national australia bank

Climate Report 2022

National Australia Bank Limited ABN 12 004 044 937

Acknowledgement of Country

NAB acknowledges Australia's First Nations peoples as the Traditional Custodians of the land and their continuing connection to country, sea and water. We pay respect to their Elders past, present and emerging. We make this acknowledgement with the ambition to continue supporting a reconciled Australia through our actions and voice.

Contents

Important information

The Group's 2022 Climate Report ('Report') contains statements that are, or may be deemed to be, forward looking statements, including climate-related goals, targets, pathways and ambitions. Such forward looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of the Group. This may cause actual results to differ materially from those expressed or implied in such statements. There are uncertainties, assumptions and judgements underlying climate-related metrics that limit the extent to which climate-related metrics are useful for decision-making and you are cautioned not to place undue reliance on the information in this Report. The measures and forward-looking statements in this report reflect the Group's best estimates, assumptions and judgements as at the date of the report, however, the uncertainty in climate-related metrics, methodologies and modelling may lead to the Group changing its views in the future.

NAB's New Zealand banking subsidiary, BNZ, has separately joined the Net Zero Banking Alliance (NZBA) and is in the process of sectoral target development, in line with the time frames set out by NZBA. Sections '*Reducing financed emissions*' (pages 21-33), '*Financed emissions methodology*' (pages 40-45) and '*Target setting baseline methodology*' (pages 46-49) relating to NAB's participation in the NZBA and sectoral decarbonisation pathways excludes BNZ from both the baseline and the targets. The Group intends to align NZBA reporting as metrics and methodologies develop and as idiosyncratic country considerations permit.

Our approach to climate change

Climate change is a significant risk to the planet and a major challenge for society to address. At the same time, opportunities are emerging as the transition to net zero occurs. NAB is supporting customers to decarbonise, build their climate resilience and help achieve the goals of the Paris Agreement.

The Group's climate ambition is to act as a catalyst for climate action, supporting emissions reduction and aligning with pathways to net zero by 2050, consistent with a maximum temperature rise of 1.5°C above pre-industrial levels by 2100.

This approach is underpinned by core beliefs:

- Climate transition can create growth for the economy.
- Management of climate transition is core to the Group's business, not an adjacency.
- The Group will be relationship-led, supported by strong enabling capabilities.
- External targets will be science-based and aligned with a growth strategy.

Climate action is everybody's job and the Group is playing its part. The challenge is formidable, and the Group still has work to do to embed climate considerations throughout the bank. Refer to the *'Strategy'* section for detail on the Group's climate strategy.

Natural disasters caused deep harm in communities across Australia in 2022. Recognising that the impacts of climate change will increase the frequency and severity of natural disasters, the Group will continue to work on offerings to support customers, colleagues and communities to withstand and recover from natural disasters.

Complementing product innovation, 'NAB Ready Together' is NAB's program to bring together philanthropy, volunteering and investment in nature-based solutions to build resilience. Refer to page 45 of NAB's *2022 Annual Report* for detail on 'NAB Ready Together'.

Progress in 2022

Supporting customers to decarbonise and build resilience

$70.8bn

Total cumulative flow of new environmental finance provided since 1 October 2015[1]

73%

of the Group's lending to power generation is to renewable energy[2]

Investing in climate capabilities

>300

Agribusiness colleagues supported with climate training

Reducing financed emissions

4

Four interim sector decarbonisation targets set for 2030

Reducing operational emissions

74%

Reduction in Scope 1 and 2 emissions compared to 2015 baseline[3]

72%

of NAB's electricity consumption sourced from renewable energy[4]

(1) Refer to page 34 'Environmental financing target' for further detail.
(2) NAB methodology (based upon the 1993 ANZSIC codes) at net Exposure at Default (EAD) basis. Excludes exposure to counterparties predominantly involved in transmission and distribution. Vertically integrated retailers included and categorised as renewable where the majority of their generation activities are sourced from renewable energy. NAB has no direct lending to coal-fired power generation assets remaining, however there is indirect exposure to coal-fired power within the Mixed Fuel category as a result of NAB's corporate level exposure to gentailers, which have a mix of generation assets (including coal, gas and renewables) within their generation portfolio.
(3) Significant progress towards the Group's 2025 science-based target has been demonstrated since 2020, however, performance has been influenced by COVID-19 and it is not expected that all of the reductions achieved to date will be permanent. The Group will review this target in 2023. Includes net operational Scope 1 and 2 greenhouse gas (GHG) emissions, and 2021 and 2022 figures calculated using a market-based approach.
(4) NAB's operational environmental measures are reported on a 1 July - 30 June performance period - the Group's environmental reporting year. Progress towards NAB's RE100 target has been influenced by COVID-19 and a resultant decrease in electricity consumption. The Group does not expect all progress achieved to date to be permanent.

Governance

The Board oversees sustainability-related risks and opportunities, including climate and nature-related risks.

Figure 1: Summary of sustainability (including climate) governance

(1) The Group's major subsidiary, BNZ, also has sustainability-related (including climate) management groups and councils. Details on BNZ's approach to relevant governance matters will be available in its climate and sustainability reporting.
(2) NAB's Indigenous Advisory Group is comprised of representatives from the Board, Executive Leadership Team and Aboriginal and Torres Strait Islander leaders from outside NAB.

Role of the Board and Committees

The Board retains oversight of environmental, social and governance (ESG)-related matters including climate change. ESG considerations are integrated into business strategy, operations and risk management.

The Board is supported by the Board Risk & Compliance Committee (BRCC) which has accountability for oversight of the Group's risk profile and risk management. This includes climate risk, within the context of Board determined risk appetite, although ultimate responsibility for risk oversight, risk appetite and risk management rests with the Board.

The BRCC refers all matters of significant importance to the Board, making recommendations to the Board concerning the Group's current and future risk appetite, risk management strategy and particular risks or risk management practices, including those related to climate change.

The Board and BRCC regularly (at least quarterly) receive reports on climate-related matters which may include strategy, goals and targets, risks and opportunities, ESG-related credit policy and appetite settings, environmental operational performance, scenario analysis and stress testing, climate-related regulatory change and reporting submissions and concerns raised by stakeholders.

In 2022, key climate-related matters presented to the Board included:

- Climate-related appetite and tolerances included in the Group Risk Appetite Statement (RAS).
- Climate strategy update.
- NAB's Climate Vulnerability Assessment.
- Financed emissions estimate and interim sector decarbonisation targets.
- 2022 Task Force on Climate-related Financial Disclosures aligned disclosures.

Board capability

Each year, NAB assesses the skills and experience of each director and the combined capabilities of the Board. The insights from this assessment are documented in a skills matrix that is:

- Considered in the context of NAB's business and its strategic needs.
- Incorporated into Board succession planning and the selection of new directors.
- Used to inform areas of focus for the Board's continuing education and use of external expertise.

To prepare the skills matrix, each director rates their skills, expertise and experience against several competency areas that are then mapped to the skills matrix. The self-assessment ratings and skills matrix are reviewed and calibrated by the Board Nomination & Governance Committee on behalf of the Board. The current skills matrix is provided in the '*Corporate Governance Statement*' section of NAB's 2022 Annual Report. In 2022, the Board assessed its combined skills and capabilities from an environmental and social perspective as strong.

In 2022, the Board Nomination & Governance Committee and Board continued to prioritise increasing the combined capabilities of the Board on environmental and social topics (including climate change) in its continuing education priorities.

The Board development program included sessions on climate action (risks, opportunities, transition opportunities, target setting methodologies and practices).

Management's role in assessing and managing climate-related risks and opportunities

Members of the Executive Leadership Team (ELT) have a key role driving the implementation of the Group's climate strategy and in assessing climate-related risks and opportunities. The ELT consider (and endorse to Board) matters relevant to the Group's climate strategy and key climate-related goals and targets. This includes relevant targets required due to the Group's participation in the NZBA.

The Group Executive, Strategy & Innovation is accountable for the design and execution of the Group's strategic climate ambition. In 2022, the Group created a Chief Climate Officer role (recruitment under way) to report to this Group Executive and drive this work.

The Group Chief Risk Officer (GCRO) is accountable for integration and management of climate risk within the Group's Risk Management Framework and practices.

The Group Chief Operating Officer (GCOO) is Chair of the Sustainability Council, which is responsible for aligning activity across the Group and overseeing progress against the Group's broader sustainability goals and targets. The GCOO provides updates on the Group's sustainability performance to the Board.

The Group Executive, Technology & Enterprise Operations, is accountable for NAB's property portfolio, technology operations, Financial Crime Operations and supply chain management. This includes managing risks and opportunities arising from capital works and operational programs that help reduce NAB's energy use, GHG emissions and other environmental impacts and power purchase agreements to help meet the Group's renewable energy target.

Management Committees

The Group Credit and Market Risk Committee (GCMRC), and where relevant, the Executive Risk and Compliance Committee or ELT, help oversee aspects of the Group's climate strategy, risk appetite and management, policies, and performance. These committees review aspects of climate change-related performance.

The GCMRC oversees ESG-related matters, including those related to climate change. It reviews matters including risk appetite, risk profile, limits, portfolio exposures, credit policies and compliance with ESG-related obligations (including climate-related regulatory requirements, voluntary initiatives, goals and targets).

The Group's Sustainability Council meets bi-monthly to review sustainability-related matters, and align activity to the long-term pillar of NAB's strategy. In 2022, key areas of focus for the Sustainability Council included:

- Climate strategy.
- NAB's interim sector decarbonisation target-setting approach.
- Aligning activity to support NAB's Indigenous business strategy.
- Improving the Group's controls related to sustainability initiatives and targets.

Refer to page 20 of the Group's *2022 Annual Report* for detail on how sustainability is integrated into business strategy.

Sustainability and NAB's performance framework

The Group's performance, including that of the Group CEO, is assessed on achievement of financial and non-financial measures as set out in the Group Performance Indicator (GPI) framework. The GPI is determined by, and linked to, the Group's key strategic priorities. The GPI incorporates a qualitative assessment to support any adjustments to the outcome.

The GPI also informs a Variable Reward (VR) multiplier which directly impacts the level of variable reward paid to colleagues participating in the Group Variable Reward Plan.

The qualitative assessment in the GPI is integral to the outcome and may result in the outcome being adjusted upwards or downwards (including to zero) for risk, quality of performance (including consideration of financial, sustainability, environmental and social impact matters, and progress made against strategy) and any other matters as determined by the Board.

In 2021, the Group formally incorporated ESG risks, including climate change, as a material risk category called 'Sustainability Risk' in the Group's Risk Management Framework. Effective management of these risks forms part of the Board's qualitative assessment of the GPI. Colleagues' individual performance plans may also contain climate-specific goals and performance indicators where relevant to their roles (for example, within teams focused on executing the Group's climate strategy).

Refer to the '*Remuneration Report*' section of NAB's 2022 Annual Report for information on how the annual VR is calculated, informed by the measures in the GPI, together with a qualitative assessment of other factors and individual performance.

Strategy

The Group's climate strategy aligns to its strategic ambition to serve customers well and help our communities prosper. With an over-arching goal of net zero emissions by 2050, the Group is working to support its customers as they decarbonise and build climate resilience, while creating prosperity for customers, colleagues and communities.

Climate strategy

The Group updated its climate strategy in 2022. The climate strategy is designed to maximise the climate transition's economic benefits for customers and NAB, and help to achieve emissions reduction targets consistent with a maximum temperature rise of 1.5˚C above pre-industrial levels by 2100.

The Group is acting now for the long-term, with the strategy requiring immediate actions to support achieving targets well into the future.

The Group's focus remains unchanged, taking a relationship-led approach that prioritises supporting customers to decarbonise and build resilience.

However, the refreshed climate strategy aims to further embed consideration of climate change into the Group's businesses, and deliver a whole-of-bank response to climate change.

When appointed, the Chief Climate Officer role, reporting to the Group Executive, Strategy and Innovation, will drive execution of this strategy.

Figure 2: NAB's climate strategy priorities

Grow by supporting our customers to decarbonise and to build resilience

- Supporting customers with their transition plans.
- Providing measurements, insights and advice to customers to help them understand their climate transition needs and opportunities to reduce their emissions.
- Funding customer transitions.
- Financing emission reduction activities and renewable energy growth.
- Financing farms and homes to enable customers to increase resilience to physical climate risks including severe weather events.
- Financing and investing in new industries contributing to the sustainable energy supply chain.
- Connecting customers to carbon capital markets and sustainable investments.

Investing in climate capabilities

- Investing in colleagues.
- Investing in data and technology.
- Investing in risk management.
- Investing in partnerships, research and development and advocacy.

Reducing financed emissions

- Member of the Net Zero Banking Alliance.
- Setting sector decarbonisation targets, prioritising emissions-intensive sectors, where there is sufficient data availability and quality.
- Investing in colleagues, processes and technology to support emissions monitoring and achieving targets.

Reducing operational emissions

- Target to source 100% renewable energy by 2025.
- Maintaining carbon neutrality for emissions yet to be reduced.

Supporting customers to decarbonise and build resilience

The Group is adopting a whole-of-bank approach to climate change, developing its offering across business units to support customers to reduce their emissions.

Corporate & Institutional Bank (C&IB)

C&IB is building on its efforts to support some of the economy's largest businesses with their climate transition, recognising the significant impact their transition can have in reducing emissions in the economy. C&IB will support its customers to decarbonise and build resilience by:

- Funding renewable energy projects, customers and supply chains.
- Funding power generation transition.
- Funding decarbonisation of operations.
- Supporting customers to participate in carbon markets.

Supporting customers' transition

NAB has completed transition maturity assessments for 86 of its largest GHG emitting customers using its Transition Framework Diagnostic (see Figure 3 below). NAB intends to complete assessments for 100 of its largest customers by 30 September 2023. Results so far suggest that:

- All customers assessed have acknowledged climate change as a business issue.
- 67% are relatively transition mature, scoring within Band 3 (27%) and Band 4 (40%), noting some variation across industries (See Figure 3).
- 76% are already reporting or have committed to report in alignment with TCFD.
- 63% have set a goal to be net zero by 2050 or sooner.

The diagnostic provides a mechanism to track customer transition maturity and assists NAB to support customers in their transition, including through products such as sustainability-linked financing. The transition maturity assessment process has provided the Group with an initial understanding of the transition maturity of its customers. The Group intends to build on its transition maturity assessment capability as it continues to work with customers to support their transition efforts.

This includes through the operationalising of interim sector decarbonisation targets (see *page 25* for detail). It is important that consistency and comparability is developed in how financial services institutions assess transition plans. In that context, the Group welcomes the recently published NZBA Transition Finance Guide.

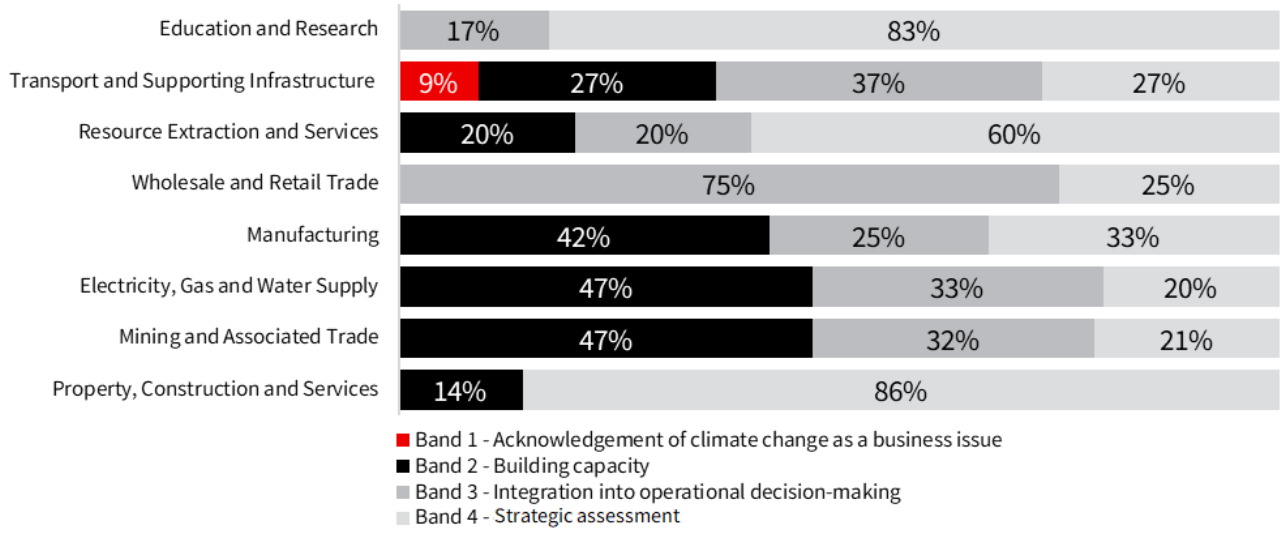
Case study: Reliance Rail Sustainability-linked loan

As a major part of Sydney's transport, Reliance Rail is playing its part in decarbonising Australia's mobility system through financial innovation that sets ambitious targets for reducing energy and water usage for its electric fleet and maintenance centre.

In 2022, NAB partnered with Reliance Rail to help them align their financing with their sustainability ambitions, through a landmark $1.8 billion green sustainability-linked loan (GSLL). The GSLL is set up as a 21-year refinancing package certified as "green" by the Climate Bonds Initiative under its Low Carbon Transport criteria. Under the GSLL, funding margins are linked to sustainability performance, and any savings generated under the loan can only be used to fund sustainability improvements.

NAB acted as a joint sustainability co-ordinator, lender and swap provider for the deal and assisted in developing the green and sustainability-linked framework and certification of the loan. As Reliance Rail supplies and maintains rolling stock that makes up about a third of the Sydney Trains suburban passenger fleet, the transaction has the potential to support significant sustainability improvements.

Figure 3: Transition maturity of 86 assessed customers, by sector



Leadership in sustainable financing

The Group is building products to provide customers with solutions that assist them in achieving sustainability objectives. Key progress in 2022 included:

- **$11bn** raised for customers through green, social, sustainability and sustainability-linked bonds[1] supported by the Group.
- **$22bn** raised for customers through green, social and sustainability-linked loans[1], supported by the Group.
- NAB remains the number one Australian bank for global renewables transactions[2].

Environmental financing target

In 2022, the Group achieved its target to provide $70bn in environmental financing ahead of the 2025 target date. Since 1 October 2015, the Group has provided the following environmental finance[3]:

- **$40.7bn** to support green infrastructure, capital markets and asset finance.
- **$30.1bn** to provide mortgage lending for new dwellings and significant renovations for 6-Star residential housing in Australia.

Refer to page 34 in '*Metrics and Targets*' for more information on the Group's Environmental Financing Target.

Connecting customers to carbon markets

NAB has developed capabilities to improve access, efficiency and security for carbon markets.

Carbonplace, a carbon credit settlement platform jointly developed by NAB and some of the world's largest financial institutions, completed a successful pilot transfer of Verra-certified carbon credits in 2022. The transfer was facilitated by NAB, on behalf of Visa, and Itaú Unibanco, on behalf of Sustainable Carbon. One of several pilot trades completed in 2022, this trade underscores how the institutions behind Carbonplace can collaboratively use infrastructure to develop an efficient market for the trading of carbon credits.

Sharing insights and opportunities

NAB hosted its inaugural Transitioning to Net Zero conference in June 2022. The conference involved leaders and decision makers discussing the role of the financial sector in driving actions to address climate change and continue the transition to net zero.

The conference had attendance across a range of sectors, with NAB hosting a panel of leading industry experts from large corporates, not-for-profit organisations, investment companies and public entities.

Sessions available on demand at: www.business.nab.com.au/transitioning-to-net-zero-post-conference-video-on-demand-54247/

Business and Private Bank (B&PB)

B&PB is developing sustainable business banking products and services, with an initial focus on agribusiness customers in recognition of the significant risks and opportunities related to climate change in the agriculture sector. B&PB will support its customers to decarbonise and build resilience by:

- Funding decarbonisation of operations.
- Funding sustainable farming.
- Increasing the resilience of customers.
- Supporting carbon projects and access to carbon markets.
- Funding emerging green technology.
- Providing access to sustainable investments.

Supporting agribusinesses

Agribusiness Green Loan Pilot

In November 2021, NAB launched the pilot phase of its Agri Green Loan, a product designed to help agribusiness customers invest in eligible on-farm practices and projects that reduce GHG emissions, and/or build resilience against climate-related risk.

The NAB Agri Green Loan is a tailored business loan to finance specific activities aligned to the independent framework and categories set out under the Climate Bonds Standard Agriculture Criteria[4]. Projects funded may:

- Reduce business costs such as energy, fertiliser and water.
- Address key risks from climatic events.
- Enhance business productivity.
- Support sustainable farming claims that may strengthen engagement with customers.

Investing in technological solutions

NAB is working with Downforce Technologies to pilot remote soil carbon measurement technology with 20 of NAB's customers.

The partnership aims to test and learn how this type of technology can be scaled to help customers make more informed decisions relating to their land management practices, and to provide information on the interventions they might apply to improve and retain their soil organic carbon profile. This supports enhanced farm resilience, improved productivity and carbon sequestration and provides data for customers to be better placed to participate in carbon offset projects, as well as supporting efforts to reduce emissions through their own value chains.

Partnering for sustainable investment

NAB Private Wealth and BlackRock partnered in 2022 to make Exchange Traded Funds (ETF) investing more accessible.

