may crack the big four banks' financial dominance. Accessed at: <https://www.abc.net.au/news/2019-02-01/how-did-the-big-four-banks-become-so-dominant/10767994>
- Australian Conservation Foundation (2023a) Superfund disclosure analysis Australia's 15 largest super funds' investment in expansionary coal, oil and gas. Accessed at: <https://www.acf.org.au/superfunds-investing-25bn-in-fossil-fuel-expansion>
- Australian Conservation Foundation (2023b) From laggards to leaders: An assessment of Australian banks' climate commitments. Accessed at: [https://assets.nationbuilder.com/auscon/pages/22443/attachments/original/1691718063/Banks\\_Net\\_Zero\\_Benchmarking\\_Report.pdf](https://assets.nationbuilder.com/auscon/pages/22443/attachments/original/1691718063/Banks_Net_Zero_Benchmarking_Report.pdf)
- Australian Government (2023). Federal Register of Legislation: Banking Act 1959. Accessed at: <https://www.legislation.gov.au/Series/C1959A00006>
- Australian Industry Energy Transitions Initiative (2023) Pathways to industrial Decarbonisation, Positioning Australian industry to prosper in a net zero global economy. Accessed at: <https://energytransitioninitiative.org/wp-content/uploads/2023/08/Pathways-to-Industrial-Decarbonisation-report-Updated-August-2023-Australian-Industry-ETI.pdf>
- Australian Prudential Regulation Authority (APRA) (2023a) Annual Report 2022-23. Accessed at: <https://www.apra.gov.au/news-and-publications/apra-annual-reports>
- APRA (2023b) Financial Claims Scheme. Accessed at: <https://www.apra.gov.au/financial-claims-scheme-0>
- APRA (2022) Information paper: Climate Vulnerability Assessment Results November 2022. Accessed at: [https://www.apra.gov.au/sites/default/files/2022-11/Information%20Paper%20-%20Climate%20Vulnerability%20Assessment%20Results\\_0.pdf](https://www.apra.gov.au/sites/default/files/2022-11/Information%20Paper%20-%20Climate%20Vulnerability%20Assessment%20Results_0.pdf)
- APRA (2021a) Information paper: An Unquestionably Strong Framework for Bank Capital. Accessed at: <https://www.apra.gov.au/sites/default/files/2021-11/Information%20paper%20-%20An%20Unquestionably%20Strong%20Framework%20for%20Bank%20Capital.pdf>
- APRA (2021b) Prudential Practice Guide CPG 229 Climate Change Financial Risks November 2021. Accessed at: <https://www.apra.gov.au/sites/default/files/2021-11/Final%20Prudential%20Practice%20Guide%20CPG%20229%20Climate%20Change%20Financial%20Risks.pdf>
- APRA (2021c) Information Paper: Climate Vulnerability Assessment 3 September 2021. Accessed at: [https://www.apra.gov.au/sites/default/files/2021-09/Climate%20Vulnerability%20Assessment\\_1.pdf](https://www.apra.gov.au/sites/default/files/2021-09/Climate%20Vulnerability%20Assessment_1.pdf)
- APRA (2019a) Information paper: Climate Change: Awareness to action 20 March 2019. Accessed at: [https://www.apra.gov.au/sites/default/files/climate\\_change\\_awareness\\_to\\_action\\_march\\_2019.pdf](https://www.apra.gov.au/sites/default/files/climate_change_awareness_to_action_march_2019.pdf)
- APRA (2019b) APRA applies additional capital requirements to three major banks in response to self-assessments. Accessed at: <https://www.apra.gov.au/news-and-publications/apra-applies-additional-capital-requirements-to-three-major-banks-response-to>
- APRA (2019c) APRA applies additional \$250m capital requirement to Allianz Australia. Accessed at: <https://www.apra.gov.au/news-and-publications/apra-applies-additional-250m-capital-requirement-to-allianz-australia>
- APRA (2018) APRA releases CBA Prudential Inquiry Final Report and accepts Enforceable Undertaking from CBA. Accessed at: <https://www.apra.gov.au/news-and-publications/apra-releases-cba-prudential-inquiry-final-report-and-accepts-enforceable>
- APRA (2013) APRA releases framework for domestic systemically important banks in Australia. Accessed at: <https://www.apra.gov.au/news-and-publications/apra-releases-framework-for-domestic-systemically-important-banks-australia>
- Australian Securities and Investments Commission (ASIC) (2023) ASIC commences greenwashing case against Active Super. Accessed at: <https://asic.gov.au/about-asic/news-centre/find-a-media-release/2023-releases/23-215mr-asic-commences-greenwashing-case-against-active-super/>
- ASIC (2022) How to avoid greenwashing when offering or promoting sustainability-related products. Accessed at: <https://asic.gov.au/regulatory-resources/financial-services/how-to-avoid-greenwashing-when-offering-or-promoting-sustainability-related-products/>