As an extension of NAB Private Wealth's broader relationship with BlackRock, nabtrade and iShares partnered to offer a suite of iShares ETFs, including globally diversified and sustainable multi-asset portfolios. NAB's customer insights show that investors are increasingly seeking sustainable investment options and this partnership is combining local and global expertise to deliver this to customers.

(1) Total value of bonds and loans presented based on principal value. Designation of "green, social, sustainability and sustainability-linked" based on application of relevant external guidelines and principles (e.g. the ICMA Green/Social/ Sustainability-Linked Bond Principles, ICMA Sustainability Bond Guidelines, LMA/APLMA/LSTA Green/Social/ Sustainability-Linked Loan Principles). Figures presented represent total bond and total loan size, and do not represent NAB's notional allocation/ loan commitment.

(2) Rankings based on IJGlobal League Table MLA, Renewables, both cumulative data from 1 January 2010 to 30 September 2022 and for the 12 months ending 30 September 2022.

(3) The Group's target is to provide a cumulative flow of new environmental financing activities of AUD $70 billion over the ten years to 30 September 2025 (off a 2015 baseline) to help address climate change and support the transition to a low-carbon economy. Refer to the '*Environmental financing methodology*' section on page 50 for further information on how this target is calculated.

(4) Available at https://www.climatebonds.net/standard/agriculture

Personal Bank

Personal Bank is exploring opportunities to embed sustainability into home lending products and provide customers with insights to support their own emissions reductions. It will support its customers to decarbonise and build resilience by:

- Providing transaction and property climate-related insights.
- Providing home loans that support climate transition.

More efficient housing

Personal Bank has been working on solutions that address cost of living pressures while rewarding customers for managing their climate impact. Lower variable rates were launched on 17 October 2022 to eligible home loan customers on homes that meet energy efficiency criteria.

Under the offer, the property must meet minimum criteria of at least a NatHERS 7-star rating or a Green Building Council of Australia Green Star rating. With Australian homes contributing more than 15% to Australia's total emissions(1), this new offer is an important first step in helping Personal Bank customers who are reducing their emissions.

Bushfire Resilience Ratings Retrofit Pilot

In 2021, NAB, along with IAG and BlueScope, supported the Resilient Building Council by sponsoring the development of the Bushfire Resilience Rating system, which aims to help households adapt their homes to make them more resilient to bushfire. The Resilience Ratings provide a tailored appraisal of a property's vulnerability to bushfire via a self-assessment app and a list of evidence-based, practical actions that measurably improve the home's resilience.

In 2022, NAB supported the Bushfire Resilience Ratings Retrofit Pilot in bushfire-impacted areas of New South Wales and Victoria. NAB is offering discounted lending to participating households who are looking to invest in the resilience of their property.

Following successful completion of the pilot, the Bushfire Resilience Ratings app, funded by the National Emergency Management Agency, is intended for a national launch in 2023.

Bank of New Zealand

A key pillar of BNZ's sustainability strategy is to accelerate the just transition to a net zero emissions economy that supports the regeneration of the natural environment and builds resilience. BNZ's climate strategy contains three focus areas related to supporting customers:

- **Transition its investment and lending portfolios to net zero emissions by 2050**, bringing together BNZ's participation in the NZBA and supporting the requirements under New Zealand's *Climate Change Response (Zero Carbon) Amendment Act 2019*.
- **Support customers to transition to low-emissions, resilient business models**, demonstrating focus on financing the climate transition and recognising that BNZ will only meet its net zero goal if customers are taking their own meaningful climate action.
- **Understand climate-related risk and support customers to adapt and build resilience**, helping better incorporate climate-related risk into BNZ's strategy, risk management approach and financial planning to enable clear public disclosure of climate-related risk.

Transitioning lending and investment portfolios to net zero by 2050

BNZ is a member of the NZBA and aims to transition all operational and attributable GHG emissions from its lending and investment portfolios to align with pathways to net zero by 2050 or sooner. BNZ has commenced work to calculate attributable financed emissions and set emissions reduction targets across emissions-intensive sectors: coal mining, oil and gas, power generation, agriculture, transport and commercial real estate. BNZ's first tranche of 2030 targets will be launched in 2023.

BNZ has been working to assess transition maturity of its customers, and an update will be provided in its 2022 climate and sustainability reporting.

Working with Small to Medium Enterprise (SME) customers

BNZ was a founding partner of the Climate Action Toolbox in 2020. In 2022, in partnership with the Sustainable Business Network and other public and private sector partners, BNZ developed a carbon emissions calculator available to SME customers through the Climate Action Toolbox.

SMEs can use the calculator to better understand their emissions impact, enabling them to set goals and track reductions over time. This tool may support BNZ's understanding of financed emissions attributable to its lending to SME customers, supporting product and service development over time to help SMEs achieve their emissions reduction goals.

NAB Green Bond issuance

NAB has been an Australian market leader in thematic bond issuance since becoming the first Australian issuer to issue a climate bond into the domestic market, and the first bank-issuer of a Certified Green Bond under the Climate Bonds Standard, in 2014. The issuance of these Bonds supports the Group's climate strategy and its customers in the transition to a low emissions economy.

In 2022 NAB issued two transactions which were certified by the Climate Bonds Initiative (CBI).

- EUR1bn senior unsecured Green Bond.
- A$500m Green tranche as part of NAB's Residential Backed Mortgage Security (RMBS) 2022-1.

NAB has now issued five CBI certified Green Bonds and two CBI certified Green RMBS tranches since 2014.

(1) Data sourced from https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-2020

Investing in climate capabilities

The Group is investing in its capabilities to realise its ambition to be a catalyst for climate action and support efforts to limit global warming to a maximum temperature rise of 1.5 degrees Celsius.

Investing in colleagues

The Group is taking steps to build the capabilities of its colleagues to support customers in their transitions.

FINSIA / Chartered Banking Institute

In Corporate & Institutional Bank, a network of sustainability champions of more than 100 colleagues was established in 2022.

All champions are enrolled in a program of formal study through the Chartered Banker Institute's Certificate in Green and Sustainable Finance, which is considered a global benchmark qualification for green finance. The qualification will help colleagues develop their understanding and application of green and sustainable finance principles and practice.

In 2022, sustainability champions also participated in a range of internal training courses on climate and sustainable finance topics.

Melbourne Business School

NAB continued its partnership with Melbourne Business School (MBS) to help develop and deliver targeted climate training for colleagues supporting customers to decarbonise and build climate resilience.

Following the initial roll-out of training to 75 C&IB colleagues, in 2022, 50 Agribusiness leaders and bankers completed the training in an initial phase. NAB has since tailored this training to be delivered at scale across the wider Agribusiness team, with more than 300 bankers and specialists expected to be trained by the end of December 2022.

Risk Awareness training

The Group's 2022 annual Risk Awareness training included a refreshed climate risk module to help all NAB colleagues understand:

- Highlights from the latest climate science.
- The goals of the Paris Agreement.
- The key elements of the TCFD's framework for managing climate risk.
- Actions being taken by the Group to address climate change.

The training provided examples of climate-related physical and transition risks to help colleagues understand the impacts of climate change on the Group's business, its customers and the communities in which it operates.

Refer to page 3 in the '*Governance*' section for information on how climate is considered in the Board's development agenda.

Investing in technology and data

To maximise the transition benefits for customers, the Group must be able to measure GHG emissions and support customers to reduce emissions and adapt. While the Group has been reporting on operational GHG emissions for almost two decades, there is a considerable challenge presented in capturing timely and good quality customer GHG emissions data. The Group is at an early stage of maturity in this space and is seeking to improve the underlying data foundations required to harness the opportunities the transition to net zero presents.

NAB's intended investment is looking at solutions to support:

- Measuring and reporting climate-related performance.
- Providing insights, tools and products to colleagues and customers.
- Embedding sustainability considerations into key decisions and processes.

(2) BNZ's reporting will be made available at https://www.bnz.co.nz/about-us/sustainability

Investing in partnerships, research and advocacy

Partnering for innovation

NAB is working with a range of potential partners, from start-ups to corporates, to understand how to best work together to support Australia's climate transition.

Climate change advocacy

In 2022, NAB engaged closely with industry associations on issues related to climate change and the transition to net zero emissions. This included:

- Working with the Australian Banking Association (ABA) to support a joint submission that collectively represented the voice of 20 peak professional, industry and investor bodies on the International Sustainability Standards Board's (ISSB) two proposed IFRS Sustainability Disclosure Standards, covering general and climate-related disclosures. NAB also worked with the ABA on its submission to the Australian Accounting Standards Board on the ISSB's draft sustainability standards. Both submissions supported the need for clear, transparent, comprehensive and comparable disclosure of sustainability-related information, including action on climate risk. NAB lodged its own submission to the ISSB, reaffirming its support for a consistent global baseline.
- NAB's work to support the ABA's development of the Australian banking industry's climate roadmap, which details how the banking sector is supporting the Paris Agreement target of net zero emissions by 2050. The banking industry roadmap will span four focus areas: financing tools, risk management, climate disclosure and operational emissions.
- NAB continues to engage with United Nations Environment Programme Finance Initiative's (UNEP FI) Principles for Responsible Banking (PRB) as a Working Group member on the improvement of the Portfolio Impact Analysis Tool. This tool is used by financial institutions to analyse their lending portfolio and understand the areas of most significant positive and negative impact. NAB's testing of the tool has confirmed climate as an area of significant impact.

Investing in risk management

The Group is building on its capabilities to manage sustainability (including climate-related) risk.

Refer to the '*Risk Management*' section for further details on progress in 2022.

Supporting a just transition

The role of corporates and financial institutions will be instrumental in planning for and supporting economies' and communities' transitions from high-emissions electricity generation to a low carbon world.

NAB, through its membership of the United Nations Global Compact (UNGC), is the only Australian company participating in the UNGC's Think Lab on Just Transition.

The Think Lab on Just Transition was launched by the UNGC with the International Labor Organisation and the International Trade Union Confederation (ITUC). It aims to:

- Shape and define business and thought leadership on critical areas linked to just transition.
- Address key business challenges.
- Identify policy advocacy opportunities and good business practices.
- Scale-up lessons learnt through the network of the UNGC.

NAB seeks to learn from its participation and to better integrate relevant social considerations into its decision-making as it supports customers to decarbonise and build climate resilience.

Reducing financed emissions

The Group is working to:

- Improve its understanding of the emissions attributable to its lending and investment activities.
- Set targets to reduce its attributable financed emissions, prioritising emissions-intensive sectors.
- Mobilise investment in colleagues, processes, technology and partnerships that will support NAB in achieving its targets.

Ultimately, the goal is to reduce emissions in the real economy, aligned with pathways to net zero by 2050.

Refer to the '*Metrics and Targets*' section on page 21 for a detailed update on the Group's interim sector decarbonisation targets.

Reducing operational emissions

The Group is working to:

- Continue to reduce its Scope 1, 2 and 3 operational emissions.
- Source 100% renewable energy for its electricity consumption needs.
- Maintain carbon neutrality by purchasing and retiring carbon offsets for operational emissions it has yet to reduce or avoid.

As the economy's recovery from COVID-19 continues, it is likely that activity that generates emissions will also increase.

Refer to the '*Metrics and targets*' section on page 35 for a detailed update on the Group's operational environmental performance and targets.

The Group is setting targets informed by the best available scientific knowledge to guide its work to reduce emissions in its financing and operations.

Risk management

The Group has integrated management of risks presented by climate change within its Risk Management Framework processes.

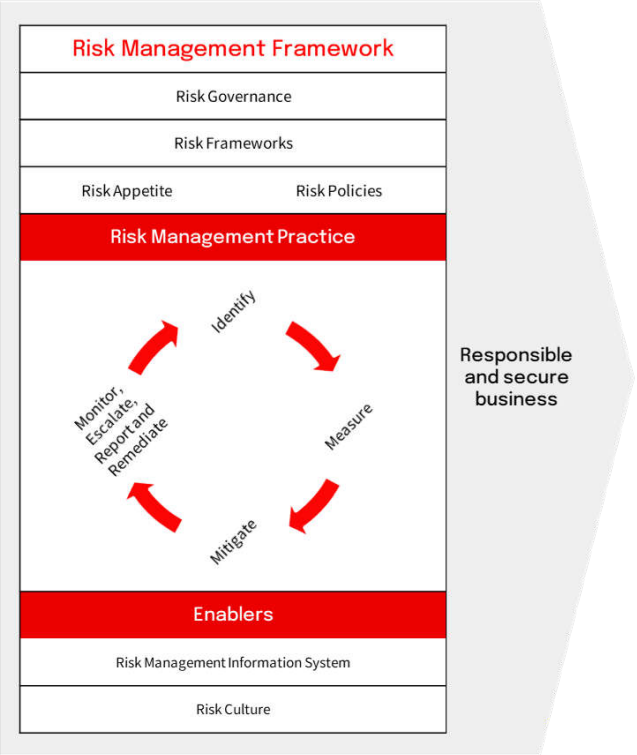
Risk management processes

ESG risks, including climate-related risks, are identified, measured, monitored, reported and overseen in accordance with the Group's Risk Management Framework (as described in the Group's Risk Management Strategy).

Risk profiling and assessment processes are key mechanisms to identify and understand internal and external risks (including climate change) to operations and strategy execution. Risk profiling aims to identify and understand drivers of change, supporting early action, while risk assessments help to make informed decisions about the risks the Group is willing to accept, reject or mitigate.

Sustainability Risk, which includes consideration of climate-related risks, is a material risk category within the Group's Risk Management Framework (RMF, see Figure 4). This became effective on 1 October 2021. Additionally, consideration of climate-related risk is incorporated within the Group Risk Appetite Statement (RAS). This was reviewed and updated in 2022 as part of the development of the Group's 2023 RAS.

Figure 4: The Group's Risk Management Framework



ESG risk management oversight

The Group's Credit and Market Risk Committee is the key risk committee which has oversight of financial risk and ESG risks, including climate-related risks. This includes ESG-related credit policy and risk settings for emissions-intensive, climate sensitive and low-emissions sectors. Matters are escalated to the Executive Risk & Compliance Committee, BRCC and the Board as required.

Figure 5: ESG risk management accountabilities and oversight

Board

Accountable for ESG strategy and oversight of ESG matters, including any escalated from Board Risk & Compliance Committee.

Board Risk & Compliance Committee

Oversees ESG risks escalated by management.

Group Credit & Market Risk Committee

Has oversight of certain financial risks and ESG risks (including climate and human rights-related risks) and the Group's environmental compliance and performance. This includes oversight of NAB's ESG-related appetite and credit policy settings and limits.

Processes used to determine material financial impacts

NAB uses a mix of qualitative and quantitative (including financial) measures to manage risk, including climate risk. These measures consider risk likelihood and consequence. The Group's Operational Risk Profiling Standard Operating Procedures provide this information in the form of likelihood and consequence matrices to enable colleagues to assess significance of financial and strategic impacts on the Group, including those arising from climate change.

For example, the consequence of a risk or incident may be defined as substantive/major due to the number of customers or proportion of operations impacted, or due to the size and length of time that the impact occurs. The Group considers climate-related risks, impacts and opportunities on a short, medium, and long-term basis based on environmental scanning and scenario analysis in accordance with the RMF.

A financial or strategic impact arising from climate-related risks would be deemed substantive/major in accordance with the Group's RMF, internal policies and operating procedures if the financial impact was at least $5m or the risk had non-financial impacts that may include: an extensive injury; an impact to more than 3,000 customers; over 24 hours interruption to provision of essential banking services/ processes; and sanctions including fines, enforceable undertakings or mandatory improvements, imposition of capital requirements and regulatory civil proceedings.

Reputation risk may also be considered substantive based on the number and type of stakeholders raising concerns, impact on reputation benchmarking scores, and direct feedback including through NAB's annual ESG materiality process. This engagement process is conducted with internal and external stakeholders to seek their views on material issues facing NAB.

Refer to page 23 in NAB's *2022 Annual Report* for detail on NAB's ESG materiality assessment.

Table 1: Types of climate risk considered

Climate risk type	Risk driver	Impact	Impact time horizon[1]	Impact to other Group material risk categories
Transition risk	Current and emerging regulation	• Increased reporting obligations and associated costs. • Higher operating costs for carbon intensive customers (e.g. carbon tax). • Additional potential for non-compliance. • Increased potential capital requirements for the financing of emissions-intensive sectors.	Short to Medium-term	• Credit • Compliance
	Technology	• Write-offs and early retirement of existing assets due to technology changes. • Cost of/investment in transition to less carbon intensive products and services.	Medium to Long-term	• Credit
	Legal	• Legal action resulting from the misalignment of public commitments and financing decisions.	Short to Medium-term	• Credit • Compliance • Conduct
	Market	• Re-pricing of assets or increased market volatility during transition. • Reduced demand for products or services due to shift in consumer preferences. • Increase in operational costs (e.g. energy).	Short to Medium-term	• Credit • Balance sheet & liquidity • Market
	Reputation	• Financing decisions for carbon intensive sectors, or climate policies that reduce emissions do not meet customer and investor expectations.	Short to Medium-term	• Conduct
Physical risk	Acute	Increased severity and frequency of extreme weather events could lead to: • Impacted supply chains or end customer markets. • Increased insurance and capital costs or operational outages. • Losses due to physical damage and inability to meet customers' demands due to business interruptions.	Short, Medium and Long-term	• Credit • Market • Operational
	Chronic	Changes in weather patterns (e.g. temperature, sea levels) could cause: • Impacts to ecosystems, living and working conditions, agricultural systems and infrastructure. • Impacts to existing assets and valuations.	Long-term	• Credit • Operational • Market • Balance sheet & liquidity • Strategic

(1) The Group defines short-term as 0-3 years (one business planning cycle), medium-term as 3-6 years (two business planning cycles), and long-term as extending past two business (>6 years) planning cycles. The Group considers a longer-term future outside immediate business planning cycles where a variety of uncertain potential scenarios are modelled to assess how risks and opportunities could evolve over longer time horizons.

ESG risk and policy settings

The Group regularly reviews its ESG-related credit policy and appetite settings, including those related to its exposure to emissions-intensive, climate sensitive and low-emissions sectors. These reviews consider a range of factors including:

- Various climate change scenarios for both transition[1] and physical risk[2].
- Customer strategies and plans and their alignment to the Paris Agreement temperature goals.
- Industry trends.
- Trends in Group exposures to these sectors.

To date, this review process has led to implementation of ESG-related credit policy and risk settings as outlined in the highlight box below.

The settings provide qualitative risk descriptions with respect to what the Group will and will not finance and are formalised through the Group's Risk Appetite Statement. These settings guide colleagues' decisions on a day-to-day basis and help ensure that decisions made, suppliers engaged and customers supported, are within the Group's risk appetite.

These risk settings are complementary to the Group's interim sector decarbonisation targets, which have been set to guide the Group's lending across key sectors in its portfolio to align to net zero emissions by 2050.

Further detail about NAB's first tranche of interim sector decarbonisation targets is provided in the '*Metrics and targets*' section (refer to pages 23 to 33).

ESG-related credit policy and risk settings for coal, oil and gas

NAB has clear credit policy and risk settings for coal, oil and gas sectors. These are set out below. They operate alongside NAB's interim sector decarbonisation targets, set out in the '*Metrics and targets*' section (from page 21).

Coal

- NAB has capped thermal coal mining[3] EAD at 2019 levels.
- NAB will not finance new thermal coal mining projects or take on new-to-bank thermal coal mining customers.
- NAB separately reports its thermal coal-related rehabilitation performance guarantees as part of reporting its resources exposures (see page 19).
- NAB will not finance new or material expansions of coal-fired power generation facilities.
- NAB recognises that currently there are no readily available substitutes for the use of metallurgical coal in steel production. NAB will continue providing finance to its customers in this segment, subject to enhanced due diligence which further considers underlying environmental, social and governance risks.

Refer to *pages 28-29* for information on NAB's thermal coal sector decarbonisation target.

Oil and gas

- NAB has capped oil and gas[4] EAD at USD2.4 billion.
- NAB will continue to support integrated liquified natural gas (LNG) in Australia, New Zealand, and Papua New Guinea and selected LNG infrastructure in other regions.
- NAB will not directly finance greenfield oil extraction projects or onboard new customers with a predominant focus on oil extraction.
- NAB will only consider directly financing greenfield gas extraction in Australia where it plays a role in underpinning national energy security.
- NAB will not directly finance greenfield gas extraction projects outside Australia.
- NAB will not finance oil and gas extraction, production or pipeline projects within, or impacting, the Arctic National Wildlife Refuge area or any similar Antarctic Refuge.
- NAB will not directly finance oil/tar sands or ultra-deep-water oil and gas extraction projects.

Refer to *pages 30-31* for information on NAB's oil and gas sector decarbonisation target.

(1) For the purpose of this work, transition risk was defined as the impact of low-carbon policy and transition to low-carbon technology on markets and industries.
(2) For the purpose of this work, physical risk was defined as the risk resulting from climate variability, extreme weather events and longer-term changes in climate patterns.
(3) Thermal coal EAD includes direct exposure to customers whose primary activity is thermal coal mining. EAD for these caps includes lending, derivatives and performance guarantees for the rehabilitation of existing assets. Excludes metallurgical coal mining and diversified mining customers. NAB's NZBA-aligned sector decarbonisation target includes diversified mining customers with revenue >5% from direct sale of thermal coal and excludes metallurgical coal mining customers.
(4) Oil and gas EAD includes oil and gas extraction (upstream); liquefied natural gas (LNG) production (not at refineries – downstream LNG); and LNG production at wellhead (integrated LNG). EAD for these caps includes lending, derivatives and performance guarantees for the rehabilitation of existing assets.

Assessing potential climate risk using scenarios

The Group uses climate-related scenario analysis to help inform its strategy, risk appetite and risk management.

The Group's use of scenarios has been two-fold, to:

1. Understand the vulnerability of the Group's lending portfolio and its customers in key high emitting segments to transition and physical risk; and
2. Understand the sectoral decarbonisation pathways to transition to a net zero lending portfolio by 2050 and set sectoral decarbonisation targets to achieve this goal.

Table 2: Summary of climate scenario models used by NAB in 2022[1]

Scenario	Net Zero by 2050[2]	Delayed Transition[3]	Current Policies[3]
Description	Provides a technology pathway resulting in a clean, dynamic and resilient energy economy dominated by renewables like solar and wind instead of fossil fuels. This scenario requires massive deployment of all available clean energy technologies – such as renewables, electric vehicles and energy efficient building retrofits – between now and 2030. Most reductions in CO_2 emissions through to 2030 come from technologies available today. But in 2050, almost half the reductions will come from technologies that are currently at the demonstration or prototype phase.	The Delayed Transition scenario assumes global annual emissions do not decrease until 2030. Strong policies are then needed to limit warming to below 2 °C. Negative emissions are limited. This scenario assumes new climate policies are not introduced until 2030 and the level of action differs across countries and regions based on currently implemented policies. Australia continues on its current policy direction to 2030, likely achieving its Paris agreement target principally through economic decarbonisation of the electricity system rather than new emissions policies. From 2030, Australian emissions follow a global emissions trajectory towards net zero emissions by 2050, with a single global price for emissions and offsets. This scenario tests sensitivity and resilience to high transition risk.	The Current Policies scenario assumes that only currently implemented policies are preserved, leading to high physical risks. Emissions grow until 2080 leading to about 3°C of warming and severe physical risks. This includes irreversible changes like higher sea level rise. Australia has no linkage to wider emissions trading schemes, and no national emissions target beyond 2030. The electricity sector continues to evolve based on market outcomes. This scenario tests sensitivity and resilience to high physical risk.
Scenario used	IEA NZE 2050	Network for Greening the Financial System (NGFS) – Delayed Transition	NGFS - Current policies
Scenario application	Used for sectoral decarbonisation target setting	Used for portfolio stress testing and customer-level analysis	Used for portfolio stress testing and customer-level analysis
Policy ambition/ global warming by 2100	0.3-1.7°C	1.6°C	3°C+
Policy reaction	High – significant cooperation	Delayed	None - current policies
Technology change	Fast	Slow/Fast	Slow
Use of carbon dioxide removal	Medium use	Low-medium use	Low use
Regional policy variation	Low variation	High variation	Low variation
Physical impacts	Low	Low	High
Carbon price range per tonne CO_2-e from 2030 to 2050	USD130-USD250[4]	Portfolio modelling USD37-USD144[5] Customer-level analysis USD0.63-USD497[6]	Portfolio modelling USD16-USD62[5] Customer-level analysis USD0.63-USD2.70[6]
Associated Representative Concentration Pathway (RCP)	N/A	RCP 2.6	RCP 8.5

(1) Details of BNZ's climate risk scenario modelling can be found in their climate reporting, which will be made available at: https://www.bnz.co.nz/about-us/sustainability
(2) Description adapted from IEA's NZE 2050 summary available at: Net Zero by 2050 – Analysis - IEA
(3) NGFS scenario descriptions are adapted from the NGFS Scenarios Portal: NGFS Scenarios Portal.
(4) These numbers are based on USD 2019 dollars and relate to advanced economies only. Refer to Table 2.2 in the IEA Net Zero by 2050: A Roadmap for the Global Energy Sector.
(5) The forecasted carbon price from a private consultant has been used for portfolio modelling.
(6) The forecasted carbon price from the NGFS REMIND-MAgPIE 2.1-4.2 model has been used for customer-level analysis.

Portfolio and customer-level climate-related scenario analysis

During 2022, NAB used two key climate scenarios from the Network for Greening the Financial System (NGFS) scenario set to assess the climate vulnerability of its lending portfolio through climate-related scenario analysis. See Figure 6 which highlights the two NGFS scenarios used by NAB.

NAB's climate risk-related scenario analysis examined climate impacts on: (i) home lending, agri and non-retail portfolios; and (ii) a subset of individual high emitting customers in climate vulnerable sectors.

The two climate scenarios used for NAB's climate risk-related scenario analysis were:

1. **Current Policies (climate inaction)** – a scenario that leads to higher temperature increases and increased physical risk; and
2. **Delayed Transition** – a scenario where policy changes and a global carbon price are suddenly introduced in 2030. NAB considered climate risks through both bottom-up detailed customer-level modelling and top-down portfolio stress testing.

Portfolio level climate stress testing was informed by physical and transition scenario data, internal experts, insurance and non-insurance data and stress testing models to segment the portfolio by relative risk levels and estimate financial impacts in terms of future losses. Physical risk modelling covered a range of perils (flood, cyclone, drought, heat, fire, rainfall) and used postcode level projections of the potential change in climate risks, which were translated into estimated financial impacts. Portfolio level analysis was applied to both mortgage and business lending.

For customer-level analysis, the focus was on analysing climate-related risk for a sample of customers in a range of high emitting sectors including: coal mining, oil & gas extraction, electricity supply, manufacturing, construction and transport.

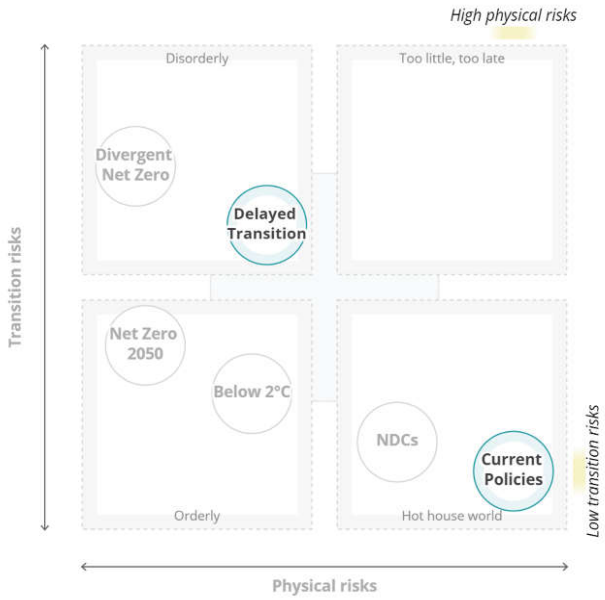
In order to support modelling assumptions at a customer level, NAB engaged with the majority of customers in the sample to: (i) validate key variables and assumptions used in transition risk-related financial analysis; and (ii) understand their exposure to physical risks and the management actions (mitigation and adaptation) they are taking or planning to take.

A quantitative analysis of transition risk was conducted for all customers in the sample. For most customers in the sample the data to support quantitative analysis of physical risk was not readily available. For some customers, NAB's modelling was able to incorporate a quantitative assessment of both physical and transition risk impacts into credit risk analysis. As physical risk is location specific, it required use of geographical information and translation of the climate data into some form of financial loss or damage that reflected, for example, a decrease in production or repairs to a physical asset. In these cases, NAB was able to translate:

1. Physical climate impacts into productivity impact (via revenue).
2. Transition impacts (via a carbon price impacting operational costs) into changes in financial performance and subsequent credit ratings.

Under the climate scenarios used for NAB's climate-risk related analysis, only a small proportion (approximately 2%) of NAB exposures face a high level of climate risk exposure, which moderates the overall impact. The overall portfolio impact was rated as moderate. However, this could change and become material depending on the range and speed of

Figure 6: Summary of NGFS Scenarios



Source: NGFS Scenarios Portal, available at www.ngfs.net/ngfs-scenarios-portal/

climatic impacts and changes in NAB's portfolio composition. It is important to note that the scenarios used for NAB's climate risk-related scenario analysis represent two possible futures and that there is a high degree of uncertainty related to the quantitative loss outcomes, which means impacts could be significantly larger or smaller, depending on actual future events which may occur.

Key insights from NAB's climate risk-related portfolio and customer-level analysis:

Portfolio-level analysis:

- **Home lending** – The climate risk-related modelling showed that less populated regional and remote postcodes are more subject to extreme physical climate stress. Other recent public analysis by the Reserve Bank of Australia and commercial providers suggests there may also be heightened risk in more populated coastal areas, particularly in southern Queensland. The role of adequate insurance coverage is important in building an understanding of climate risk exposure of banks, given in the absence of insurance, the risk of collateral damage is essentially transferred to a bank. For home lending, transition risk is fundamentally a second-order risk, driven by loss of employment in impacted industries and regions. The impact may also be higher in regions where there is a larger proportion of Fly-in Fly-out workers. Overall, transition risk appears to be lower risk than physical risk for the home lending portfolio.
- **Business lending** – High emitting non-agricultural sectors with elevated risk levels (e.g. coal, oil and gas) make up a relatively small part of the Group's direct lending exposures. Most industry sectors are expected to have only minor or short-term impacts from the sudden introduction of a carbon price in 2030 under the delayed transition scenario modelled by NAB. However, understanding the links between industries is important. For example, rail and water transport are generally less emission intensive than road and air, but this advantage may be neutralised if operators are transporting carbon intensive products, and demand for their customers'

products decreases materially. For agricultural lending analysed, regions with the greatest projected physical risk impacts aligned to 2017-2019 drought experience. NAB did not see material credit losses through this drought, but the compounding impacts of more frequent and severe and multi-hazard events is highly likely to increase this risk level in the future.

Customer-level analysis:

- **Agribusiness** – Under the Current Policies scenario, there was only minor deterioration in credit risk ratings across the sampled customers due to chronic physical risk (shifts in climate). However, this modelling did not consider acute physical impacts (extreme weather events) and compound events. Industry sectors, particularly in agriculture, may have tipping points where businesses are severely impacted (e.g. animal mortality resulting from extreme temperature stress). Tipping points need to be better understood and integrated into analysis to inform risk management and appetite decisions. Although agribusiness can be particularly vulnerable to physical risk, particularly acute physical risk, NAB could see that some of NAB's agribusiness customers are already adapting. For example, some customers in the sample had already installed cooling for cows (to maintain milk production during heat waves), others were using genetics to select for greater ability of animals to cope with heat stress, with others improving water efficiency to manage drought-related risks. Under the Delayed Transition scenario, agribusiness customers can experience deterioration in credit rating, as a result of the introduction of a carbon price. NAB noted positive signs that agribusiness customers were implementing a range of carbon mitigation actions including installing renewable energy, planting legumes for pasture, installing biogas production to manage effluent/animal waste, using feed supplements to reduce methane emissions and using nitrogen inhibitors to reduce fertiliser emissions.
- **Non-agri customers** – Under a Delayed Transition scenario, without mitigation, some customers experience significant credit rating deterioration in 2030 and beyond. For customers that have transition plans to reduce emissions, the potential ability to pass through, or absorb, cost increases reduces potential credit rating deterioration. After accounting for customer mitigation plans, a number of customers still experience significant credit impacts under a Delayed Transition scenario due to their early stage of transition plan adoption, low levels of investment in decarbonisation activities, and reliance on future technology development. Customers in similar industry sectors can experience quite differing transition risk impacts reflective of business models with varying reliance upon carbon-intensive assets or differences in the degree to which customers have committed to transition and adaptation plans.

This climate risk-related scenario analysis (portfolio and customer level) is complementary to that required for assessing customer's transition plans and determining NAB's sectoral decarbonisation pathways.

Moving forward NAB will consider key learnings from its climate risk-related scenario analysis in:

- Future assessment of the impacts of compound climate events[1] and/or physical risk tipping points.
- Building future climate-related data requirements into NAB's climate risk capability.
- Future changes to risk appetite and policy settings, where appropriate, to manage climate-related risks.
- Future planning for climate risk measurement and monitoring, including building internal capability in geo-spatial mapping.
- Future financing provided to support customers to decarbonise and build climate resilience.

(1) These are cumulative climate events with no time for full or partial recovery between events. Measuring the impact of these events can be complex, but it reflects observed circumstances in a number of locations in Australia.

Participation in industry climate risk initiatives

Recognising that climate change as an issue cannot be addressed by the Group alone, in 2022, the Group continued to collaborate and participate in climate risk-related industry activities and projects. These aimed to better understand, and implement, methodologies to assess and manage climate risk. This included the following:

- Completed the **Australian Prudential Regulation Authority (APRA)-led Climate Vulnerability Assessment (CVA)**. The key objectives of the CVA were to:
  - Measure the potential financial exposure of participating banks to both physical and transition climate risks.
  - Understand how participating banks would adjust their business models and implement management actions in response to the different scenarios.
  - Improve banks' climate risk management capabilities.

  The CVA was a collaborative pilot exercise involving APRA and a number of major Australian banks including NAB.
- **UNEP FI Task Force on Climate Related Financial Disclosures (TCFD) programme** - NAB has continued its participation in this program in 2022. This included updates from regulators on climate stress testing activities from NGFS members, review of a range of tools being developed for climate-related risk analysis, and updates on climate-related litigation.
- **ABA Climate Risk Working Group** – This included NAB's participation in the development of an Australian banking industry climate roadmap, which details how the banking sector is supporting the Paris Agreement target of net zero emissions by 2050. The banking industry roadmap will span across four focus areas: financing tools, risk management, climate disclosure, and operational emissions.
- **Climate Measurement Standards Initiative (CMSI)** – In 2022, the CMSI commenced work on its Phase 2 work program. The Group has supported this cross-sector industry initiative since it formed in 2020. The CMSI includes representatives from across the banking, insurance and investment sectors alongside pre-eminent Australian climate scientists working together under the auspices of the National Environmental Science Program, professional services firms and finance sector industry bodies. The objective of the CMSI is to provide open source voluntary guidance on climate risk.
- **The Australian Industry Energy Transitions Initiative (Australian Industry ETI)** – The Australian Industry ETI aims to accelerate action towards achieving net zero emissions in hard-to-abate supply chains by 2050 while managing the transition to thrive in a decarbonised global economy. The Group continued to support this collaborative industry initiative led by ClimateWorks Australia and Climate-KIC Australia. In FY2022, the Australian Industry ETI released analysis into regional net zero opportunities across five targeted sectors.

Metrics and targets

This section outlines the metrics and targets the Group uses to assess and manage relevant climate-related risks and opportunities.

Climate-related targets

Portfolio alignment target

Net zero by 2050

First tranche of interim sector decarbonisation targets now published (*Page 23*).

Environmental financing target

$70bn

Target of new flow environmental financing to be provided 2016-2025 (*Page 34*).

Operational emissions reduction target

51%

Target to reduce Scope 1 and Scope 2 tCO_2-e by 2025 against a 2015 baseline (*Page 35*).

Sourcing renewable energy target

100%

Target to source 100% of electricity consumption from renewables by 2025 (*Page 35*).

The Group has developed metrics and targets to track progress against its climate strategy, measure and manage its climate-related risks and opportunities. This includes disclosing the Group's exposure to high-emitting sectors, environmental financing provided to help address climate change, and measures to support the reduction of financed and operational emissions.

In developing these metrics and targets, the Group continues to work on and improve methodologies, including adding granularity and updating external client and industry data as it becomes available over time. Changes to previously disclosed data or methodologies are stated where relevant.

Exposure to high-emitting sectors

The Group's exposure to high-emitting sectors, with high levels of transition risk, are outlined below. The below figures are all based on the Group's exposure at default as at 30 September 2022.

- Power generation exposure increased slightly to $7.36bn, from $7.18bn in 2021.
  - Renewable energy represents 72.8% ($5.36 billion) of the power generation portfolio, up from 71.4% ($5.12 billion) in 2021.(1)
  - Coal-fired power generation has reduced to zero within the power generation portfolio, from 1.2% in 2021. The Group still has indirect exposure to coal-fired power through its corporate level exposure to gentailers, which have a mix of generation assets (including coal, gas and renewables) within their generation portfolio.
- Thermal coal mining exposure decreased to $0.42 billion (2022) from $0.52 billion (2021).(2)
- Oil and gas exposure increased from $2.90 billion at 30 September 2021 to $3.60 billion at 30 September 2022. This increase was significantly driven by passive movements in foreign exchange positions across the existing portfolio and is not due to an increase in underlying lending.
  - Oil and gas exposure (lending only) decreased to USD0.99 billion (30 September 2022) from USD1.53 billion (30 September 2021). NAB discloses its oil and gas lending exposures in USD as the majority of its lending is denominated in that currency.

Supporting the transition to net zero

The Group's assessment of climate-related risks and opportunities has led to targets associated with: (i) decarbonisation of the Group's operations; and (ii) supporting customers through the low-carbon transition. The Group's progress on these targets includes:

- **Decarbonising operations**
  - Progressing towards the Group's RE100(3) target to source 100% of its electricity consumption from renewable sources by 30 June 2025. The proportion of electricity sourced which was renewable electricity increased from 31% in the 2021 environmental reporting year to 72% in the 2022 environmental reporting year. Further information is available on page 35.
- **Supporting customers**
  - Interim sectoral decarbonisation targets set for four sectors, detailed from page 23.
  - Environmental financing target: $70.8bn provided(4), detailed on page 34.

(1) NAB methodology (based upon the 1993 ANZSIC codes) at net EAD basis. Excludes exposure to counterparties predominantly involved in transmission and distribution. Vertically integrated retailers included and categorised as renewable where majority of their generation activities sourced from renewable energy.
(2) ~23% of thermal coal exposures is exposure to rehabilitation guarantees.
(3) RE100 is a global corporate leadership initiative bringing together businesses committed to 100% renewable electricity.
(4) Represented as cumulative flow of new environmental finance since 1 October 2015. Refer to the 'Environmental financing target methodology' on page 50 for a further breakdown of how this number is calculated.

Understanding financed emissions

The Group is connected to all parts of the economy through its lending and other banking activities and has an important role to play in financing the low-carbon transition.

2022 is the third year that the Group has completed an estimation of attributable financed emissions for its lending portfolio. The Group has made several improvements to its methodology, outlined below. Due to these changes, prior period financed emissions are not comparable.

- **Aligning the financed emissions baselines with the 10 clearly defined emissions-intensive sectors outlined in the UNEP FI Guidelines for members of the NZBA.** Specifically, agriculture; aluminium; cement; coal; commercial real estate; residential real estate; iron and steel; oil and gas; power generation; and transport sectors. As a result of this alignment, the only potential reduction in coverage in lending is a small loss in SMEs where individual firms were unable to be allocated to the emissions-intensive UNEP FI sectors. The Group is working to improve data quality and insights to help reduce emissions across all of its lending portfolio.
- **Aligning emissions reporting and EAD reporting dates.** For the purposes of reporting financed emissions in 2022, NAB has aligned the reporting periods for emissions and EAD to 30 June 2021. Note, the delay between emissions reporting and NAB's reporting date is due to the lag between when customers report their emissions (e.g. to the Clean Energy Regulator through obligations under the National Greenhouse and Energy Reporting Act) and the availability of this data for NAB's reporting.[1] In NAB's previous reporting, financed emissions were calculated based on EAD during NAB's reporting year, with emissions from the prior year.
- **Expanding coverage of financed emissions baseline.** In 2022, the Group expanded coverage to international exposures (excluding Bank of New Zealand exposures) for relevant sectors. Additionally, NAB supplemented the baseline dataset with production-based, revenue-based and other financial based estimates, to calculate emissions for customers where reported emissions data was not available.

Refer to the '*Financed emissions methodology*' section in '*Supporting information*' for details on how the Group measures its attributable financed emissions.

(1) The Clean Energy Regulator publishes emissions data for companies reporting under NGER Act reporting period of July-June in February of the following calendar year. The Group's reliance on this information results in a lag between when companies report their data, and when NAB publishes its financed emissions.

Reducing financed emissions

The Group recognises its ability to help the economy transition through the financing it provides. In the Group's 2021 Annual Review, the Group outlined its intention to set and publish emissions reduction targets for a substantial majority of its Australian lending portfolio. The Group has since joined the NZBA, furthering this ambition to align its operational and financed emissions with pathways to net zero by 2050, consistent with a maximum temperature rise of 1.5°C above pre-industrial levels by 2100.

Working towards this ambition, NAB has set interim 2030 sectoral decarbonisation targets ('sector targets') for its lending portfolio in four of its most emissions-intensive sectors: power generation, oil and gas, thermal coal mining and cement production.

In setting these targets, NAB has been informed by the *UNEP FI Guidelines for Climate Target Setting for Banks* ('UNEP FI Guidelines').

NAB has prioritised target-setting for its lending portfolio, recognising the most significant impact NAB has on emissions is through the finance it provides. The Group's baselines and targets currently exclude NAB's New Zealand banking subsidiary BNZ, which has separately signed up to the NZBA. Over time, it is intended that BNZ's financed emissions will be brought into the Group's baselines, targets and reporting. Learn more about BNZ's progress in its forthcoming climate and sustainability reporting[1].