Australian Sustainable Finance Institute (ASFI) (2023) Government to back ASFI-led Australian Sustainable Finance Taxonomy. Accessed at: <https://www.asfi.org.au/media-centre/government-to-back-asfi-led-australian-sustainable-finance-taxonomy>

Bank Australia (2023) Bank Australia 2023 Financial Report. Accessed at: [https://cdn.bfldr.com/1R31Y8GR/as/n4qhtfhckvhtqwtvvgsg6c38f/Financial\\_Report\\_2023](https://cdn.bfldr.com/1R31Y8GR/as/n4qhtfhckvhtqwtvvgsg6c38f/Financial_Report_2023)

Bank of International Settlements (n.d.) Basel Committee on Banking Supervision reforms - Basel III. Accessed at: <https://www.bis.org/bcbs/basel3/b3summarytable.pdf>

Bellrose, K., Norman, D., and Royters, M. (2021) Climate Change Risks to Australian Banks. Reserve Bank of Australia. Accessed at: <https://www.rba.gov.au/publications/bulletin/2021/sep/climate-change-risks-to-australian-banks.html>

Bloomberg (2023a) Why Those Bank Emissions Numbers Are So Rosy. Accessed at: <https://www.bloomberg.com/news/articles/2023-11-08/why-those-bank-emissions-numbers-are-so-rosy?srnd=undefined#xj4y7vzkg>

Bloomberg NEF (2023b) Financing the Transition: Energy Supply Investment and Bank Financing Activity. Accessed at: <https://about.bnef.com/blog/financing-the-transition-energy-supply-investment-and-bank-financing-activity/#:~:text=The%20most%20frequently%20referenced%20climate,current%20~1%3A1%20to%20a>

Bolton, P., Despres, M., Pereira Da Silva, L.A., Samama, F. & Svartzman, R. 2020, The Green Swan: Central banking and financial stability in the age of climate change. Bank of International Settlements. Accessed at: <https://www.bis.org/publ/othp31.pdf>

Centre for Policy Development (2021a) CPD releases new materials on directors' duties, climate risk and net zero. Accessed at: <https://cpd.org.au/2021/04/directors-duties-2021/>

Centre for Policy Development (2021b) Finance sector's funded emissions over 700 times greater than its own. Accessed at: <https://www.cdp.net/en/articles/media/finance-sectors-funded-emissions-over-700-times-greater-than-its-own>

Centre for Policy Development (2019) Updated Hutley opinion on directors' duties and climate risk. Accessed at: <https://cpd.org.au/2019/03/directors-duties-2019/>

Centre for Policy Development (2016) New legal opinion and business roundtable on climate risks and directors' duties. Accessed at: <https://cpd.org.au/2016/10/directorsduties/>

Chenet, H., Ryan-Collins, J., & Van Lerven, F. (2021). Finance, climate-change and radical uncertainty: Towards a precautionary approach to financial policy. Ecological Economics, 183, 106957.

Climate Bonds Initiative (2023) Green Bonds Market 2023. Accessed at: <https://www.climatebonds.net/>

Climate Council (2023) Briefing note: Building the future, protecting Australians and our unique environment from climate harm: the case for fixing Australia's national environment law. Accessed at: [https://www.climatecouncil.org.au/wp-content/uploads/2023/08/CC\\_MVSA0373-CC-Policy-Brief-EPBC\\_V2-FA-Screen-Spread.pdf](https://www.climatecouncil.org.au/wp-content/uploads/2023/08/CC_MVSA0373-CC-Policy-Brief-EPBC_V2-FA-Screen-Spread.pdf)

Climate Energy Finance (2023a) Macquarie Group Limited FY2022/1H2023 Climate Finance Assessment. Accessed at: [https://climateenergyfinance.org/wp-content/uploads/2023/03/FY2022\\_1H2023-Macquarie-Full-Year-Results-Climate-Finance-Assessment.docx-1.pdf](https://climateenergyfinance.org/wp-content/uploads/2023/03/FY2022_1H2023-Macquarie-Full-Year-Results-Climate-Finance-Assessment.docx-1.pdf)