The Group's role in sector transition

Across its lending portfolio, the Group will support the transition to net-zero by 2050 by:

- **Supporting customers to accelerate their decarbonisation plans.** For example, providing financing for decarbonisation activities, innovation and the near-term deployment of existing viable technologies.
- **Working to re-balance its portfolio exposure to customers with lower emissions intensities.** For example, increasing funding to customers advanced in their transition plans. This approach will only apply to sectors where an intensity target has been selected in order to facilitate growth in lending that will support transition (e.g. in power generation where energy demand is forecast to increase, see page 26.)
- **Advocating for change that supports the transition** with policymakers, regulators, industry associations, customers and investors, as well as the broader community.
- **Considering selectively reducing exposure** to high emitting clients that have been unable to demonstrate how they are aligned with the Group's sector targets.

Refer to the '*Strategy*' section on pages 5-11 for further information on the actions the Group is taking to achieve its strategic ambition to support customers to decarbonise and build climate resilience.

A sector-specific approach to attributable financed emissions enables the Group to consider varying factors such as technological advancement or supply and demand, that will likely impact absolute emissions reduction across the economy.

Customers within sectors will have varied emissions reduction trajectories. NAB's targets should be viewed at a sector portfolio level, rather than at an individual customer level. Customers may have emissions profiles that differ from NAB's sectoral targets or transition plans that are based on data,

The Group is taking action to support customers as they reduce their emissions and has set targets to guide emissions reduction across its lending.

reference scenarios, assumptions and methodologies that are different to those used by NAB in setting its targets. NAB may continue lending to such customers if doing so is consistent with NAB's targets at a portfolio level.

Emissions reduction across the lending portfolio is unlikely to be linear. New lending will occur, including to enable and accelerate customer transition plans to achieve net zero.

This may lead to a temporary increase in absolute financed emissions and emissions intensity in some reporting years between now and 2030, however these are intended to decline over time towards NAB's sector targets.

The Group will consider national energy security requirements in relation to the power generation and oil and gas sectors. It is expected that decisions based on national energy security would be by rare exception. Such decisions may impact on the Group's ability to achieve financed emission reduction targets.

The Group views climate transition as both a risk and an opportunity. NAB's sector targets and associated methodologies are aligned to the Group's ambition to be a catalyst for climate action, as detailed on page 5.

The Group's existing ESG-related credit policy and risk settings relevant to carbon-intensive sectors (page 14) complement its sector targets.

NAB's sector targets complement the Group's targets to reduce emissions associated with its own operations (page 35) and the Group's target to provide $70bn in financing activities planned to help address climate change and support the transition to a low carbon economy (page 34).

Challenges associated with financed emissions and target setting

Measuring financed emissions and setting emissions reduction targets involves considerable complexity and uncertainty, particularly given that financial institutions are predicting movements over almost 30 years. Despite the challenges and issues associated with setting targets for financed emissions reduction, the Group considers that there is still considerable value in doing so as the targets help to guide organisational decisions over time.

Data availability, quality and timeliness vary considerably within and across businesses, industries and geographies. Consistency in reporting guidance and frameworks is improving, though reporting is often completed on a voluntary basis and requirements vary across jurisdictions.

Climate science is continuously evolving: methodologies and assumptions underpinning scenarios the Group relies on for setting targets are subject to change and may require targets to be revised. Scenarios may also rely on the development of potentially impactful but largely unproven technologies, with risk that investment in these areas fails to achieve intended outcomes.

Targets have been set with reference to the best science currently available, as detailed in the '*Reference scenario selection*' section on page 23. At a minimum, the Group will

(1) BNZ's reporting will be made available at https://www.bnz.co.nz/about-us/sustainability

review its sector targets on a five-yearly basis in alignment with NZBA requirements.

These challenges impact the ability to accurately and consistently measure attributable financed emissions and to set and achieve appropriate targets to reduce attributable financed emissions.

Further information on challenges associated with attributable financed emissions data and target setting can be found on page 44 of the '*Supporting information*' section of this Climate Report.

Further information on important factors that could impact NAB achieving its climate-related ambitions, including its sector targets, is contained in the '*Disclosure on Risk Factors*' section discussing Sustainability Risk on pages 91-92 of the Group's 2022 Annual Report. This includes information on how physical, transitional and nature-related risks may impact the Group, including the relationship between more frequent and acute physical climate events on the value of the Group's collateral assets.

Table 3: Summary of NAB's 2030 sector targets

Sector	NAB's Exposure at Default (EAD)		2021 Absolute Emissions ($MtCO_2$-e)			Performance		Targets	
	Sector EAD $bn[1]	Sector Proportion of EAD[2]	Scope 1 and 2	Scope 3	Total	Metric[3]	2021[4]	2030 Target	Target Reduction (%)
Sectors with targets set[5]									
Power generation	5.8	0.67%	3.0			tCO_2-e/MWh	0.2	**0.14**	**32%**
Thermal coal	0.7	0.09%	0.5	4.6	5.1	$MtCO_2$-e	5.1	**0.0**	**100%**
Oil and gas	1.9	0.22%	0.4	3.7	4.1	$MtCO_2$-e	4.1	**3.2**	**21%**
Cement[6]	0.8	0.09%	0.7			tCO_2-e/t	0.6	**0.46**	**24%**
Sectors with target work ongoing									
Commercial real estate[7]	6.0	0.70%	0.03			tCO2-e/ $mEAD	5.0		
Residential real estate	365	42.33%	1.8			tCO2-e/ $mEAD	4.8		
Iron and steel[8]	0.2	0.02%	0.08			tCO2-e/ $mEAD	524.0		
Aluminium[9]	0.05	0.01%	0.07			tCO2-e/ $mEAD	1,514.9		
Agriculture	30.6	3.55%	3.3			tCO2-e/ $mEAD	108.2		
Transport	9.6	1.11%	3.4			tCO2-e/ $mEAD	357.7		

(1) EAD for the purposes of target setting is as at 30 June 2021, excludes BNZ, and off-balance sheet financing activities. See *Scope of financing activities* on the following page (page 24) for details.
(2) Sectoral EAD presented as a percentage of Group EAD, excluding BNZ, as at 30 June 2021.
(3) Where targets have been set, the metric has been selected as either absolute emissions or physical intensity. Where targets are yet to be set, financed emissions have been presented on an intensity basis for estimated tCO2-e per $m of EAD.
(4) 2021 performance represents the baseline year for the first tranche of sector targets.
(5) Refer to pages 26-33 for detail on the four sector targets that have been set in 2022.
(6) Due to data availability, the Cement baseline estimate may include a small amount of rehabilitation bonding, but quantity is not considered significant compared to overall baseline for the sector.
(7) Commercial Real Estate Attributable Financed Emissions represent only 9% coverage of the EAD of this sector. Unlike other sectors, NAB has not extrapolated the remainder to estimate our attributable financed emissions to avoid sampling bias in this sector.
(8) Does not currently include Metallurgical Coal mining, however sector coverage is intended for expansion in 2023.
(9) Does not include Bauxite mining.

Approach to sector target setting

The Group has considered the following in its approach and decision-making on target-setting.

Sector prioritisation

This year, NAB updated its reporting of financed emissions attributable to its lending portfolio to align to the ten 'carbon-intensive' sectors defined by the UNEP FI Guidelines[1]. Power generation, thermal coal, oil and gas and cement sectors have been prioritised as they represent the majority of financed emissions attributable to NAB's lending portfolio and are among the most emissions-intensive sectors in NAB's lending portfolio (based on Australian emissions: Scope 1 and 2 tCO_2-e / $m EAD).

The Group will set sector-level targets for the remaining carbon-intensive sectors by May 2024, consistent with requirements of the NZBA.

Reference scenario selection

The Group assessed a range of net-zero scenarios aligned to its ambition to inform target-setting.

The International Energy Agency's Net Zero Emissions 2050 scenario (IEA NZE 2050 scenario) was selected as the reference scenario for all four first tranche sector targets, on the basis it is consistent with the scenario selection requirements of the UNEP FI Guidelines, which are:

- Widely accepted, science-based from credible and well recognised sources and consistent with a maximum temperature rise of 1.5˚C above pre-industrial levels by 2100.
- Reasonable in assumptions on negative emissions technologies and carbon sequestration achieved through nature-based solutions and land use change, and aligned to "no overshoot" or "low-overshoot" scenarios.
- Designed to maximise alignment with other Sustainable Development Goals, where possible.

Key principles for target-setting

NAB has adopted the following principles in its design and setting of targets.

- **Alignment with UNEP FI Guidance** and decarbonisation objectives.
- **Scientifically credible pathway** to achievement, in line with Australian market conditions.
- **Consistency** in decision-making across the portfolio.
- **Consideration of market practice** and alignment to emerging disclosure regimes.
- **Simplicity in reporting and operationalising** the targets that have been set.

(1) The UNEP FI Guidelines require that, "where data and methodologies allow, targets shall be set for all, or a substantial majority of agriculture; aluminium; cement; coal; commercial and residential real estate; iron and steel; oil and gas; power generation; and transport sectors". Note that the Group has separated commercial and residential real estate into individual sectors in its reporting.

A summary of the IEA NZE 2050 scenario is available in the '*Target Setting Baseline Methodology*' section on page 49. Sector specific scenario assumptions are outlined in the following pages for each sector target. NAB's sector target for power generation includes additional assumptions relevant to the achievability of this sector target.

Note, the Group also draws on scenario analysis in its risk management and strategic processes, outlined on pages 15-17.

Absolute or intensity metric selection

The Group has considered whether physical intensity or absolute emissions reduction metrics are appropriate for each sector.

The Group has set absolute emissions targets for the thermal coal and oil and gas sectors, consistent with achieving an absolute reduction in lending over time to these sectors (see page 14).

It is appropriate to adopt absolute targets for fossil fuel industries, as decline in the use of fossil fuels is a key driver of emissions reductions in the IEA NZE 2050 scenario.

Physical intensity targets require emissions reductions to outweigh growth in output. Physical intensity metrics are appropriate for power generation and cement, as each of these sectors will require growth to support living standards and expected population increases.

By contrast, an absolute target for these sectors would incentivise a reduction in production to meet the target. Setting a physical intensity target for these sectors will enable the Group to identify and allocate capital towards investments and businesses that are focused on lowering their emissions, for example renewable energy and sustainable alternatives to traditional emissions intensive products.

Scope of emissions

The Group's approach to emissions scope inclusion is described below and has been informed by the UNEP FI Guidelines.

The first tranche of sector targets includes Scopes 1, 2 and 3 emissions for fossil fuels (thermal coal and oil and gas), recognising the significant materiality of Scope 3 emissions within these sectors. NAB has obtained, or where unavailable estimated, production data and applied emission coefficients to calculate Scope 3 emissions for lending to these sectors.

Scope 3 emissions have not been included in the targets for cement and power generation due to a combination of lower data quality and availability, and because the majority of emissions in each of the sector value chains are Scope 1 and Scope 2. Data quality, particularly for Scope 3 emissions is expected to improve as current and proposed reporting frameworks are implemented in Australia and globally. In line with UNEP FI Guidelines, and as part of its periodic target review processes, the Group will look to expand its emissions scope inclusions where methodologies and data allow.

Scope 1 emissions for the power generation sector are included in the total Scope 2 emissions for all other sectors. NAB has included this 'double-count' within its attributable emissions estimate, to account for all emissions each sector is responsible for.

The Group prioritises use of emissions data from customer-reported sources, such as compliance reporting required under the *National Greenhouse and Energy Reporting* Act 2007 (NGER Act) and assured company reports. Where verified customer emissions data is not available, third-party data sources are relied upon.

The Group has followed the Partnership for Carbon Accounting Financials (PCAF) recommendation to publish scores to illustrate the Group's assessment of the quality of data relied upon and methodology for target setting. These are provided alongside each sector target in pages 26-33.

Scope of financing activities

Relevant exposures are identified primarily through ANZSIC codes. Financed emissions baselines and targets have been set using 'Exposure at Default' (EAD)[1]. For the purposes of setting sector targets, this measure covers all types of NAB's lending to relevant customers, including:

- Any on-balance sheet loans and lines of credit with unknown use of proceeds to businesses, non-profits and any other structure of organisation.
- Revolving credit and overdraft facilities and business loans secured by real estate, such as commercial real estate-secured lines of credit.
- Business loans, short-term debt and lines of credit.

This excludes off-balance sheet and markets related EAD, covering derivatives and performance guarantees to rehabilitate existing thermal coal mining and oil and gas assets. Targets do not include debt capital markets activity (i.e. facilitated emissions) recognising there are no currently agreed methodologies for measuring emissions associated with these activities or approaches for net-zero-aligned target setting. The Group will review this as guidance and methodologies evolve. Australian Energy Market Operator (AEMO) bonds have been excluded as they are a requirement to participate in domestic electricity and gas markets for any entity not regulated by the Australian Prudential Regulation Authority.

Significant manual processing and analysis is required to identify diversified companies with greater than 5% of revenue from thermal coal mining and thermal coal-fired power generation within NAB's financed emissions reporting. Further, it is often the case that small, diversified companies do not disclose breakdowns of their revenue or production, making it extremely difficult to identify them for the purposes of the 5% revenue threshold. NAB applied a series of materiality thresholds in performing this analysis, including a $1 million EAD floor. This has the potential to result in some customers with relatively low absolute EAD, but who derive greater than 5% of their revenues from thermal coal mining or coal-fired power generation, not being identified within NAB's thermal coal target.

EAD figures are as at 30 June 2021, to align with regulatory reporting dates for Scope 1 and 2 emissions in Australia.

Current UNEP FI Guidelines state that banks should include on-balance sheet investments held for the purposes of investment. For the Group, this would include investments made by NAB Ventures, however there are currently no investments held in the sectors covered by the first tranche of sector targets.

(1) Exposure at Default represents the expected lending exposure at default, taking into account the repayment of principal and interest from the balance sheet date to the default event together with any expected drawdown of a facility.

Operationalising the targets

Governance, approval and oversight

NAB's sector targets have been reviewed and approved by the Executive Leadership Team and the Board.

While the first tranche predominantly impacts customers in the Corporate and Institutional Banking division, decarbonisation is relevant to all the Group's divisions.

The Group's governance of climate-related risks and opportunities, including sector targets, is discussed further in the '*Governance*' section of this Report.

The Group's climate-related obligations, including those related to the NZBA, are recorded and managed in its enterprise risk management tool. Clear accountabilities are assigned to relevant executives, with associated controls reviewed on an annual basis.

Integrating sector targets within NAB's processes

Having set initial sector targets, NAB is working towards their implementation and integration across its business and supporting functions over time. Initial implementation and integration steps have prioritised core requirements to support operationalising sector targets, in the form of process changes to assist colleagues in reviewing potential transactions against the sector targets.

This includes:

- A tool to calculate the expected impact of a new or refinancing transaction on NAB's attributable financed emissions and ability to meet its targets.
- Integrated with the tool, guidance to record the existence, details and maturity of customers' transition plans and to inform decision-making and provide clear approval escalation pathways where required.
- Additional, tailored policy guidance on NAB's status as a signatory to NZBA, NAB's sector targets, and the obligations that flow from them, to support colleagues.
- Completing a review of NAB's lending policies and guidance notes to ensure simplicity and consistency with NAB's sector targets.
- Training for colleagues with responsibility for lending decisions within sectors included in the first tranche of sector targets.

The Group is at an early stage of maturity in meeting requirements of its participation in the NZBA and first tranche of sector targets. The Group will develop a transition plan to set out greater detail on how it will work with customers between now and 2030 to reduce their emissions in line with the Group's targets.

This will consider enablers, such as data systems, policy and risk setting alignment, training and partnerships, required to achieve its strategic ambition.

Priority next steps include:

- Investing in development of a climate data ecosystem to provide meaningful insights to customers to support their own carbon footprint estimation and identify targeted opportunities to reduce emissions. It will also support the Group in improving the quality of its transaction assessments and reporting, including the required improvements in data quality to support target setting for the remaining emissions-intensive sectors.
- Building on the steps taken to date to better assess the maturity of customers' transition plans, including continuing to work with the NZBA and industry bodies on development and trialling of relevant guidance.

The financed emissions reduction targets are intended to help guide the Group's decision-making over time at a sector portfolio level, rather than being a commitment to specific outcomes at an individual customer level.

The Group will provide an update on implementation, and intends to publish its high-level transition plan, in its 2023 reporting.

Refer to pages 39-48 for detail on the Group's financed emissions and target setting methodology. Note that the following sector targets cannot be read or understood without this information.

Power generation

Figure 7: Power generation sector target and IEA NZE 2050

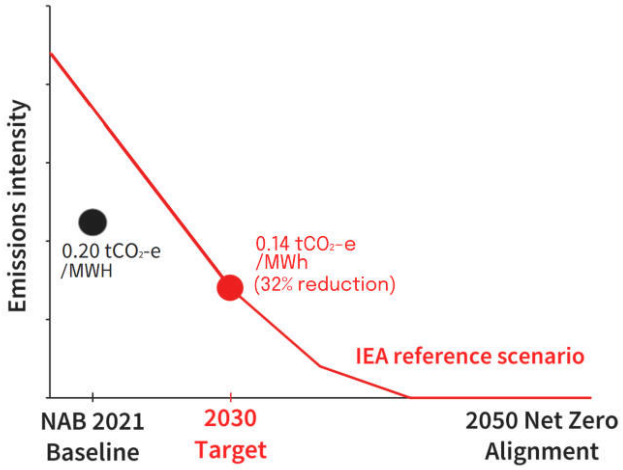


Table 4: Power generation target overview

Key target elements	Approach selected for Power generation
2021 baseline	0.20 tCO_2-e/MWh
2030 target	0.14 tCO_2-e/MWh (32% reduction against baseline)
Sector inclusion	Electricity generation from fossil fuels and renewable sources. Excludes transmission and distribution due to their immateriality to value chain emissions.
Reference scenario	IEA NZE 2050
Emissions scope	Scope 1 and 2
Metric	Emissions intensity (tCO_2-e /MWh)
Financing scope	EAD excluding derivatives and AEMO performance guarantees (see page for 24 for scope of financing)
Data quality score	Average PCAF score: 1.7 (Scope 1 and 2)

Sector overview

As the primary contributor to global emissions, decarbonising the global electricity supply will be critical to reducing emissions and achieving a net zero world by 2050. At the same time, demand for electricity will continue to grow globally.

In Australia increased demand is expected through the electrification of industry and transport. Decarbonisation of commercial real estate and residential housing in particular is heavily reliant on the electricity system, further highlighting the critical role this sector will play in the global transition.

Given the Group's ambition to be a catalyst in Australia's climate transition, a critical challenge and opportunity lies in this sector.

NAB's sector target for power generation is a 32% decrease in emissions intensity ($tC0_2$-e / MWh) by 2030, against a 2021 baseline.

NAB's lending (EAD) to the power generation sector totals $5.8bn, 0.67% of total EAD[1].

Key scenario assumptions

IEA NZE 2050 assumptions

To achieve net zero emissions by 2050, the IEA NZE 2050 scenario requires the emissions intensity of the power generation sector to decrease to 0.14 tCO_2-e/MWh in 2030. Key assumptions[2] which underpin this reduction include:

- Emissions fall by 57% between 2020 – 2030 and carbon intensity decreases by 68% in the same period.
- Renewables growth is initially driven by additional solar photovoltaic (PV) capacity, followed closely by wind before 2030
- Generation from coal drops to 9% in 2030, with 9% of coal-fired generation coming from plants fitted with carbon capture utilisation and storage (CCUS) technology.
- Unabated natural gas-fired generation peaks by 2030.
- Unabated coal-fired generation is phased out in advanced economies by 2030.
- Coal-fired plants are retrofitted to co-fire with ammonia and gas turbines with hydrogen by 2025.

Additional NAB assumptions

NAB's modelling of the achievability of meeting its interim sector target for power generation also depends on the following additional assumptions:

- NAB's forecast for its financed emissions in power generation assumes that customers' existing asset retirement plans remain the same (or are accelerated).
- NAB assumes that when non-renewable generation capacity is retired, it is replaced with renewable generation (i.e. no new non-renewable power generation assets).
- NAB has assumed that government policies and incentives, along with market economics, support an orderly transition to renewable forms of power generation at the levels and within the timeframes anticipated by those plans.

If the above assumptions do not occur as anticipated, NAB's sector target for power generation is a stretch target that will be difficult to achieve without some other government action and/or technological improvements in the sector.

(1) Note, EAD for the purposes of setting targets is as at 30 June 2021, to align with the regulatory reporting period for the National Greenhouse and Energy Reporting Act and currently excludes BNZ.
(2) NAB's consideration of key assumptions from the IEA NZE 2050 relevant to power generation. This list is not exhaustive.

Power generation (cont.)

NAB's approach

The Group has identified three broad avenues of action to achieve the targeted reduction:

- Supporting customers to accelerate the decommissioning of coal and gas-powered assets.
- Increasing financing to renewable power generation.
- Considering selective reduction in the Group's exposure to customers that do not have a transition plan.

The Group's thermal coal sector risk policy settings (set out on page 14) are also expected to help NAB meet this target. These settings include not financing new, or material expansions of, coal-fired power generation facilities.

While the Group has selected a global reference scenario to inform its power generation target, NAB has given specific consideration to the Australian energy market dynamic, including government and market operator plans[1].

The need to manage the phase-out of high-emitting power generation assets over time will require continued investment. As the Group provides lending to support this transition, including to support investment in emissions reduction activities, financed emissions to power generation will likely increase in the short-term. The Group does not anticipate a linear pathway between now and achieving its 2030 target. The Group selected an emissions intensity measure (tCO_2-e / MWh) recognising the underlying scenario anticipates increase in energy demand.

Reporting on this sector target in future periods may consider the application of specific managed phase-out frameworks currently being developed by the Global Financial Alliance for Net Zero (GFANZ).

NAB will consider national energy security requirements in relation to the power generation sector. It is expected that decisions based on national energy security would be by rare exception. Such decisions may impact on NAB's ability to achieve financed emission reduction targets.

Refer to pages 5-11 for further information on NAB's climate strategy to support customers to decarbonise and build climate resilience.

Sourcing sector data

NAB has assessed its lending portfolio to identify customers outside of the power generation sector that generate more than 5% of their revenue directly from sale of thermal coal-fired electricity. NAB has not identified any such customers in its 2021 baseline. Note this information has been sourced from public sources of coal assets, alongside company production information and revenue data where available. Particular challenges associated with identifying diversified companies for this purpose and potential gaps in emissions capture resulting from those challenges are described on pages 21 and 44.

NAB has a relatively high level of confidence in the data, with 96% of emissions production data sourced from national government inventories across Australia (NGERS) and the United States of America (EPA), and direct company disclosures (United Kingdom). The remaining 4% is sourced from third-party sources (United States of America - EIA). See the 'Data Quality Scores' in the '*Financed Emissions Methodology*' section for detail on data quality scores and limitations.

Other sections of this Climate Report include important information that is relevant to NAB's sector targets and which will assist readers in assessing and understanding the targets NAB has set. Please also refer to the following sections of this report for information relevant to NAB's sector targets:

- **'*Complexities and limitations in measuring financed emissions and setting targets*' on page 44.**
- **Information relating to financed emissions methodology, target setting methodology and other measures, metrics and methodologies relevant to sector targets in '*Supporting information*' from page 38.**
- **'*Notes on forward looking statements*' on page 54.**

(1) Australian Energy Market Operator, 2022 Integrated System Plan For the National Electricity Market, June 2022.

Thermal coal

Figure 8: Thermal coal sector target and IEA NZE 2050

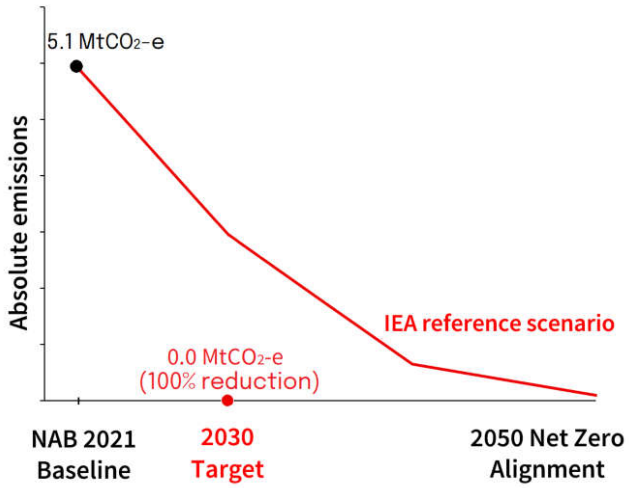


Table 5: Thermal coal target overview

Key target elements	Approach selected for Thermal coal
2021 baseline	5.1 $MtCO_2$-e
2030 target	0.0 $MtCO_2$-e (100% reduction against baseline)
Sector inclusion	Mining of black coal, brown coal and lignite. Including diversified companies where these activities make up greater than 5% of their revenues. Excludes emissions associated with metallurgical coal mining customers, including those with more than 5% revenue from thermal coal sales, as these are captured within the 'Iron and Steel' sector emissions per UNEP FI Guidelines.
Reference scenario	IEA NZE 2050
Emissions scope	Scope 1, 2 and 3
Metric	Absolute emissions ($MtCO_2$-e)
Financing scope	EAD, excluding markets products, derivatives and rehabilitation performance guarantees (see page 24 for scope of financing)
Data quality score	Average PCAF score: 1.4 (Scope 1 and 2), 2.7 (Scope 3)

Sector overview

Reducing reliance on thermal coal will be critical in Australia's transition to a net zero economy. Thermal coal mining currently contributes over 7% of Australia's total Scope 1 emissions[1], and is a significant source of emissions for power generation domestically and internationally. Emissions reduction will be achieved through substituting coal-fired power with renewable energy and curbing exports of thermal coal.

NAB's sector target for thermal coal is a 100% decrease in absolute emissions by 2030, against a 2021 baseline.

NAB's lending (EAD) to the thermal coal sector[2] totals $0.7bn, 0.09% of total EAD[3].

Key scenario assumptions

IEA NZE 2050 scenario assumptions

To achieve net zero emissions by 2050, the IEA NZE 2050 scenario requires absolute emissions in the coal sector[4] to reduce to zero unabated emissions within advanced economies. Key assumptions[5] which underpin the reduction include:

- Coal emissions decline by 55% by 2030 from 2021.
- No new coal mines or extensions are required beyond those already committed.

NAB's approach

NAB's thermal coal sector target has been prepared in line with UNEP FI Guidelines[6] as follows:

- Includes customers with thermal coal mining as their primary activity and diversified miners which generate more than 5% of revenue from thermal coal mining.
- Excludes metallurgical coal mining customers, including where some secondary customer revenues come from the sale of thermal coal. Emissions related to metallurgical coal mining are intended to be reported in the 'Iron and Steel' sector and will be included in a separate target.

Achieving this target will require a combination of existing thermal coal sector customers diversifying their operations, and reducing exposure to customers that are not transitioning their operations in line with NAB's sector target. The Group's thermal coal sector policy settings (set out on page 14) are also expected to help NAB meet this target. These settings include not financing new thermal coal mining projects, or taking on new to bank thermal coal mining customers.

(1) National Inventory by Economic Sector 2020, Department of Climate Change, Energy, the Environment and Water https://www.greenhouseaccounts.climatechange.gov.au/
(2) As defined in the 'Financing scope' in 'Thermal coal target overview' table above.
(3) Note, EAD for the purposes of setting targets is as at 30 June 2021, to align with the regulatory reporting period for the National Greenhouse and Energy Reporting Act and currently excludes BNZ.
(4) In IEA NZE 2050, coal includes both primary coal (including lignite, coking and steam coal) and derived fuels (including patent fuel, brown-coal briquettes, coke-oven coke, gas coke, gas-works gas, coke-oven gas, blast furnace gas and oxygen steel furnace gas). Peat is also included.
(5) NAB's consideration of key assumptions from the IEA NZE 2050 relevant to thermal coal. This list is not exhaustive.
(6) *UNEP FI Guidelines for Climate Target Setting for Banks* allow for metallurgical coal to be considered within the value chain of the iron and steel sector (refer page 7 of the UNEP Guidelines).

Thermal coal (cont.)

NAB has capped thermal coal mining[1] exposures at 2019 levels and intends to reduce these exposures by 50% by 2026, to be effectively zero[2] by 2030, apart from residual performance guarantees to rehabilitate existing thermal coal mining assets.

Refer to pages 5-11 for further information on NAB's climate strategy to support customers to decarbonise and build climate resilience.

Sourcing sector data

To identify and include emissions from companies with greater than 5% of revenue generated directly from thermal coal mining, NAB has matched a global database of coal mines to its customer list to identify customers with associated coal-based assets and revenues.

There are particular challenges associated with identifying diversified companies for this purpose, involving significant manual processing and analysis. It is often the case that small, diversified mining companies do not disclose breakdowns of their revenue or production, making it extremely difficult to identify them for the purposes of the 5% revenue threshold. NAB applied a series of materiality thresholds in performing this analysis, including a $1 million EAD floor. This has the potential to result in some customers with relatively low absolute EAD, but who derive greater than 5% of their revenues from thermal coal mining, not being identified within NAB's thermal coal target.

Please refer to page 44 for further details of this selection methodology.

100% of company Scope 1 and 2 emissions have been sourced from customer-reported sources (e.g. Company reporting, NGER reporting). 50% of Scope 3 emissions have been sourced from customer-reported sources, with 50% from production estimates completed by NAB.

Other sections of this Climate Report include important information that is relevant to NAB's sector targets and which will assist readers in assessing and understanding the targets NAB has set. Please also refer to the following sections of this report for information relevant to NAB's sector targets:

- **'*Complexities and limitations in measuring financed emissions and setting targets*' on page 44.**
- **Information relating to financed emissions methodology, target setting methodology and other measures, metrics and methodologies relevant to sector targets in '*Supporting information*' from page 38.**
- **'*Notes on forward looking statements*' on page 54.**

(1) Thermal coal exposures covered by this include direct exposure (including lending and guarantees) to customers whose primary activity is thermal coal mining. Includes performance guarantees for the rehabilitation of existing coal mining assets. Excludes metallurgical coal mining and diversified mining customers.
(2) 'Effectively zero' refers to the fact that the Group may still hold some exposures to thermal coal in 2030, only through residual performance guarantees to rehabilitate existing coal mining assets. These guarantees are excluded from the financed emissions coverage of NAB's thermal coal sector target.

Oil and gas

Figure 9: Oil and gas sector target and IEA NZE 2050

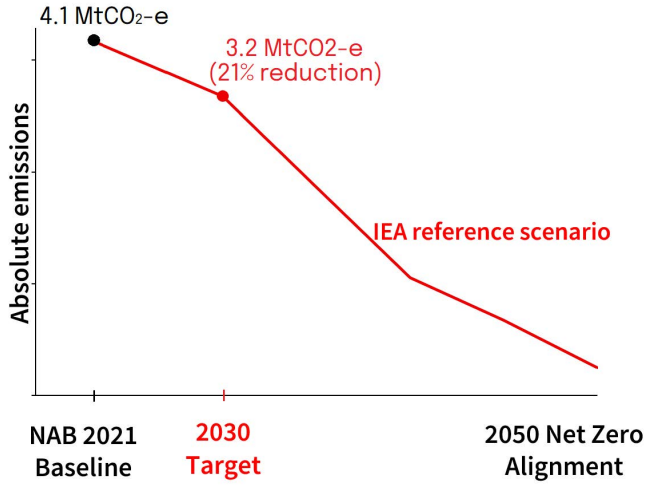


Table 6: Oil and gas target overview

Key target elements	Approach selected for Oil and gas
2021 baseline	4.1 $MtCO_2$-e
2030 target	3.2 $MtCO_2$-e (21% reduction against baseline)
Sector inclusion	Extraction and production of natural gas, liquefied natural gas (LNG), liquefied petroleum gas (LPG) and oil shale (i.e. upstream oil and gas activities). Excludes exploration activities due to immateriality of emissions associated with exploration.
Reference scenario	IEA NZE 2050
Emissions scope	Scope 1, 2 and 3
Metric	Absolute emissions (tCO_2-e)
Financing scope	EAD excluding derivatives and rehabilitation performance guarantees (see page 24 for scope of financing)
Data quality score	Average PCAF score: 2. 1 (Scope 1 and 2), 2.5 (Scope 3)

Sector overview

Reducing emissions across oil and gas extraction and production will require significant industry change in Australia, accounting for almost 10% of domestic Scope 1 emissions.(1) Reducing demand for oil and gas is linked to the transition of other key sectors, such as power generation, where gas currently accounts for about 19% of the Australian electricity generation fuel mix, and transport, where petrol and diesel cars represent the significant majority of vehicles.(1)

NAB's sector target for oil and gas is a 21% decrease in absolute emissions to 3.2 $MtCO_2$-e by 2030, against a 2021 baseline.

NAB's lending (EAD) to oil and gas sector(2) totals $1.9bn, 0.22% of total EAD(3).

Key scenario assumptions

IEA NZE 2050 assumptions(4)

To achieve net zero emissions by 2050, the IEA NZE 2050 scenario requires NAB to reduce its absolute emissions attributable to lending to the oil and gas sector to 3.2 MtCO2-e in 2030. Key assumptions which underpin that scenario pathway include:

- No exploration is required and no new oil or gas fields are needed beyond those that have already been approved for development from 2021.
- Demand for oil and gas declines by 14% from 2020 to 2030, with an anticipated price of $US130 per tCO_2-e in 2030 in advanced economies making a large portion of production not economically viable, therefore putting downward pressure on production.
- Reductions in operational emissions via:
  - Ending flaring and methane leaks from oil and gas supply chains.
  - Using carbon capture utilisation and storage (CCUS) with centralised sources of emissions.
  - Electrification of upstream operations.
- 75% decrease from 2020-2030 in methane emissions using emissions reduction measures and technologies.

NAB also notes the IEA NZE 2050 scenario assumes adoption of CCUS technologies to capture Scope 3 emissions. NAB will support action in this space by financing end-users such as gas-fired power stations and heavy industries to adopt CCUS where credible and appropriate. NAB does not currently consider CCUS to be an effective lever in its own right for the oil and gas sector, and notes that replacing fossil fuels with renewable energy is a primary requirement of the IEA NZE 2050.

NAB's approach

NAB has identified a number of core strategies to assist it to meet its target, and that it will seek to deploy in combination, depending on the progressive rate of decarbonisation within its oil and gas lending portfolio. This includes supporting customers with financing to reduce their Scope 1 and 2 emissions by decarbonising their extraction operations, such as through the reduction of methane leaks and flaring, and diversifying their businesses.

NAB's oil and gas sector risk policy settings (set out on page 14) are also expected to assist NAB to meet this target.

NAB will continue to provide corporate lending to existing oil and gas customers. From 1 October 2025, new lending and renewals will require oil and gas customers to have a transition plan in place.

(1) Australian Energy Statistics, Table O, Department of Climate Change, Energy, the Environment and Water 2022.
(2) As defined in the 'Financing scope' in the 'Oil and gas target overview' table.
(3) Note, EAD for the purposes of setting targets is as at 30 June 2021, to align with the regulatory reporting period for the National Greenhouse and Energy Reporting Act and currently excludes BNZ.
(4) NAB's consideration of key assumptions from the IEA NZE 2050 relevant to oil and gas. This list is not exhaustive.

Oil and gas (cont.)

NAB's oil and gas sectoral target relates to NAB's financed emissions, set at a portfolio level, and does not assume that all customers within that sector will adopt transition plans or business activities based on the same data, reference scenarios, assumptions and methodologies used by NAB for this purpose.

NAB will consider national energy security requirements in relation to the oil and gas sector. It is expected that decisions based on national energy security would be by rare exception. Such decisions may impact on NAB's ability to achieve financed emission reduction targets.

Refer to pages 5-11 for further information on NAB's climate strategy to support customers to decarbonise and build climate resilience.

Sourcing sector data

The Group has calculated its attributable financed emissions from oil and gas extraction and production based on Scope 1, 2 and 3 emissions relative to its customers EAD.

89% of customer Scope 1 and 2 emissions have been sourced from company reports, with the remaining sourced from third-party reports, or calculated using equity-based estimates. 78% of Scope 3 emissions are derived from production-based estimates, with the remainder sourced from company reports.

Each of NAB's four interim sector decarbonisation targets should be read in the context of this Climate Report as a whole.

Other sections of this Climate Report include important information that is relevant to NAB's sector targets and which will assist readers in assessing and understanding the targets NAB has set. Please also refer to the following sections of this report for information relevant to NAB's sector targets:

- '***Complexities and limitations in measuring financed emissions and setting targets***' **on page 44.**
- **Information relating to financed emissions methodology, target setting methodology and other measures, metrics and methodologies relevant to sector targets in '*Supporting information*' from page 38.**
- '***Notes on forward looking statements***' **on page 54.**

Cement

Figure 10: Cement sector target and IEA NZE 2050

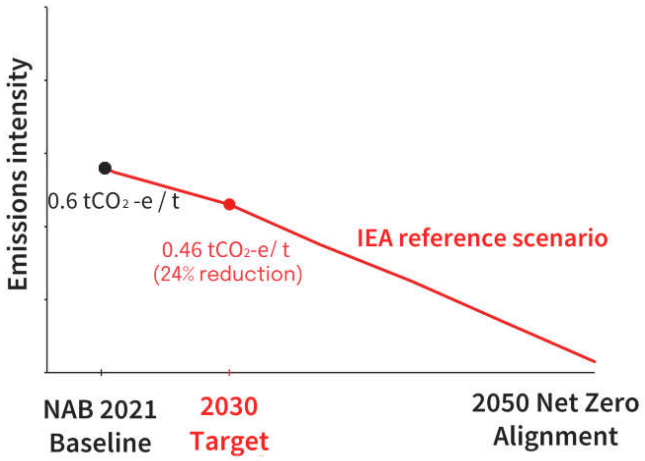


Table 7: Cement target overview

Key target elements	Approach selected for Cement
2021 baseline	0.60 tCO_2-e / t
2030 target	0.46 tCO_2-e / t (24% reduction against baseline)
Sector inclusion	Portland and hydraulic cement manufacturing. Excludes concrete and lime manufacturing.
Reference scenario	IEA NZE 2050
Emissions scope	Scope 1 and 2
Metric	Emissions intensity (tCO_2-e / tonne cement produced)
Financing scope	EAD excluding derivatives (see page 24 for scope of financing)
Data quality score	Average PCAF score: 2.3

Sector overview

As a key component of concrete, cement is one of the most used materials in the world. It is expected to play an important role in the global transition to net zero through its use in important infrastructure such as wind farms, climate-resilient housing and low-carbon transport. However, the cement sector is also a large source of global GHG emissions, contributing to around 1% of Australia's Scope 1 emissions,(1) and about 7% of global emissions.(2)

NAB's sector target for cement is a 24% decrease in emissions intensity (tCO_2-e / tonne cement produced) by 2030, against a 2021 baseline.

NAB's lending (EAD) to the cement sector totals $0.8bn, 0.09% of total EAD(3).

Key scenario assumptions

IEA NZE 2050 assumptions

To achieve net zero emissions by 2050, the IEA NZE 2050 scenario requires the emissions intensity of the cement sector to decrease to 0.46 tCO_2-e /t in 2030. Key assumptions(4) which underpin that scenario pathway include:

- Cement production increases by 5% from 2020 to 2030, while emissions decline by about 19%.
- Increased blending of alternative materials into cement to replace a portion of clinker, reduced growth in demand for cement and energy efficiency measures deliver around 40% of emissions reductions by 2030.
- The clinker-to-cement ratio declines from 2020 by about 0.8% per year, leading to a global average ratio of 0.65 by 2030.
- CCUS technologies in cement production are commercialised by 2030.

NAB's approach

The Group considers that actively supporting customers with finance to decarbonise their operations is a credible action to achieve emissions reduction and its cement sector target.

The Group may consider selectively reducing its exposure to customers that do not have a transition plan in place.

NAB's lending exposure to the cement industry is concentrated across a small number of customers. Any change in the composition of NAB's lending exposure to the cement industry could significantly impact the Group's progress toward achieving its target for the cement sector.

Refer to pages 5-11 for further information on NAB's climate strategy to support customers to decarbonise and build climate resilience.

Sourcing sector data

NAB has calculated its attributable financed emissions from cement manufacturing based on Scope 1 and 2 emissions relative to its customers' EAD. Scope 3 emissions have been excluded from this stage of target-setting due to data availability issues, as the Group has found Scope 3 emissions are currently rarely reported by customers in the cement sector.

38% of company emissions data was sourced directly from customer-reported sources, with the remainder estimated using sector wide emissions intensity ratio, as production data is not readily accessible for cement companies.(5)

(1) National Inventory by Economic Sector 2020, Department of Climate Change, Energy, the Environment and Water https://www.greenhouseaccounts.climatechange.gov.au/
(2) Global Cement and Concrete Association 2021 https://gccassociation.org/news/global-cement-and-concrete-industry-announces-roadmap-to-achieve-groundbreaking-net-zero-co2-emissions-by-2050/
(3) Note, EAD for the purposes of setting targets is as at 30 June 2021, to align with the regulatory reporting period for the National Greenhouse and Energy Reporting Act and currently excludes BNZ.
(4) NAB's consideration of key assumptions from the IEA NZE 2050 relevant to cement. This list is not exhaustive.
(5) Estimated through calculation from revenue and average cement price data and supplemented with PACTA data.

Cement (cont.)

Other sections of this Climate Report include important information that is relevant to NAB's sector targets and which will assist readers in assessing and understanding the targets NAB has set. Please also refer to the following sections of this report for information relevant to NAB's sector targets:

- **'*Complexities and limitations in measuring financed emissions and setting targets*' on page 44.**
- **Information relating to financed emissions methodology, target setting methodology and other measures, metrics and methodologies relevant to sector targets in '*Supporting information*' from page 38.**
- **'*Notes on forward looking statements*' on page 54.**

Environmental financing target

The Group's ambition is to grow by supporting customers to decarbonise and build climate resilience.

One of the ways the Group measures its progress is its environmental financing target to provide $70bn in financing activities planned to help address climate change and support the transition to a low carbon economy from 2016-2025. First set in 2015, the target was designed to drive and align activities to support environmental outcomes. This included development of associated methodologies, reporting processes and innovation in product offering.

This year, the Group has met and exceeded its 2025 target, having provided a total of $70.8bn in environmental financing since 1 October 2015.

As outlined in the table below, this included:

- $40.7bn to support green infrastructure, capital markets and asset finance.
- $30.1bn in new mortgage lending flow for new dwellings and significant renovations for 6-Star residential housing in Australia.

The Group's approach to climate action has developed considerably since 2015, though its focus continues to be on how it can help its customers take climate action. The Group will consider future opportunity-oriented targets to support the achievement of its climate strategy.