Climate Energy Finance (2023b) CBA's oil and gas policy ratchets up shift of finance away from fossil fuels and meets the minimum global standard. Accessed at: <https://climateenergyfinance.org/wp-content/uploads/2023/08/CBAs-oil-and-gas-policy-ratchets-up-shift-of-finance-away-from-fossil-fuels-and-meets-the-minimum-global-standard.pdf>

Climate Energy Finance (2023c) The US IRA one year on: a quickstart guide to how Australia should respond. Accessed at: <https://climateenergyfinance.org/wp-content/uploads/2023/08/IRA-1-year-on-12.pdf>

Committee for Economic Development of Australia (CEDA) (2012) GFC and Sovereign Risk. Accessed at: <https://www.ceda.com.au/NewsAndResources/News/Economy/GFC-and-sovereign-risk>

Commonwealth Bank of Australia (CBA) (2023) 2023 Climate Report. Accessed at: <https://www.commbank.com.au/content/dam/commbank-assets/investors/2023-08/climate/2023-climate-report-spreads.pdf>

CBA (2022) 2022 Climate Report. Accessed at: [https://www.commbank.com.au/content/dam/commbank-assets/about-us/2022-08/2022-climate-report\\_spreads.pdf](https://www.commbank.com.au/content/dam/commbank-assets/about-us/2022-08/2022-climate-report_spreads.pdf)

Commonwealth of Australia (2023) Intergenerational Report 2023 Australia's future to 2063. Accessed at: <https://treasury.gov.au/sites/default/files/2023-08/p2023-435150.pdf>

Commonwealth Scientific and Industrial Research Organisation (CSIRO) (2022) State of the Climate. Accessed at: <https://www.csiro.au/en/research/environmental-impacts/climate-change/state-of-the-climate>

Conservation Council of Western Australia and The Australia Institute (2021) Conservation Council of Western Australia Why the Scarborough LNG development cannot proceed. Accessed at: [https://d3n8a8pro7vnm.cloudfront.net/ccwa/pages/1/attachments/original/1622622008/Why\\_the\\_Scarborough\\_LNG\\_development\\_cannot\\_proceed\\_web\\_final.pdf?1622622008](https://d3n8a8pro7vnm.cloudfront.net/ccwa/pages/1/attachments/original/1622622008/Why_the_Scarborough_LNG_development_cannot_proceed_web_final.pdf?1622622008)

Deloitte Access Economics (2021) Special report: Update to the economic costs of natural disasters in Australia Australian Business Roundtable for Disaster Resilience & Safer Communities. Accessed at: [https://www.iag.com.au/sites/default/files/Newsroom%20PDFs/Special%20report%20\\_Update%20to%20the%20economic%20costs%20of%20natural%20disasters%20in%20Australia.pdf](https://www.iag.com.au/sites/default/files/Newsroom%20PDFs/Special%20report%20_Update%20to%20the%20economic%20costs%20of%20natural%20disasters%20in%20Australia.pdf)

Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2022) Australia's emissions projections 2022. Accessed at: <https://www.dcceew.gov.au/sites/default/files/documents/australias-emissions-projections-2022.pdf>

Eames, N. and Barmes, D. (2022) The Green Central Banking Scorecard 2022 Edition. Accessed at: <https://positivemoney.org/wp-content/uploads/Positive-Money-Green-Central-Banking-Scorecard-Report-2022-8.12.pdf>