Table 8: Environmental financing by lending category ($bn)[1]

Financing category	2016	2017	2018	2019	2020	2021	2022	Cumulative total
Lending activity								
Lending for green commercial buildings	0.2	0.0	0.0	0.5	0.5	1.3	0.7	**3.2**
Specialised lending, corporate and securitisation finance for applicable projects	0.7	1.6	2.3	2.6	3.1	3.6	5.0	**18.9**
Asset finance	0.1	0.0	0.2	0.0	0.0	0.03	0.0	**0.3**
Green term deposits	0.0	0.0	0.0	0.4	0.0	0.1	0.1	**0.6**
Debt market activity								
Green bonds	0.4	1.7	2.7	0.0	0.0	0.0	1.5	**6.3**
Advisory, underwriting and arranging activities								
Advisory, underwriting and arranging activities	0.0	0.2	0.3	3.6	2.0	3.6	1.7	**11.4**
Progress towards 2025 target of $35 billion	**1.4**	**3.5**	**5.5**	**7.1**	**5.6**	**8.6**	**9.0**	**40.7**
Lending to support development of 6-star Residential properties[2]	5.7	2.8	4.0	3.6	3.3	5.2	5.5	30.1
Progress towards 2025 target of $35 billion	**5.7**	**2.8**	**4.0**	**3.6**	**3.3**	**5.2**	**5.5**	**30.1**
Progress towards aggregated 2025 target of $70 billion	**7.1**	**6.3**	**9.5**	**10.7**	**8.9**	**13.8**	**14.5**	**70.8**

(1) Represents total cumulative flow of new environmental financing from 1 October 2015. Totals may not appear to sum due to rounding. Further details on how the Group calculates its environmental financing is available in the *'Environmental financing target methodology'* section on page 50.

(2) Along with new home construction, this amount includes residential financing provided for activities where the identified loan purpose is 'Construction'. This typically includes major renovation activity in which the borrower undertakes a progressive drawdown of the loan amount. For major renovations, State building requirements for such construction activity generally require the overall home to meet a 6-star natHERS rating (or equivalent).

For further information how the Group calculates progress towards its $70 billion environmental financing target, refer to pages 49-50 '*Environmental Financing Methodology*'.

Reducing operational emissions

It's everyone's job to reduce greenhouse gas emissions. The Group is playing its part by reducing its own emissions footprint while helping customers to reduce theirs. As the first Australian bank certified carbon neutral in 2010[1], NAB has maintained a long-standing focus on avoiding and reducing GHG emissions, and offsetting those that remain.

Purchasing renewable energy

Delivering on the Group's RE100[2] target to source 100% of its electricity consumption from renewable sources by 30 June 2025, includes using on-site solar generation at the Group's main data centre, power purchase agreements and contracts for renewable energy certificates. The proportion of the Group's electricity consumption that was sourced from renewable electricity increased from 31.4% in the 2021 environmental reporting year to 72.4% in the 2022 environmental reporting year.

Reducing operational emissions and environmental impact

In the 2022 environmental reporting year, the Group's performance against its energy and science-based emissions reduction targets were as follows:

- 47% reduction in energy use against a 30 June 2019 baseline (against a target of a 30% reduction in energy use by 30 June 2025).
- 74% reduction in the Scope 1 and 2 GHG emissions as at 30 June 2022 against a 30 June 2015 baseline (towards the Group's science-based target of a 51% reduction by 30 June 2025).

The GHG emissions reductions in environmental reporting year 2022 have been greater than expected partly due to the ongoing impacts of COVID-19, including reduced building occupancy and restricted travel. This was despite the Group taking into account the emissions generated by employees working from home. It is expected that some of these emission reductions will not be permanent as the Group continues to adjust to a hybrid way of working and business-related travel resumes.

The Group's energy efficiency initiatives, including the move into new more energy efficient buildings and the inclusion of lower emissions vehicles in its car fleets, are expected to result in permanent GHG emissions reductions. The Group is starting to see the reductions resulting from these initiatives realised in its GHG emission data.

Detailed GHG and environmental performance data is available in the Group's 2022 Sustainability Data Pack. Additionally, the Group has a number of other targets which contribute to operational efficiency and reduction in the Group's Scope 3 operational emissions. Performance against these targets is shown in Table 9 on the following page.

Figure 11: Group electricity consumption (MWh) by fuel source type

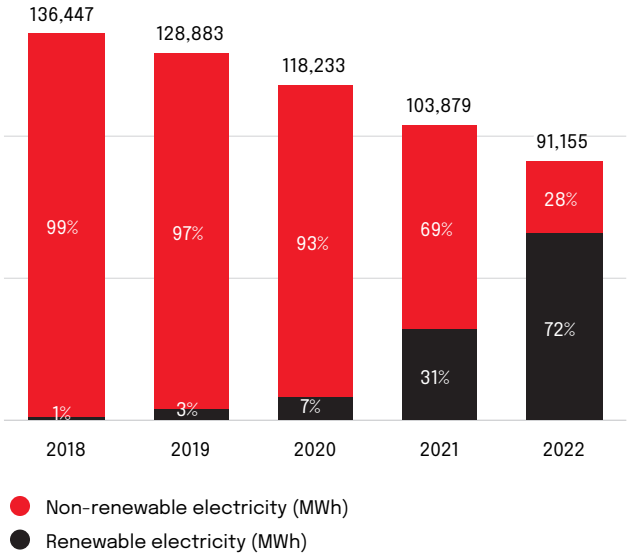
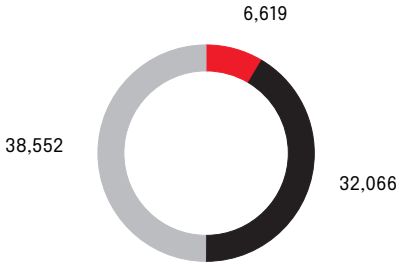


Figure 12: NAB's market-based operational emissions by scope



(1) Scope 3 emissions for NAB's operational footprint excludes financed emissions. For detail on how NAB is assessing Scope 3 emissions attributable to its financing, refer to pages 39-48.

The role of offsets

While NAB's approach to carbon neutrality is focused on reducing operational emissions, the Group uses quality accredited carbon offsets to neutralise remaining emissions.

NAB's purchasing and retirement of offsets is guided by the Group Environmental Reporting and Offset Management Policy, and is disclosed annually in NAB's Climate Active Public Disclosure Statement, as part of its carbon neutral certification. NAB has purchased offsets only from Australian sources since 2020, with a focus on savannah burning projects which utilise traditional Indigenous land-practices.

(1) Certified carbon neutral since 1 July 2010. NAB has a forward purchasing approach and forward purchased and retired offsets for the environmental reporting year (1 July 2010 to 30 June 2011) to be carbon neutral for 2011 and meet certification obligations, under the Australian Government's Carbon Neutral Program, now administered by Climate Active.
(2) RE100 is a global corporate leadership initiative bringing together businesses committed to 100% renewable electricity.

Table 9: Performance against environmental operational targets

Indicator	2019 baseline[1]	Target	Target date	2022 actual	2022 reduction
Science-based GHG emissions (tCO_2-e)[2]	150,893	▼51%	2025	38,685	74%
Gross Energy use (GJ)	759,096	▼30%	2025	405,542	47%
Office paper (A3, A4 and A5) (tonnes)	514	▼20%	2025	168	67%
Customer eStatements (proportion online only - Aus and BNZ only)	64%	▲to 80%	2025	70%	N/A
Water use (potable water withdrawal) (kL)	385,005	▼5%	2025	163,659	57%
Waste to landfill (tonnes)	1,871	▼10%	2025	626	67%
Vehicle fuels (GJ) (Aus and BNZ only)	120,686	▼50%	2025	49,265	59%
Colleague air travel (tCO_2-e) (BNZ only)	4,679	▼70%	2025	607	87%

(1) Baseline figures include data from MLC Wealth operations as NAB had operational control at the time of calculation. As the divestment from MLC Wealth did not have a material impact on the baseline figures (<5%), these have not been re-stated.

(2) This target has a baseline of 2015 and covers all direct GHG emissions (Scope 1) and indirect GHG emissions from consumption of purchased electricity (Scope 2) across all GHGs required in the GHG Protocol Corporate Standard. The target has been prepared in accordance with the Sectoral Decarbonisation Approach 'Services Buildings' methodology published by the Science Based Target initiative and uses the Science-Based Target Setting Tool, v1.1. In 2023, the baseline will be restated to reflect organisational changes (including emissions following the acquisition of Citigroup's Australian consumer business, and expansion of operations in Europe, Vietnam and India, and excluding emissions from MLC Wealth operations). It will also align with a 1.5˚C scenario and implement the latest version of the Science-Based Target Setting Tool.

Regulatory and voluntary operational environmental reporting

The Group's operations are subject to the *National Greenhouse and Energy Reporting Act 2007* (Cth) (NGER Act). This is part of Australia's legislative response to climate change. The NGER Act requires the Group to report on the period from 1 July to 30 June (the environmental reporting year), therefore, all of the Group's energy and greenhouse gas (GHG) emissions reporting is aligned to this reporting period. For further detail on this, see the 2022 Annual Report.

The Group is voluntarily reporting data required for the Streamlined Energy & Carbon Reporting (SECR) requirements which are implemented through the *Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018* (United Kingdom) in this 2022 Climate Report. The Group's United Kingdom-based (London Branch) energy use reported, and aligned to the SECR for the 2022 environmental reporting year was 506,076 KWh (2021: 419,667KWh). The associated total gross GHG emissions from fuel combustion (Scope 1) and from electricity use (Scope 2) were 97 tCO_2-e (2021: 87 tCO_2-e). This equates to 198 KWh and 0.04 tCO_2-e per metre squared of property space occupied by the Group's London Branch. Further London Branch and Group energy and GHG emissions data is provided in Table 10 to satisfy SECR requirements. See Table 10 for more detail.

In 2014, the Group's United Kingdom-based operations became subject to the Energy Savings Opportunities Scheme (ESOS), introduced by the United Kingdom ESOS Regulations 2014. The ESOS requires mandatory energy assessments (audits) of organisations' buildings and transport to be conducted every four years. The Group fulfilled its most recent ESOS obligation in December 2019 and will resubmit as required in December 2023, if it continues to meet the ESOS qualification requirements at 31 December 2022.

Additional detail on the Group's environmental and climate-related performance is provided in the 2022 Sustainability Data Pack available at nab.com.au/annualreports.

Streamlined Energy and Carbon Reporting (SECR)

Table 10: Key GHG emissions and energy use (1 July - 30 June)

	London Branch		NAB Group (excluding London Branch)		NAB Group Total[1]	
	2021	2022	2021[2]	2022	2021[2]	2022
Energy from gas consumption (KWh)	64,131	**45,312**	16,773,264	**2,764,836**	16,837,395	**2,810,148**
Energy from vehicle fleet fuel use (KWh)	0	**0**	23,261,807	**18,347,741**	23,261,807	**18,347,741**
Energy from electricity consumption (KWh)	355,536	**460,764**	96,216,129	**88,344,922**	96,571,665	**88,805,756**
Total energy for SECR reporting (KWh)[3]	419,667	**506,076**	136,251,200	**109,457,570**	136,670,866	**109,963,646**
GHG emissions from energy use (Scope 1 – Gas) (tCO_2-e)	12	**8**	3,118	**532**	3,130	**541**
GHG emissions from vehicle fleet (Scope 1) (tCO_2-e)	0	**0**	5,818	**4,582**	5,818	**4,582**
GHG emissions from energy use (Scope 2, location-based – electricity) (tCO_2-e)	75	**89**	74,774	**68,779**	74,850	**68,868**
Total gross Scope 1 & 2 GHG emissions for SECR reporting (tCO_2-e)[3]	87	**97**	83,710	**73,893**	83,797	**73,990**
Total gross Scope 3 emissions (tCO_2-e)	477	**587**	46,482	**42,392**	46,960	**42,979**
Intensity ratio: Energy (KWh)/$ Financial metric[4]	0.00138	**0.003**	0.016	**0.01113**	0.01708	**0.013789**
Intensity ratio: Gross Scope 1 & 2 GHG (tCO_2 -e)/ $ Financial Metric[4]	0.0000003	**0.000001**	0.000010	**0.0000075**	0.000010	**0.000008**
Intensity ratio: Energy (KWh)/ m^2	144	**198**	195	**181**	339	**378**
Intensity ratio: GHG (tCO_2-e)/ m^2	0.03	**0.04**	0.12	**0.12**	0.15	**0.16**
Intensity ratio: Energy (KWh)/ FTE	1,506	**1,718**	3,906	**3,338**	5,413	**5,057**
Intensity ratio: GHG (tCO_2-e)/ FTE	0.31	**0.33**	2.40	**2.25**	2.71	**2.58**
Emissions from electricity use (Scope 2, market-based – electricity) (tCO_2-e)	-	**-**	57,287	**32,066**	57,287	**32,066**
Total net Scope 1,2 and 3 GHG emissions (after UK and Australian renewable energy)[3]	339	**485**	111,640	**77,096**	111,979	**77,581**
Carbon Offsets Retired	339	**485**	111,640	**77,096**	111,979	**77,581**
Net carbon emissions (carbon neutral)	0	**0**	0	**0**	0	**0**

(1) This data is an extract of the Group's full energy and GHG emissions inventory data to satisfy SECR requirements. A full set of the Group's assured energy use and emissions data is available in the Group's 2022 Sustainability Data Pack.

(2) 2021 emissions were restated due to the addition of inventory items for BNZ and JBWere's Toitu carbon neutral certification. JBWere's Scope 3 emissions increased by 6.4 tCO_2-e to include emissions from waste to landfill. BNZ's Scope 3 emissions increased by 1,038 CO_2-e to include emissions from postage, freight and courier services.

(3) London Branch operations consume no Scope 1 diesel for stationary energy purposes (backup generators). The Group (excluding London Branch) figures include diesel used for backup generators (2021: KWh – 273,925 and tCO_2-e – 69; 2022: KWh 294,722 and tCO_2-e – 74). The Total net Scope 1, 2 and 3 GHG emissions (after accounting for UK and Australian renewable energy) figures also includes Scope 1 refrigerant gases from Australian and New Zealand vehicle fleets and heating, ventilation, and air conditioning systems and domestic refrigeration in offices and branches.

(4) The Group has used 'Underlying profit' as a financial metric (rather than other financial measures of profit or economic activity) for normalisation of its environmental performance as this allows for meaningful comparison to prior years' data and to financial intensity measures used in the Group's Sustainability Data Pack and CDP disclosures due to the nature of its underlying business activities.

Methodology

The Group reports its energy and GHG data based on operational control. Energy consumption data is captured through utility billing; meter reads or estimates.

The Group has applied the latest emission factors available at the time of reporting to the current year. Refer to methodology documents on the Group website at www.nab.com.au/about-us/social-impact/environment/climate-change for a full list of the emissions factor sources. Prior year figures reflect the emissions reported in that year, unless otherwise stated. United Kingdom-based emissions were calculated using factors provided by the United Kingdom Department for Business, Energy & Industrial Strategy.

Intensity ratio calculations have been calculated using location-based emission factors.

The financial intensity metrics in Table 10 use an activity data numerator which is reported for the Group's environmental reporting year (1 July – 30 June) and a financial metric denominator which is reported for the Group's financial year (1 October–30 September). This is to ensure that the Group uses metrics which are publicly available as much as possible and because of the difference in the Group's environmental reporting and financial years.

Supporting information

TCFD Content Index

TCFD Recommendation	Page or web reference
Governance	
Describe the board's oversight of climate-related risks and opportunities.	• The Board's role, including assessment of Board expertise is described on page 3. Further detail is available in the '*Corporate Governance Statement*' section from page 56 of the Group's 2022 Annual Report.
Describe management's role in assessing and managing climate-related risks and opportunities.	• Management's role is described on page 4.
Strategy	
Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	• Processes to integrate climate-related risks are described on page 13.
Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	• Potential impacts of risks identified are described on page 13.
Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	• NAB's consideration of resilience to different climate-related scenarios is described on pages 15-17.
Risk management	
Describe the organization's processes for identifying and assessing climate-related risks.	• Process for identifying and assessing climate-related risks detailed on pages 12-13.
Describe the organization's processes for managing climate-related risks.	• Process for managing climate-related risks detailed on page 14.
Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	• Processes to integrate climate-related risks are described across pages 12-15.
Metrics and targets	
Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	• Metrics are disclosed on pages 19-20, and cover financed and operational emissions, exposure to emissions-intensive or sensitive sectors and finance intended to drive positive impact.
Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	• The Group's Scope 1, 2 and where relevant Scope 3, operational emissions are disclosed on pages 36-37. • NAB's Scope 3 financed emissions are available on page 23.
Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	• The targets that have been set by the Group and NAB are disclosed on pages 19-35.

Net Zero Banking Alliance - Requirements summary index

Net Zero Banking Alliance Requirements	Action taken	Refer to
Transition the operational and attributable GHG emissions from their lending and investment portfolios to align with pathways to net-zero by 2050 or sooner.	• Carbon neutral for operational emissions since 2010. • Goal set to align to net zero for lending by 2050.	• Page 35 • Page 21
Within 18 months of joining, set 2030 targets (or sooner) and a 2050 target, with intermediary targets to be set every 5 years from 2030 onwards.	Interim targets have been set for: • Power generation. • Thermal coal. • Oil and gas. • Cement.	• Pages 21-33.
Banks' first 2030 targets will focus on priority sectors where the bank can have the most significant impact, ie. the most GHG-intensive sectors within their portfolios, with further sector targets to be set within 36 months.	• Initial target-setting has covered the most emissions-intensive sectors where NAB has sufficient quality data. • Targets covering the remainder of sectors will be published by May 2024 at the latest in line with NZBA requirements.	• Pages 21-33.
Annually publish absolute emissions and emissions intensity in line with best practice and within a year of setting targets, disclose progress against a board-level reviewed transition strategy setting out proposed actions and climate-related sectoral policies.	• Published financed emissions attributable to lending portfolio since 2020. • Refreshed climate strategy.	• Page 23 • Page 5
Take a robust approach to the role of offsets in transition plans.	• NAB's approach to achieving carbon neutrality prioritises the avoidance and reduction of emissions, with offsets purchased for emissions that remain. • Work is under way to further develop NAB's ability to assess customers' transition plans, including their approach to offsets.	• Page 35 • Page 25

Financed emissions methodology

The Group's approach to financed emissions

In 2021, the Group released its baseline estimate of attributable financed emissions for eight key segments of its Australian lending portfolio: power generation, heavy manufacturing, resources, transport, agriculture, small and medium enterprises, residential real estate, and commercial real estate. Emissions were attributed to the Group in accordance with the Partnership for Carbon Accounting Financials (PCAF) greenhouse gas (GHG) accounting methodologies, as outlined in the first edition of *PCAF's Global GHG Accounting and Reporting Standard for the Financial Industry* (PCAF Standard)[1], with the exceptions detailed below.

In 2022, the Group made a number of key changes to its baselining methodology to improve the accuracy and coverage of its financed emissions baseline, and to improve alignment with the UNEP FI Guidelines, including which emissions-intensive sectors to cover. These changes include:

- **Matching the reporting dates of customer Exposure at Default (EAD) with emissions data, to calculate attributable financed emissions**. In 2021, NAB's financed emissions were estimated using EAD data from 30 June 2021, however, the emissions data used was from 30 June 2020, as 2021 emissions data, reported under the National Greenhouse and Energy Reporting Act, was not available at the time of NAB's published reporting.[2] This year, to improve accuracy, NAB has aligned the dates used for its 2022 financed emissions estimate to 30 June 2021. This does result in a lag between the date of the Group's reporting period end (30 September 2022) and the relevant reporting period of customer emissions data (30 June 2021). The Group will continue to work with customers, industry, government and partners to improve the quality and timeliness of emissions data over time.
- **Improving the level of coverage of the Group's financed emissions baseline**, by expanding the geographic boundary of the baseline to include international exposures (excluding Bank of New Zealand exposures[3]) for relevant sectors, and by supplementing the baseline dataset with production-based and revenue-based and other financial based estimates to calculate emissions for customers where reported emissions data was not available.
- **Aligning the sectors included in NAB's financed emissions reporting with UNEP FI's list of carbon-intensive sectors[4]**. As a member of the NZBA, the Group is required to set decarbonisation targets for all, or a substantial majority, of carbon-intensive sectors stipulated by UNEP FI. These sectors are: power generation, coal, oil and gas, cement, commercial real estate, residential real estate, iron and steel, agriculture, transport and aluminium. To support consistency between the Group's financed emissions reporting and its target setting activities, the Group will now report financed emissions for the 10 carbon-intensive sectors outlined in the *UNEP FI Guidelines for Climate Target Setting for Banks*. As a result of this re-alignment, the only reduction in coverage is a small loss in SMEs where individual firms were unable to be allocated between the 10 emissions-intensive UNEP FI sectors. The Group shall work to improve its access to data quality and insights to help reduce emissions in sectors beyond the 10 UNEP FI emissions-intensive sectors.

Table 11: Geographic boundary and scope inclusions for the Group's 2022 attributable financed emissions estimate

Sector	Exposure at Default ($bn)	Exposure at Default (% of NAB's total EAD)	Geographic boundary[1]	Operational boundary
Power generation	5.8	0.67%	Global	Scope 1 and 2
Thermal coal	0.7	0.09%	Global	Scope 1, 2 and 3
Oil and gas	1.9	0.22%	Global	Scope 1, 2 and 3
Cement	0.8	0.09%	Global	Scope 1 and 2
Commercial real estate (office and retail)	6.0	0.70%	Australia	Scope 1 and 2
Residential real estate	365	42.33%	Australia	Scope 1 and 2
Iron and steel	0.2	0.02%	Global	Scope 1 and 2
Agriculture	30.6	3.55%	Australia	Scope 1 and 2
Transport	9.6	1.11%	Global	Scope 1 and 2
Aluminium	0.05	0.01%	Global	Scope 1 and 2

(1) Global excludes Bank of New Zealand exposures.