- European Central Bank (2022) Pillar 3 reconciliation: improving banks' reporting discipline. Accessed at: [https://www.bankingsupervision.europa.eu/press/publications/newsletter/2022/html/ssm.nl221117\\_2\\_en.html#:~:text=Pillar%203%20of%20the%20Basel,in%20separate%20Pillar%203%20reports](https://www.bankingsupervision.europa.eu/press/publications/newsletter/2022/html/ssm.nl221117_2_en.html#:~:text=Pillar%203%20of%20the%20Basel,in%20separate%20Pillar%203%20reports).
- Finance Watch (2022) A safer transition for fossil banking: Quantifying capital needed to reflect transition risk. Accessed at: <https://www.finance-watch.org/publication/a-safer-transition-for-fossil-banking/>
- Financial Stability Board (2022) Basel III - Implementation. Accessed at: <https://www.fsb.org/work-of-the-fsb/implementation-monitoring/monitoring-of-priority-areas/basel-iii/#:~:text=Following%20a%20one%2Dyear%20deferral,priority%20areas%20for%20implementation%20monitoring>
- Global Energy Monitor (2022) Opacity and Accountability: The Hidden Financial Pipelines Supporting New Coal. Accessed at: <https://globalenergymonitor.org/report/finance-industry-coal-restrictions-have-not-stopped-new-coal-due-to-billions-flowing-to-coal-plants-through-opaque-corporate-finance/>
- Guterres, A. United Nations Secretary General (2023) Secretary-General's video message for press conference to launch the Synthesis Report of the Intergovernmental Panel on Climate Change. Accessed at: <https://www.un.org/sg/en/content/sg/statement/2023-03-20/secretary-generals-video-message-for-press-conference-launch-the-synthesis-report-of-the-intergovernmental-panel-climate-change>
- Intergovernmental Panel on Climate Change (IPCC) (2023a) Climate Change 2023: Synthesis Report. [https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC\\_AR6\\_SYR\\_FullVolume.pdf](https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_FullVolume.pdf)
- IPCC (2023b) Climate Change 2022 - Mitigation of Climate Change Working Group III Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Accessed at: <https://www.cambridge.org/core/books/climate-change-2022-mitigation-of-climate-change/2929481A59B59C57C743A79420A2F9FF#:~:text=%20Book%20description,Reducing%20emissions%20and%20enhancing%20sinks>.
- International Energy Agency (IEA) (2023) Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach 2023 Update. Accessed at: <https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-0c-goal-in-reach>
- IEA (2021) Net Zero by 2050. Accessed at: <https://www.iea.org/reports/net-zero-by-2050>
- International Monetary Fund (IMF) (2023) Fossil Fuel Subsidies Surged to Record \$7 Trillion. Accessed at: <https://www.imf.org/en/Blogs/Articles/2023/08/24/fossil-fuel-subsidies-surged-to-record-7-trillion#:~:text=Fossil%2Dfuel%20subsidies%20surged%20to,economic%20recovery%20from%20the%20pandemic>.
- Institute for Energy Economics and Financial Analysis (IEEFA) (2023) Billions in oil and gas investments undermine Macquarie Group's climate commitment. Accessed at: <https://ieefa.org/resources/billions-oil-and-gas-investments-undermine-macquarie-groups-climate-commitment>
- Investor Group on Climate Change (2022) Making the Transition Happen, investment policy for a net zero emissions economy. Accessed at: <https://igcc.org.au/wp-content/uploads/2022/09/IGCC-Policy-2025-PrioritiesWeb.pdf>
- Kurian, S., Reid, G., and Sutton, M. (2023) Climate Change and Financial Risk. Accessed at: <https://www.rba.gov.au/publications/bulletin/2023/jun/climate-change-and-financial-risk.html>
- Market Forces (2023a) Banking Climate Failure: How Australia's big four banks are still funding new fossil fuels. Accessed at: <https://www.marketforces.org.au/campaigns/banks/banking-climate-failure-2023/>
- Market Forces (2023b) Compare Banks: Fossil fuels - where does your bank stand. Accessed at: <https://www.marketforces.org.au/info/compare-bank-table/>
- Market Forces (2023c) CommBank's climate policy update leaves ANZ, NAB and Westpac in the dust. Accessed at: <https://www.marketforces.org.au/commbanks-climate-policy-update-leaves-anz-nab-and-westpac-in-the-dust/#:~:text=9%20August%202023,net%20zero%20emissions%20by%202050>.
- Mercure, J. F., Pollitt, H., Viñuales, J. E., Edwards, N. R., Holden, P. B., Chewpreecha, U., ... & Knobloch, F. (2018). Macroeconomic impact of stranded fossil fuel assets. *Nature Climate Change*, 8(7), 588-593.
- Moody's Analytics (2011) Regulation Guide: An Introduction. Accessed at: <https://www.moodyanalytics.com/-/media/whitepaper/2011/11-01-03-Regulation-Guide-Introduction.pdf>
- Morgan Stanley (2022) 2022 ESG Report: Diversity & Inclusion, Climate, and Sustainability. Accessed at: [https://www.morganstanley.com/content/dam/msdotcom/en/assets/pdfs/Morgan\\_Stanley\\_2022\\_ESG\\_Report.pdf](https://www.morganstanley.com/content/dam/msdotcom/en/assets/pdfs/Morgan_Stanley_2022_ESG_Report.pdf)
- Morningstar (2023) ASX companies are not on track to reach net zero by 2050. Accessed at: <https://www.morningstar.com.au/insights/stocks/235673/asx-companies-are-not-on-track-to-reach-net-zero-by-2050>
- MSCI (2023) How Sovereigns have changed the green-bond market. Accessed at: <https://www.msci.com/www/blog-posts/how-sovereigns-have-changed-the/03778801668>
- National Australia Bank (NAB) (2023) 2023 Climate Report. Accessed at: <https://www.nab.com.au/content/dam/nab/documents/reports/corporate/2023-climate-report.pdf>
- NAB (2022) Climate Report 2022. Accessed at: <https://www.nab.com.au/content/dam/nab/documents/reports/corporate/2022-climate-report.pdf>
- Neal, T. (2023). Have some economists severely underestimated the financial hit from climate change? Recent evidence suggests yes. Accessed at: <https://theconversation.com/have-some-economists-severely-underestimated-the-financial-hit-from-climate-change-recent-evidence-suggests-yes-214579>
- Net Zero Australia (2023) Net Zero Mobilisation report: How to make net zero happen. Accessed at: <https://www.netzeroaustralia.net.au/mobilisation-report/>