(1) Available at: https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf
(2) The Clean Energy Regulator publishes emissions data for companies reporting under NGER Act reporting period of July-June in February of the following calendar year. The Group's reliance on this information results in a lag between when companies report their data, and when NAB publishes its financed emissions.
(3) Bank of New Zealand is a subsidiary of NAB.
(4) Sectors listed in this section are set out in *UNEP FI Guidelines for Climate Target Setting for Banks, Guideline One – Additional Guidance*.

Partnership for Carbon Accounting Financials (PCAF) alignment

NAB's financed emissions calculations are intended to align with the PCAF methodology with the following exceptions[1].

Definition of EAD in financed emissions reporting

PCAF's definition of EAD encompasses on-balance sheet loans and lines of credit only.[2] NAB has expanded its definition of EAD to include:

- Any on-balance sheet loans and lines of credit with unknown use of proceeds to businesses, non-profits, and any other structure of organisation.
- Revolving credit and overdraft facilities, and business loans secured by real estate, such as commercial real estate-secured lines of credit.
- Business loans, short-term debt and lines of credit.

NAB's definition of EAD for use in financed emissions reporting excludes:

- Derivatives (excluded as movement in foreign exchange or commodity prices are not related to underlying lending).
- Rehabilitation performance guarantees for thermal coal, and oil and gas.
- Australian Energy Market Operator (AEMO) bonds for power generation.

This is a conservative approach to cover the broader exposures of the bank, not only limited to cash flows. Rehabilitation performance guarantees have been excluded as they are not directly linked to any emissions-generating activities, given they are to be used for the rehabilitation of existing thermal coal mining, and oil and gas assets. AEMO bonds have been excluded as they are for energy security purposes. That is, AEMO requires credit support for any entity not regulated by the Australian Prudential Regulation Authority in order to approve their participation in domestic electricity and gas markets.

The Group's EAD for use in financed emissions baselines and sector targets currently excludes Business and Personal Bank exposures in sectors where it accounts for less than 5% sector EAD, as well as NAB's New Zealand banking subsidiary BNZ, which has separately signed up to the NZBA. Over time, it is intended that BNZ's financed emissions will be brought into the Group's baselines, targets and reporting. You can learn more about BNZ's progress in its forthcoming climate and sustainability reporting.

NAB has considered its on-balance sheet securities "held for the purposes of investment"[3] in its financed emissions reporting. These include equity investments made by NAB Ventures, which do not currently include any investments made in the sectors for target setting.

Other departures

PCAF outlines financed emissions calculation methodologies by asset class, (e.g. business loans and unlisted equity, mortgages etc.) however, NAB has reported its financed emissions at a more granular industry sector level as NAB considers this provides a more detailed and meaningful representation of its lending portfolio.

Where the PCAF valuation method has been deemed unable to be followed due to missing data points such as in the oil and gas or power generation sectors, alternative valuation methods have been used. These include utilisation of recent purchase prices of assets and comparable asset valuations (scaled based on production).

Estimation approaches

NAB applies two approaches to estimating financed emissions based on the availability of data:

1. A bottom-up approach – based on individual company GHG data.
2. A top-down approach – based on industry-level data where bottom-up information was unavailable.

These approaches are detailed below.

Bottom-up approach

The bottom-up approach was applied to sectors where some individual company emissions data was available. In the first instance, emissions data was sourced from customer-reported sources, including data reported to the Australian Clean Energy Regulator under the NGER Act, as there is high confidence in the quality of this data.

If individual company data was not available, the PCAF data hierarchy, as documented in the PCAF Standard, was followed to complement and complete the dataset. The hierarchy specifies that:

- If reported emissions are not available, emissions should be calculated using production-based estimates.
- If production information is not available, emissions should be calculated using revenue-based estimates.
- If revenue-based estimates are not available, sector-wide averages are to be used.

The Group will continue to refine its methodologies and data and seek to expand its coverage using primary data sources in future years.

As outlined in Table 12, the bottom-up approach was applied to Corporate and Institutional Banking exposures. Business Banking exposures were only included for sectors where more than 5% of the overall sector EAD was derived from Business Bank customers. Sectors where this applies are indicated in the table below. Bank of New Zealand exposures have been excluded from this process.

Table 12: Exposures included for bottom-up approach for financed emissions methodology[1]

Sector	Corporate and Institutional	Business Bank
Power generation	Y	N
Thermal coal	Y	N
Oil and gas	Y	N
Cement	Y	N
Commercial real estate	Y	Y
Iron and steel	Y	N
Transport	Y	Y
Aluminium	Y	N

(1) Y = Exposures for the division have been included in the sector financed emissions estimate. N = Exposures for the division have not been included in the sector financed emissions estimate.

(1) The Group's policy is to rebaseline where emissions have exceeded a 5% variance based on new or more accurate data.
(2) Page 45 of the PCAF Standard, available at: https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf
(3) Page 7 of UNEP FI Guidelines outlines that on-balance sheet securities held for the purposes of investment should be included and those held for client facilitation and market-making purposes are excluded.

Top-down, intensity measure approach

A top-down approach using industry-level emissions intensity data was applied to estimate the Group's financed emissions for the below sectors.

- Residential real estate.
- Agriculture.

The Group has applied its own emissions estimation methodologies for residential real estate and agriculture, and is monitoring the development of methodologies by industry initiatives, including PCAF and NZBA, for attributable financed emissions estimation and portfolio temperature alignment for these sectors in order to refine its measurement methodology going forward.

A more detailed description of the methodologies used to estimate the Group's attributable financed emissions for each sector is provided over the following pages.

Financed emissions methodology by sector

Power generation, thermal coal, oil and gas, cement, iron and steel, transport and aluminium

For these sectors, the bottom-up approach to estimating financed emissions was applied. In the first instance, the Group estimated attributable emissions for these sectors using data from customer-reported sources, including:

- National Greenhouse and Energy Reporting (NGER) data sourced from the Clean Energy Regulator's website - Australia only.
- United States Environmental Protection Agency (EPA) Greenhouse Gas Reporting Program data sourced from the US EPA website - USA only.
- Disclosures published under CDP.
- Customer reports such as annual reports, climate reports and sustainability reports.

If individual company data was not available, the PCAF data hierarchy, as documented in the PCAF Standard, was followed to complement and complete the dataset. This involved calculating customer emissions using production-based estimates[1] and revenue-based estimates, and GHG emissions factors. Emissions factors were applied according to the country the asset was operating in. Where an emissions factor could not be sourced, factors were used from the nearest country for which the Group had data. Relevant emissions factors and intensity figures were sourced from:

- The NGER Determination applicable to the 2020-2021 reporting period - Australia.
- The National Greenhouse Accounts Factors (August 2021) - Australia.
- Emissions Factors for Greenhouse Gas Inventories - United States.
- International Energy Agency Net Zero by 2050 scenario global cement pathway (due to regional factors not being available).
- Environmental impact assessments.[2]

Where 2021 emissions data was not available, data from the closest available year was utilised. This included 2020 emissions (or earlier years), or approximate sector-wide emissions intensities and ratios.

Once the above approach had been applied, if there was still a gap to 100% coverage due to some customers having no data available, the remaining emissions were estimated. To reach full coverage, emissions totals were extrapolated from known datasets utilising ANZSIC[3] groupings on a tCO_2-e/$m EAD basis to complete an emissions estimate for the remaining customers in the sample.

Emissions were then attributed to the Group in proportion to the Group's EAD as at 30 June 2021 to the customer, as a percentage of the customers' enterprise value as at 30 June 2021. For publicly listed customers, the enterprise value as at 30 June 2021 was sourced from company reports, Eikon and Bloomberg.

For unlisted companies or special purpose vehicles, valuations were estimated within the Group as at 30 June 2021, and were used to attribute the proportion of financed emissions to the Group. This process aligns to pages 61-64 of the PCAF Standard for corporate finance and pages 70-72 for project finance with the exceptions noted above in the PCAF alignment section. Where the necessary data points were not always available, such as for some private assets, similar assets with valuations were used and scaled based on production, or recent purchase prices were referenced to estimate their value - these were provided by NAB's Corporate and Institutional bankers. NAB's assessment of data quality for these sectors, in accordance with the PCAF Standard, is provided in the data quality assessment table on page 49.

Commercial real estate

The bottom-up approach was also used for commercial real estate. The Group calculated emissions for this sector based upon actual reported emissions under the Commercial Building Disclosure Program[4] for the period ended 30 June 2021. Valuations corresponded to this period and were derived from external and independent valuations.

Emissions were then attributed to the Group in proportion to the Group's EAD as a share of the known valuation of each building as at 30 June 2021. Where emissions were not available for financed buildings, but floor area was, an average State emissions intensity factor per square metre was sourced from the National Australian Built Environment Rating System (NABERS), and used to estimate emissions based on floor area. This process aligns to pages 79-80 of the PCAF Standard for commercial real estate. NAB's assessment of data quality for this sector, in accordance with the PCAF Standard, is provided in the data quality assessment table on page 49.

No extrapolation was applied to Commercial Real Estate to avoid sampling bias as only the Group's green bond commercial real-estate portfolio has been estimated using the above methodology, at present[5]. Further efforts will be made to increase coverage in the future.

Residential real estate

The top-down intensity measure estimation approach was adopted for the residential real estate sector. The Group estimated the absolute attributable emissions for residential

(1) Production based estimates were used to estimate Scope 3 emissions in the oil and gas and coal sectors.
(2) An environmental impact assessment is the process of assessing the likely or possible environmental impacts of a proposed project or development, before a decision is made as to whether the project should proceed or not, and if so, under what conditions.
(3) Australian and New Zealand Standard Industrial Classification.
(4) The Commercial Building Disclosure Program is managed by the Australian Government Department of Climate Change, Energy, the Environment and Water. It aims to improve the energy efficiency of Australia's largest office buildings, by requiring energy efficiency information, including emissions data, to be provided in most cases where commercial office space of 1000 square metres or more is offered for sale or lease.
(5) CRE emissions currently only cover 9% of the Group's portfolio.

real estate for all States and Territories in Australia by applying an average GHG intensity factor per dwelling to the number of dwellings financed by the Group in each State and Territory. A loan to valuation at time of origination ratio (LVR) was applied in alignment with the methodology described on page 85 of the PCAF Standard.

The steps taken to estimate attributable emissions associated with residential real estate were as follows:

- Total state-based residential energy consumption figures (gas and electricity) were sourced for the residential sector in each State and Territory as disclosed in Table F of the Australian Energy Statistics – Australian Energy Update 2022.
- State and Territory electricity and natural gas emissions factors were sourced from the National Greenhouse Accounts Factors (August 2021) and the National Greenhouse and Energy Reporting (Measurement) Determination 2008.
- Total state-based residential GHG emissions were then calculated by applying the emissions factors to total residential energy consumption.
- The total number of dwellings in the 2021 period ending 30 June 2021 was sourced from the number of dwellings reported by the Australian Bureau of Statistics (ABS) from the 2021 Australian census per state and territory.
- The total emissions for each State and Territory were then divided by the estimated number of dwellings per State and Territory to provide an estimated emissions per dwelling figure for each State and Territory.
- The emissions per dwelling for each State and Territory were then multiplied by the abovementioned LVR ratio, then by the total number of NAB mortgages for each State and Territory to estimate the attributable financed emissions relevant to the Group's Australian residential mortgages by State or Territory.
- The State and Territory dwelling-related GHG emissions totals attributable to the Group's financing were then aggregated to provide a total figure attributable to the Group's Australian mortgage portfolio.

This approach allowed the Group to achieve a coverage of 100% for emissions from residential real estate. This process aligns to pages 85-86 of the PCAF Standard for mortgages. NAB's assessment of data quality for this sector, in accordance with the PCAF Standard, is provided in data quality assessment table on page 49.

Agriculture

The Group developed a top-down approach to estimating its attributable financed emissions from the agriculture sector. This involved estimating a share of emissions associated with its agribusiness customers based on total agribusiness EAD by attributing a share of 2021 total emissions disclosed in the Paris Agreement Inventory relative to the Group's market share for agriculture.

To support this approach, the Group applied an average debt-to-equity ratio of 11.9%, which was provided in the 2021 survey data published under the Australian Bureau of Agricultural and Resource Economics and Sciences Farm Data Portal[1] to attribute the Group's share of total sectoral-based emissions relative to EAD. Financed emissions were estimated for the following Australian agricultural sub-sectors: aquaculture, livestock (sheep, beef, poultry, pigs, and dairy), grains, cotton, cropping, horticulture, sugarcane and forestry.

As there was some uncertainty with respect to the estimation of dairy emissions, the Group took a conservative approach and uplifted total emissions by 16% to ensure adequate coverage of dairy sector emissions. This uplift was used as it is NAB's view that the national equity ratio was underrepresenting the dairy sector, therefore a secondary source – the Dairy Farm Monitoring Project (DFMP) and the equity ratio contained within – was used to calculate the uplift to emissions. The Group's attributable emissions estimate associated with the dairy sub-sector EAD was based on the following approach:

- Identifying average emissions per dairy farm based on Dairy Australia's DFMP Annual Report 2021-22 for Victoria[2] (given 74% of NAB's dairy customers in this period were located in Victoria).
- Multiplying the average emissions per farm by the average debt based on Dairy Australia's DFMP Annual Report 2020-21 for Victoria.[3]
- Multiplying the per dairy farm emissions figure by the number of dairy customers with lending provided by the Group.

Using the methodology outlined above, the coverage achieved for the Group's attributable share of Australian agricultural emissions is 100%. The Group will continue to refine this methodology for future estimates as data availability and quality improves. NAB's assessment of data quality for this sector, in accordance with the PCAF Standard, is provided in the data quality assessment table on page 49.

(1) Data provided under equity ratio as at 30 June for all farm types.
(2) Refer Table 1 for net emissions per farm (20-21 figure used).
(3) Refer Table A6 'Capital Structure - Statewide'.

Complexities and limitations in measuring financed emissions and setting targets

Climate-related metrics are underpinned by methodologies containing uncertainties, assumptions and judgements that limit the extent to which they can be relied upon. This applies to all climate-related metrics, including (without limitation) historical metrics relating to emissions and forward-looking climate metrics, such as goals, targets, climate scenarios or projections and pathways.

A summary of the Group's understanding of the main challenges associated with climate-related data, methodology and metrics follows. This is a non-exhaustive thematic summary of certain key risks that are relevant to consider in relation to climate related metrics and information, but they are not the only risks, and each thematic risk will in turn involve a range of particular and specific risks that impact the quality, utility and effectiveness of climate-related information:

- Data availability, quality and timeliness vary considerably within and across businesses, industries and geographies. This impacts both the ability to measure existing financed emissions and to set appropriate targets to reduce financed emissions. Measurement of financed emissions is, in many cases, based on estimates, and relies on data that the Group does not generate or control. The methodologies for estimating and calculating greenhouse gas emissions or emissions intensities and other climate-related metrics vary widely in their approaches. This may result in under or overestimates of climate-related risks or performance and/or financed emissions.
- While there has been improvement, there is a lack of common definitions and standards for reporting climate-related information, which may impact on the accuracy of estimates of financed emissions and targets based on existing estimates. In particular, climate metrics, measurement, other methodologies and reporting are not supported by a globally accepted framework or standard that facilitates efficiency, comparability and transparency. Frameworks and methodologies are often voluntary and a range of frameworks and methodologies are used by corporate organisations reporting on climate related information and metrics. This makes comparison by investors and others evaluating the climate performance of corporate organisations difficult.
- Estimating financed emissions is complex and requires significant methodological choices, judgements and assumptions. Methodologies to estimate financed emissions are evolving as understanding increases and data availability changes. This means methodologies used to estimate financed emissions are likely to change over time, impacting existing estimates, and targets based on existing estimates.
- When setting targets for reducing financed emissions, the inherent uncertainty in estimating financed emissions is exacerbated by the long time periods involved, for example, to set targets aligning to net zero by 2050.
- Climate science, and the decarbonisation trajectory that it implies, is continually evolving. Climate scenarios are inherently uncertain, and there are limitations of climate modelling, including climate scenario modelling. Climate scenarios are modelled over a significantly longer time-frame than more traditional financial scenario modelling and therefore the complexity and risk of error is higher.
- Many factors relating to the achievement of financed emissions reduction targets are outside the control of the Group.
- The Group's customer-base is not fixed. Changes to the Group's customer base over time can alter both the absolute level of financed emissions and the intensity of financed emissions. In addition, revenue and production for individual customers is volatile and subject to variation year-on-year.
- The reliance on customer data can lead to significant lags between the time of the emissions being generated, and the publishing of the Group's financed emissions reporting. For example, financed emissions data published in NAB's 2022 Climate Report is based on emissions data, and in order to match this timing, EAD, as at 30 June 2021.
- Scenarios, and customers' transition plans, may have varying reliance on the commercialisation of currently unproven technologies to meet emissions reduction targets. Investment in these technologies may fail to achieve the intended outcomes. Overreliance on unproven technologies to meet targets may impact NAB's assessment of those transition plans.

These challenges reduce the accuracy of estimated financed emissions, and mean that targets may not always be achieved despite the Group using best efforts to pursue its targets.

Challenges in allocating emissions to sectors

ANZSIC codes

When a lending transaction is created in NAB's systems, for most loans, the relevant customer is assigned an ANZSIC code based on their primary business activity. It is not NAB's current practice, and NAB does not consider it to have been historic common industry practice, to assign or otherwise record secondary ANZSIC codes for customers with diversified business activities.

As such, under NAB's current methodology, estimated customer emissions and sector-specific emissions estimates are applied to each customer's EAD with the assumption that the emissions are 100% attributable to the assigned primary business activity. Accordingly, if a customer is diversified across business activities, the estimate of their emissions may be under or overstated in sectors for which they have secondary operations.

Further limitations associated with reliance on ANZSIC codes to identify financed emissions, which could impact the accuracy of the sector under which financed emissions are captured and/or the accuracy of total financed emissions captured, include:

- The possibility of manual processing error in ANZSIC coding at the time of loan origination and/or renewal.
- Lending is undertaken by NAB without an ANZSIC code being recorded for the borrower. Manual efforts to identify such lending may not have been successful.

UNEP FI Guidelines 5% revenue threshold

The UNEP FI Guidelines outline that any bank client with more than 5% of their revenue coming directly from thermal coal mining, and electricity generation activities, shall be included in the scope of targets.

To identify and include emissions from companies with greater than 5% of revenue generated directly from thermal coal mining or coal-fired electricity generation, NAB has matched a global database of coal mines and coal generation assets to its customer list to identify customers with associated coal-based assets and revenues.

There are particular challenges associated with identifying diversified companies for this purpose, involving significant

manual processing and analysis. It is often the case that small, diversified mining companies do not disclose breakdowns of their revenue or production, making it extremely difficult to identify them for the purposes of the 5% revenue threshold. To address this, NAB applied a series of materiality thresholds in performing this analysis, including a $1 million EAD floor. This has the potential to result in some customers, who are classified outside the power generation or thermal coal mining sector, with relatively low absolute EAD, but who derive greater than 5% of revenues from thermal coal mining, not being identified within NAB's thermal coal or power generation targets.

For more details on NAB's methodology, refer to Table 15 on page 49.

Actual emissions and emissions intensity values are inclusive of both Scope 1 and Scope 2 emissions for all sectors, as well as Scope 3 emissions for thermal coal, and oil and gas. As such, the Scope 1 emissions created by the power generation sector are included in the total Scope 2 emissions for all other sectors. In order to fairly present emissions arising within each sector, the Group has included this 'double-count' within its attributable emissions estimate.

Target Setting Baseline Methodology

Target scope and boundaries

In line with the UNEP FI Guidelines, NAB is setting 2030 decarbonisation targets for 10 carbon-intensive sectors by May 2024. These sectors are: power generation, thermal coal, oil and gas, cement, commercial real estate, residential real estate, iron and steel, aluminium, agriculture and transport.

NAB has prioritised setting targets for the most emissions-intensive sectors in its lending portfolio(1), and where there is sufficient data availability and quality to set credible targets: power generation, thermal coal, oil and gas, and cement. The Group is working to collect higher quality emissions data to support target setting across the remaining six emissions-intensive sectors identified in the UNEP FI Guidelines, as well as to support the Group's ability to include customer Scope 3 emissions for all sectors over time.

An overview of the coverage, scope and boundaries of NAB's first tranche of 2030 decarbonisation targets is provided below.

Table 13: Coverage and boundaries associated with NAB's 2030 decarbonisation targets

Sector	EAD ($bn)	EAD (% of NAB's total EAD)	Operational boundary	Geographic boundary(1)	Metric
Power generation	5.8	0.67%	Scope 1 and 2	Global	tCO_2-e/MWh
Thermal coal	0.7	0.09%	Scope 1, 2 and 3	Global	$MtCO_2$-e
Oil and gas	1.9	0.22%	Scope 1, 2 and 3	Global	$MtCO_2$-e
Cement	0.8	0.09%	Scope 1 and 2	Global	tCO_2-e/t

(1) Global excludes BNZ exposures.

PCAF alignment

Emissions baselines and alignment with PCAF have been determined as outlined in the 'Financed emissions methodology' on pages 40-45.