Network for Greening the Financial System (NGFS) (2023) Nature-related Financial Risks: a Conceptual Framework to guide Action by Central Banks and Supervisors September 2023. Accessed at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_conceptual-framework-on-nature-related-risks.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_conceptual-framework-on-nature-related-risks.pdf)

NGFS (2022) NGFS Scenarios for central banks and supervisors September 2022. Accessed at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_climate\\_scenarios\\_for\\_central\\_banks\\_and\\_supervisors\\_.pdf.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_climate_scenarios_for_central_banks_and_supervisors_.pdf.pdf)

Oil Change International (2023) Planet Wreckers Factsheet. Accessed at: <https://priceofoil.org/content/uploads/2023/09/Planet-Wreckers-Australia.pdf>

Organisation for Economic Cooperation and Development (OECD) (2021) Increasing sovereign green bond issuance, helping to promote green growth. Accessed at: <https://www.oecd.org/coronavirus/en/data-insights/increasing-sovereign-green-bond-issuance-helping-to-promote-green-growth>

OECD (2020) 'Chapter 12: Systemic Risk Emerging from Interconnections: The Case of Financial Systems' in Hynes, W., Lees, M. and Müller, J.M. (ed.) Systemic Thinking for Policy making. Accessed at: <https://www.oecd-ilibrary.org/sites/55ade69f-en/index.html?itemId=/content/component/55ade69f-en>

Poseidon Principles (2022) Annual Disclosure Report 2022. Accessed at: <https://www.poseidonprinciples.org/finance/wp-content/uploads/2022/12/Poseidon-Principles-Annual-Disclosure-Report-2022.pdf>

Rainforest Action Network (2023) Banking on Climate Chaos Fossil Fuel Finance Report 2023. Accessed at: [https://www.ran.org/wp-content/uploads/2023/04/BOCC\\_2023\\_vF.pdf](https://www.ran.org/wp-content/uploads/2023/04/BOCC_2023_vF.pdf)

Read, P. and Dennis, R. (2020) With costs approaching \$100 billion, the fires are Australia's costliest natural disaster. Accessed at: <https://theconversation.com/with-costs-approaching-100-billion-the-fires-are-australias-costliest-natural-disaster-129433#>

Reserve Bank of Australia (RBA) (2023a) Financial Stability Review April 2023. Accessed at: <https://www.rba.gov.au/publications/fsr/2023/apr/pdf/financial-stability-review-2023-04.pdf>

RBA (2023b) Speech by Michelle Bullock, Climate Change and Central Banks. Accessed at: <https://www.rba.gov.au/speeches/2023/sp-dg-2023-08-29.html>

RBA (2023c) Green and Sustainable Finance in Australia. Accessed at: <https://www.rba.gov.au/publications/bulletin/2023/sep/green-and-sustainable-finance-in-australia.html>

RBA (2022) Financial Stability Review October 2022. Accessed at: <https://www.rba.gov.au/publications/fsr/2022/oct/>

RBA (2021) Speech: Climate Risks and the Australian Financial System. Accessed at: <https://www.rba.gov.au/speeches/2021/sp-dg-2021-10-14.html>

RBA (2017) Speech: Big Banks and Financial Stability. Accessed at: <https://www.rba.gov.au/speeches/2017/sp-ag-2017-07-21.html>

Reuters (2023) Natural disasters caused \$313 bln economic loss in 2022 - Aon. Accessed at: <https://www.reuters.com/business/environment/natural-disasters-caused-313-bln-economic-loss-2022-aon-2023-01-25/>

Richardson, K., Steffen, W., Lucht, W., Bendtsen, J., Cornell, S.E., Donges, J.F., Drüke, M., Fetzer, I., Bala, G., von Bloh, W. and Feulner, G., (2023). Earth beyond six of nine planetary boundaries. *Science Advances*, 9(37).

Semieniuk, G., Holden, P. B., Mercure, J. F., Salas, P., Pollitt, H., Jobson, K., ... & Viñuales, J. E. (2022). Stranded fossil-fuel assets translate to major losses for investors in advanced economies. *Nature Climate Change*, 12(6), 532-538.

Summerhayes, G. (2017) Australia's new horizon: Climate change challenges and prudential risk, APRA. Accessed at: <https://www.apra.gov.au/news-and-publications/australias-new-horizon-climate-change-challenges-and-prudential-risk>

Taleb, Nassim N. 2007. *The Black Swan*. New York: Penguin Random House.

Task Force on Climate-Related Financial Disclosures (TCFD) (2017) Recommendations of the Task Force on Climate-Related Financial Disclosures. Accessed at: <https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf>

Teachers Mutual Bank Limited (TMBL) (2023) Annual Report and Sustainability Update 2022-2023. <https://www.tmb.com.au/-/media/tmb/about/annual-report/pdf/annual-report-2022-2023.ashx>

The Australia Institute (2016) Australia's banks the most profitable in the world. Accessed at: <https://australiainstitute.org.au/post/australias-banks-the-most-profitable-in-the-world/>

The Treasury (2023a) Statement on O'Donnell v Commonwealth. Accessed at: <https://treasury.gov.au/media-release/statement-odonnell-v-commonwealth>

The Treasury (2023b) Climate-related financial disclosure Consultation paper. Accessed at: <https://treasury.gov.au/sites/default/files/2023-06/c2023-402245.pdf>

The Treasury (2023c) Green Bond program. Accessed at: <https://treasury.gov.au/policy-topics/banking-and-finance/green-bond-program>

Transition Plan Taskforce (2023) Banks Sector Guidance. Accessed at: <https://transitiontaskforce.net/wp-content/uploads/2023/11/TPT-Banks-Sector-Guidance.pdf>

Triodos Bank (2023) Annual Results 2022. Accessed at: <https://www.triodos.co.uk/press-releases/2023/annual-results-2022#:~:text=Total%20Assets%20under%20Management%20decreased,to%20market%20circumstances%20by%20EUR>

United Nations Environment Programme Finance Initiative (UNEPFI) (2021) UNEP FI's Comprehensive Good Practice Guide to Climate Stress Testing. Accessed at: <https://www.unepfi.org/wordpress/wp-content/uploads/2021/12/Good-Practice-Guide-to-Climate-Stress-Testing.pdf>

Vancity (2023) Vancity announces strong 2022 financial results. Accessed at: <https://www.vancity.com/AboutVancity/News/MediaReleases/Vancityannouncesstrong2022financialresults/#:~:text=May%208%2C%202023%2C%20Territories%20of,a%20total%20of%20%2434.3%20billion.>

Westpac Banking Corporation (Westpac) (2023) 2023 Climate Report. Accessed at: <https://www.westpac.com.au/content/dam/public/wbc/documents/pdf/aw/ic/Westpac-2023-Climate-Report.pdf>

Westpac (2019) Westpac 2019 Sustainability Performance Report. Accessed at: [https://www.westpac.com.au/content/dam/public/wbc/documents/pdf/aw/ic/Westpac\\_Group\\_2019\\_Sustainability\\_Performance\\_Report.pdf](https://www.westpac.com.au/content/dam/public/wbc/documents/pdf/aw/ic/Westpac_Group_2019_Sustainability_Performance_Report.pdf)

Wood Mackenzie (2020) Australia Oil & Gas Industry Outlook Report. Accessed at: <https://appea.com.au/wp-content/uploads/2020/06/Australia-Oil-and-Gas-Industry-Outlook-Report.pdf>

Woodside Petroleum Limited (2022) WOODSIDE COMPLETES PLUTO TRAIN 2 SELL-DOWN TO GIP. Accessed at: [https://www.woodside.com/docs/default-source/asx-announcements/2022/woodside-completes-pluto-train-2-sell-down-to-gip.pdf?sfvrsn=47e014ee\\_3](https://www.woodside.com/docs/default-source/asx-announcements/2022/woodside-completes-pluto-train-2-sell-down-to-gip.pdf?sfvrsn=47e014ee_3)

World Bank (2021) What You Need to Know About IFC's Green Bonds. Accessed at: <https://www.worldbank.org/en/news/feature/2021/12/08/what-you-need-to-know-about-ifc-s-green-bonds#:~:text=In%20late%202007%2C%20a%20group,for%20eligible%20climate%2Dfocused%20projects.>

World Resources Institute (2021) How the US can address legacy fossil fuel sites for a clean energy future. Accessed at: <https://www.wri.org/insights/addressing-us-legacy-fossil-fuel-infrastructure>

World Wildlife Fund (WWF) and Nature-Australia (2021) Fire on the Farm Assessing the Impacts of the 2019-2020 Bushfires on Food and Agriculture in Australia. Accessed at: [https://assets.wwf.org.au/image/upload/v1/website-media/resources/WWF\\_Report-Fire\\_on\\_the\\_Farm\\_converteda=ATO2Ba20](https://assets.wwf.org.au/image/upload/v1/website-media/resources/WWF_Report-Fire_on_the_Farm_converteda=ATO2Ba20)

# Image credits

**Cover image:** Coin stack with young green sprout on top. Photo by Piyawat Nandeenoparit purchased via Adobe Stock.

**Page 1, Figure 1:** Kangaroo and her joey in Mallacoota, Australia. Photo by Jo-Anne McArthur via Unsplash.

**Page 4, Figure 2:** Woman buying Groceries. Photo by Getty Images purchased via Unsplash+.

**Page 7, Figure 4:** Flooding of the Hawkesbury River. Photo by Harley Kingston purchased via Shutterstock. Stock Photo ID: 2133731985.

**Page 11, Figure 6:** Australian Bushfires Malua Bay. Photo by Jesse Rowan via Flickr.

**Page 13, Figure 7:** Melbourne suburbs. Photo by Tom Rumble via Unsplash.

**Page 19, Figure 8:** Stop Adani Rally. Photo by Stop Adani via Flickr.

**Page 21, Figure 9:** Gas flare. Photo by Akacj via Flickr.

**Page 29, Figure 11:** Aerials of Leard State Forest and surrounds. Photo by Leard Forest Alliance via Flickr.

**Page 33, Figure 12:** Bank Australia ATM and customers. Photo courtesy of Bank Australia.

**Page 38, Figure 13:** Magnifying glass for the industry. Photo by TeamDAF purchased via iStock.

**Page 41, Figure 14:** Solar Farm. Photo by Andrew Correll.

**Page 44, Figure 15:** NAB protest. Photo by Matt Hrkac via Flickr.

**Page 48, Figure 16:** Children in a wind farm. Photo by Sharomka, use licensed through Shutterstock.

# The Climate Council is an independent, crowd-funded organisation providing quality information on climate change to the Australian public.

The Climate Council acknowledges the Traditional Custodians of the lands on which we live, meet and work. We wish to pay our respects to Elders past, present and emerging and recognise the continuous connection of Aboriginal and Torres Strait Islander peoples to Country.

## CLIMATE COUNCIL

-  [facebook.com/climatecouncil](https://facebook.com/climatecouncil)
-  [twitter.com/climatecouncil](https://twitter.com/climatecouncil)
-  [instagram.com/theclimatecouncil](https://instagram.com/theclimatecouncil)
-  [tiktok.com/tag/climatecouncil](https://tiktok.com/tag/climatecouncil)
-  [youtube.com/user/climatecouncil](https://youtube.com/user/climatecouncil)
-  [info@climatecouncil.org.au](mailto:info@climatecouncil.org.au)
-  [climatecouncil.org.au](https://climatecouncil.org.au)

The Climate Council is a not-for-profit organisation. We rely upon donations from the public. We really appreciate your contributions.

**DONATE**

[climatecouncil.org.au/donate](https://climatecouncil.org.au/donate)