PCAF outlines financed emissions calculation methodologies by asset class (e.g., business loans and unlisted equity, mortgages etc.) however, NAB has reported its attributable financed emissions at a more granular industry sector level as NAB considers this provides a more detailed and meaningful representation of its lending portfolio, and enables consideration of industry sector-specific information.

Where the PCAF valuation method has been deemed unable to be followed due to missing data points, such as in the oil and gas or power generation sectors, alternative valuation methods have been used. These include utilisation of recent purchase prices of assets and comparable asset valuations (scaled based on production).

Sector definitions

The following subsector definitions and categories have been used to capture all Corporate and Institutional Bank exposures in the emissions baselines for the Group's targets, excluding exposures held by the Bank of New Zealand. In line with UNEP FI Guidelines, NAB has defined its sectors in accordance with nationally and internationally recognised sector classification codes, ANZSIC 1993 and 2006, and International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 4.

(1) Based on Australian emissions: Scope 1 and 2 tCO_2-e / $m EAD.

Table 14: Sector definitions for NAB's target setting emissions baseline

Sector	NAB definition[1]	ANZSIC (1993)	ANZSIC (2006)	ISIC (Rev. 4)
Thermal coal	Black Coal Mining - Steaming	1101	0600	0510
	Brown Coal Mining	1102	0600	0510
	Brown Coal Mining Not Elsewhere Classified (NEC)	1102	0600	0510
	Lignite Mining	1102	0600	0520
Oil and gas	Gas, Natural Extraction	1200	0700	0620
	L.N.G. Production At Wellhead	1200	0700	0620
	Liquefied Petroleum Gas Production	1200	0700	0620
	Natural Gas Separation At The Wellhead	1200	0700	0620
	Oil Shale Mining	1200	0700	0610
	Oil and Gas Extraction NEC	1200	0700	0610, 0620
Cement	Cement Mfg (Except Adhesive Or Refractory)	2631	2031	2394
	Hydraulic Cement Mfg	2631	2031	2394
	Portland Cement Mfg	2631	2031	2394
	Other Cement and Lime Manufacturing NEC	2631	2031	2394
Power generation	Electricity Generation	3610	261	3510
	Electricity Generation Using Coal	3610	2611	3510
	Electricity Generation Using Gas	3610	2611	3510
	Hydro-Electric Power Generation	3610	2612	3510
	Renewable Energy	3610	2619	3510
	Wind Farms	3610	2619	3510

(1) The Group has used an internal classification system that provides greater granularity than ANZSIC 4 digit. The names of sectors included in the Group's targets and the concordance to ANZSIC 4 digit 1993 and 2006 are found within the table.

Companies with significant operations in one of the categories specified above, but which are classified under a different sector, have been included on the advice of NAB's banking team. This provides the Group with a more comprehensive view of its attributable financed emissions that may not have been captured under a stricter use of the classification.

Target metrics

The Group has set physical emissions intensity targets for power generation and cement, and absolute emissions reduction targets for oil and gas and thermal coal. NAB considers physical intensity metrics appropriate for power generation and cement, as each of these sectors will require growth to support living standards and expected population increases. In alignment with the Group's chosen reference scenario, IEA NZE 2050, physical intensity targets will require emissions reductions to outweigh growth in output, ultimately supporting real world emissions decreases. Key scenario assumptions and limitations are shown in Table 17.

Setting absolute targets for thermal coal and oil and gas is designed to achieve an absolute reduction in lending over time to these sectors. NAB considers it appropriate to adopt absolute targets for fossil fuel industries, as decline in the use of fossil fuels is a key driver of emissions reductions in the Group's chosen reference scenario.

Establishing a baseline

Calculation methodologies

For sectors where absolute emissions targets have been set, the baselines have been calculated using the approaches illustrated in Figures 13 and 14.

Figure 13: Absolute emissions baseline calculation methodology for business loans and unlisted equity

For business loans and equity investments to/in private companies:

$$Financed\ emissions = \sum_{c} \frac{Outstanding\ amount_c}{Total\ equity + debt_c} \times Company\ emissions_c$$

For business loans to listed companies:

$$Financed\ emissions = \sum_{c} \frac{Outstanding\ amount_c}{Enterprise\ Value\ Including\ Cash_c} \times Company\ emissions_c$$

$(with\ c = borrower\ or\ investee\ company)$

Source: PCAF Standard, page 63.

Figure 14: Absolute emissions baseline calculation methodology for project finance

$$Financed\ emissions = \sum_{p} \frac{Outstanding\ amount_p}{Total\ equity + debt_p} \times Project\ emissions_p$$

$(with\ p = project)$

Source: PCAF Standard, page 63.

For sectors where emissions intensity targets have been set, the baselines have been calculated using the approach illustrated in Figure 15. This approach, known as the weighted average method, involves weighting company-level emissions intensities by the outstanding loan amount for each customer. This approach is consistent with global peers[1] and removes the need to use company valuations in financed emissions estimations when calculating emissions intensity.

(1) A benchmarking exercise was undertaken to assess how global and local peers have calculated intensity measures. This method was found to be commonly used across multiple peer banks.

Figure 15: Physical emissions intensity baseline calculation methodology

$$\frac{\sum_{Customer}\left(\frac{Emissions}{Production} \times Outstanding\ loan\ amount\right)}{\sum_{Customer} Outstanding\ loan\ amount}$$

Treatment of lending for project finance and corporate entities

Lending can occur at a corporate level (for example, general facilities made available to the parent company of a group of companies), or at a project finance level, that is on an individual project basis for a specific project purpose.

NAB's methodology has assigned EAD for project financing to the entity it was lent to as opposed to always aggregating this lending to the parent company of a group. This may mean that the consolidated lending of the relevant customer group has separate line items for project finance and for corporate lending. NAB has kept these items separate so as to preserve the valuation to EAD dynamics and apportion emissions as per the PCAF methodology. Emissions have been captured at the level of the corresponding counterparty where possible.

Data collection

Emissions

In the first instance, the Group estimated emissions for power generation, cement, thermal coal and oil and gas using data from customer-reported sources, including:

- National Greenhouse and Energy Reporting (NGER) data sourced from the Clean Energy Regulator's website (corporate data and designated generation facility data).
- CDP (formerly known as the Carbon Disclosure Project).
- Customer reports such as annual reports, climate reports and sustainability reports.

If individual company data was not available, the PCAF data hierarchy, as documented in the PCAF Standard, was followed to complement and complete the dataset. This involved calculating customer emissions using production-based estimates and revenue or other financial-based estimates, and greenhouse gas emissions factors, including sector-wide emissions factors and averages. Emissions factors were used based on the country the asset was operating in, and where an emissions factor could not be found, factors were used from the nearest country for which the Group had data. Relevant emissions, emissions factors and intensity figures were sourced from:

- The NGER Determination applicable to the 2020-2021 reporting period - Australia.
- The National Greenhouse Accounts Factors (August 2021) - Australia.
- Emissions Factors for Greenhouse Gas Inventories - United States.
- International Energy Agency Net Zero by 2050 scenario global cement pathway (due to regional factors not being available).
- Environmental impact assessments.

Where 2021 emissions data was not available, data from the closest available year was utilised. This included 2020 emissions (or earlier years), or approximate sector-wide emissions intensities and ratios.

Once the above approach had been applied, there was still a gap to 100% coverage due to some customers having no data available. To reach full coverage, emissions totals were extrapolated from known datasets utilising ANZSIC groupings on an tCO_2-e/$m EAD basis to complete an emissions estimate for the remaining customers in the sample.

Production

In addition to emissions data, production data was also required for each customer to derive emissions intensity figures for power generation and cement. These production figures were obtained from a variety of sources, including:

- Customer reports that state production levels.
- Operator data that states production levels.
- Publicly available third-party and industry reports that provide production level data.
- Revenue-based estimates that have used an assumed price for the particular commodity in question combined with company revenue to derive an estimate of production.

Valuation

Customers' enterprise value as at 30 June 2021 for public companies was drawn from Bloomberg, Eikon and company statements. For unlisted companies or special purpose vehicles, valuations sought internally within NAB as at 30 June 2021 were used to attribute the proportion of financed emissions. This process aligns to pages 61-64 of the PCAF Standard.

Table 15: NAB's 5% revenue threshold methodology

Customer grouping	Step	Resulting customers
NAB Corporate and Institutional customers	Compiled list of Corporate and Institutional customers, including primary ANZSIC classification and EAD.	47,000+
Customers with coal/power asset ownership	Used a Jaccard index(1) for customer names to asset owners in a global data base of 20,000 power stations and 3,000 coal mines. Filtered out customers with <$1m EAD,(2) <90% customer-owned name match confidence or with correct sector already assigned.	15
Customers not in existing sector analysis	Manually reviewed list to filter out customers where prior analysis has already reclassified into the correct sector.	8
Additional customers added to sector	Compared revenue from thermal coal/electricity sales to customer total revenue(3). Where revenue was not available, estimates of revenue were based on production, this was particularly relevant in the case of thermal coal mining. Majority of customers either used the coal/electricity for their own operations (not sold) or sales constituted <5% of total revenue. One customer was found to have >5% of revenues from thermal coal sales.	1

(1) Jaccard index compares two sets of names to see which characters are used in both. It is used to gauge the similarity between two datasets, in this case databases of names, to identify similar matches.
(2) Refer to explanation of materiality thresholds for the 5% revenue threshold requirement on page 45.
(3) 2021 revenue figures were used.

Table 16: Data quality assessment

Sector	Data quality
Power generation	1.7 (Scopes 1 and 2)
Thermal coal	1.4 (Scopes 1 and 2), 2.7 (Scope 3)
Oil and gas	2.1 (Scopes 1 and 2) 2.5 (Scope 3)
Cement	2.3 (Scopes 1 and 2)
Commercial real estate (office and retail)	1 (Scopes 1 and 2)
Residential real estate	5+ (Scopes 1 and 2)
Iron and steel	2.9 (Scopes 1 and 2)
Agriculture	5+ (Scopes 1 and 2)
Transport	4 (Scopes 1 and 2)
Aluminium	1.6 (Scopes 1 and 2)

Table 17: NZE 2050 (2021): Scenario summary

Theme	Summary of key points
Temperature alignment	• 1.5 degrees Celsius
Key scenario assumptions	• Fast policy and technological change. • No new oil or gas developments beyond those with approvals in place as at 2021. • 88% share of renewables in electricity generation by 2050. • Limited use of carbon removals. • Universal access to affordable, reliable, sustainable and modern energy services by 2030. • International co-operation and recovery plans. • Does not rely on emissions reductions from outside the energy sector. • Carbon price is adopted in all regions, with an assumed price of USD130 by 2030 in advanced economies.
Limitations	• Not derived from Intergovernmental Panel on Climate Change models. • Trajectories lack granular local context: Australia is not currently designated as its own region. • Only covers CO_2 not CO_2-e. • Significant reliance on technological improvements.
Rationale for selection	• High sectoral granularity. • Global coverage – enabling the inclusion of offshore exposures. • Well accepted and understood by customers, investors and peers.

Environmental financing target methodology

This section summarises the financing the Group considers to be eligible for inclusion in its target to provide $70 billion in environmental financing to help address climate change and support the transition to a low-carbon economy.

Specialised, corporate and securitisation finance for projects that reduce emissions and assist with climate change adaptation and finance to other low carbon businesses

The Group's environmental finance target includes specialised lending, corporate and securitisation financing for various activities which are set out in Table 18.

This category also includes finance for low carbon businesses such as renewable energy retailers, providers of solar and energy storage systems and solar installers. Where only a proportion of the activities or assets funded are eligible, the Group only counts the proportion of funding provided that is attributable to the eligible activity or asset. If the lending is a syndicated facility only the Group proportion is counted. All areas/sectors included in the table below.

Table 18: Eligible specialised, corporate and securitisation finance categories

Energy	Energy efficiency	Transport	Water	Waste management	Land-use	Adaptation infrastructure
• Renewables • Electricity transmission and distribution for renewables • Distribution / management • Products/ technology that support smart grids • Data centres using Renewable Energy • Energy storage	• Green commercial/ residential buildings • Energy efficiency technology and products • Industrial retrofits	• Low-emission vehicles/ efficient transport • Electric vehicle infrastructure • Cycling rental schemes & infrastructure • Electric vehicle infrastructure	• Storm water adaptation • Investments to deal with rainfall volatility • Water treatment and recycling • Waterway adaptation	• Waste-to-energy • Wastewater treatment and methane capture	• Sustainable Forestry and supply chains • Sustainable Agriculture and supply chains	• Adapting infrastructure to increased heat stress • Ports redevelopment to address sea level rise • Storm surge protection

Green commercial property[1]

This category of environmental finance includes new financing or re-financing of commercial property within NAB's real estate investment trust (REIT) customer base. The Group includes finance for properties which rank within the top 15% of energy efficiency based on NABERs ratings referenced to the Climate Bonds Initiative calculator hurdle rates. The amount of financing included for the respective REIT customer, where financing has occurred, is in proportion to the percentage of commercial property that sits within the top 15% of energy efficiency in the marketplace for the specific REITs portfolio.

Asset finance

NAB's Energy Efficient Bonus (discounted lending facility) was available to customers seeking finance for energy efficient equipment in accordance with the Clean Energy Finance Corporation's "Approved Assets List" which sets out the environmental thresholds that the equipment must meet to qualify. This product has been discontinued. The various asset classes included were:

1. Vehicles.
2. Energy efficient equipment and lighting for buildings, industry and agriculture.
3. Fuel efficient tractors and headers.
4. Solar PV.
5. Batteries.

All qualified lending under the Energy Efficient Bonus Scheme was eligible and included towards the Group's environmental financing target.

Green term deposits

Money that had been deposited by customers into ubank's Green term deposits and was allocated towards lending for projects and assets where activities were eligible under NAB's Green Bond Framework. Examples included lending for renewable energy, low-carbon public transport, low-carbon buildings, energy efficiency and nature-based assets which are eligible under the Climate Bonds Taxonomy and contribute to the sustainable development goals. Cumulative flow of new deposits written has been included in historic progress towards NAB's cumulative target.

Green bonds funding

NAB, or NAB-related entity issued green bond funding is included towards its environmental financing target where the underlying activity funded is eligible under NAB's Green Bond Framework. If the Group is responsible for 100% of the issuance, then 100% of the bond issuance value is counted towards the environmental financing target. If the Group is arranging or managing the issuance for another non-NAB entity then the Group only allocates the Group's proportion towards the target. If the Group is a sole arranger of the issuance, the Group includes the full issuance. Proceeds of green bonds issued by the Group are used for investments

(1) Green commercial property was originally defined as a commercial building with a minimum 6-star certified NABERs rating. This methodology was updated in 2019. The current methodology includes commercial property in the top 15% of NABERs ratings as defined by the Climate Bonds Initiative hurdle rates.

in renewable energy, low-carbon public transport, low-carbon buildings, energy efficiency and nature-based assets which are eligible under the Climate Bonds Taxonomy and contribute to the sustainable development goals.

Advisory, underwriting or arranging activities

The Group includes the value of financing and bond issuances where it is advising, arranging or underwriting provided that the activities meet the definitions of green financing as per NAB's Green Bond Framework. If the Group is not the sole advisor, arranger or underwriter then the Group only includes the NAB proportion of the advisory, arranging or underwriting activity towards the Group's environmental finance target.

6-Star Residential properties

Mortgages included towards the Group's environmental financing target include new construction and major renovation of houses which rank within the top 15% of energy efficiency based on the National House Energy Rating Scheme (NatHERS) ratings. As a reference point, new construction and major renovation of houses undertaken from 1 October 2015 onwards which have a minimum 6-Star NatHERS (or equivalent) energy efficiency rating are estimated to be within the top 15% of the national housing stock in terms of energy efficiency. This includes residential financing provided for activities where the identified loan purpose is 'Construction' which typically includes new homes or major renovation activity where the borrower undertakes a progressive drawdown of the loan amount. To estimate the percentage of mortgages for houses with energy efficiency within the top 15% of national housing stock, total housing stock is calculated using ABS census data and Housing Industry Association housing starts data.

Emissions sources included in NAB Group's 2022 Carbon Inventory for operational emissions

Emissions source	Australia	New Zealand	Asia	United Kingdom	Europe	United States of America
Scope 1						
Stationary energy – diesel	X	X				
Stationary energy – gas	X	X		X		
Building-based refrigerants – in HVAC and refrigerators	X	X	X	X		
Business travel - work use vehicle fleet – (petrol, diesel, ethanol)	X					
Business travel - work use vehicle fleet – (petrol, diesel, electricity)		X				
Work use vehicle fleet – air conditioning refrigerant	X	X				
Scope 2						
Electricity	X	X	X	X	X	X
Scope 3						
A3 and A4 paper purchased	X	X	X	X	X	X
Base-building energy use (gas, diesel and electricity) not under NAB's operational control	X	X				
Business travel – air	X	X	X	X	X	X
Business travel – employee claims for use of personal vehicles for work purposes	X	X				
Business travel – hotel stays	X	X	X	X	X	X
Business travel – rental cars	X	X	X			
Business travel – taxi use	X	X	X	X		
Business travel – rail			X	X	X	
Transmission losses – base-building – Electricity	X	X				
Transmission losses – base-building – gas	X					
Transmission losses – stationary energy – diesel	X					
Transmission losses – stationary energy – gas	X	X		X		
Transmission losses – stationary energy – electricity[1]	X	X	X	X	X	X
Transmission losses – Business travel – work use vehicle fleet - (diesel, ethanol, petrol)	X					
Transmission losses – Business travel – work use vehicle fleet - Electricity		X				
Offsite energy - electricity		X		X		
Courier, Freight & Postage		X				
Customer Statements		X				
Materials recycled		X				
Waste to landfill	X	X	X		X	
Waste to incineration			X	X		
Water[2]	X	X		X	X	
Working from home estimation	X	X	X	X	X	X

(1) Includes offsite electricity for New Zealand and UK.
(2) Includes water use and wastewater (for New Zealand).

Assurance

The Group has sought assurance from KPMG over a selection of climate-related measures and disclosures presented in the 2022 Climate Report. The below summary outlines the scope of KPMG's assurance, with individual assurance statements available on NAB's website.

KPMG has provided reasonable assurance over:

- Australian National Greenhouse and Energy Reporting (NGER) data (Scope 1 and 2 GHG emissions).

KPMG has provided limited assurance over:

- Specified GHG emissions and offset data relating to NAB Group.
- Progress reported against NAB Group's science-based target to reduce Scope 1 and 2 GHG emissions from operations by 51% by 30 June 2025, from a 2015 baseline.
- Selected GHG emissions and energy use data prepared to meet the requirements of the Streamlined Energy & Carbon Reporting (SECR), which are implemented through the Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018 (UK).
- Renewable energy generation as a proportion (%) of the Group's exposure to the power generation sector, expressed as Exposure at Default (EAD).
- Aggregate progress reported against the goal to undertake $70 billion of environmental financing activities by 30 September 2025.
- Financed emissions data, including baselines for NAB's interim sector decarbonisation targets.

KPMG's assurance statements available at:

https://www.nab.com.au/about-us/social-impact/shareholders/performance-and-reporting

Understanding this report

This document is not a concise report prepared under section 314(2) of the Corporations Act 2001 (Cth). NAB has not prepared a concise report for the 2022 financial year. All figures quoted are in Australian dollars unless otherwise stated. A reference to '$' is to an amount in Australian dollars. References to
'NAB' or the 'Company' are to National Australia Bank Limited ABN 12 004 044 937. The 'NAB Group' refers to NAB and its controlled entities.

The Group's financial year ends on 30 September. The financial year ended 30 September 2022 is referred to as 2022 and other financial years are referred to in a corresponding manner. References in this document to the year ended September 2022 are references to the twelve months ended 30 September 2022. References in this document to the environmental reporting year are references to the twelve months ended 30 June 2022.

Data for NAB's 'financed emissions' is based on the year from 1 July 2020 to 30 June 2021 as this aligns with customers' emissions data availability, reported in alignment with the National Greenhouse and Energy Reporting Scheme Act.

Further information on non-financial information boundaries is available in the 2022 Sustainability Data Pack. Any references to changes (including an increase or decrease) relate
to the previous year, unless otherwise stated. Unless otherwise stated, information in this document is presented on a cash earnings basis. Cash earnings is a non-IFRS key financial performance measure used by NAB and the investment community.

Note on forward-looking statements

This report contains statements that are, or may be deemed to be, forward looking statements, including climate-related goals, targets, pathways and ambitions. These forward looking statements may be identified by the use of forward looking terminology, including the terms "believe", "estimate", "plan", "project", "anticipate", "expect", "goal", "target", "intend", "likely", "may", "will", "could" or "should" or, in each case, their negative or other variations or other similar expressions, or by discussions of strategy, plans, objectives, targets, goals, future events or intentions. Indications of, and guidance on, future earnings and financial position and performance are also forward looking statements. The NZBA sectoral financed emissions reduction targets set out on page 23, the various targets relating to operational emissions reduction set out on pages 35-36, and the environmental financing target set out on page 34 are all forward looking statements.

As at the date of this report (9 November 2022), the Group considers there to be a reasonable basis for making the forward looking statements contained in this report. However, you are cautioned not to place undue reliance on such forward looking statements. The measures and forward looking statements in this report reflect best estimates, assumptions and judgements as at the date of the report. There is a risk that these judgements, estimates or assumptions may subsequently prove to be incorrect.

Such forward looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of the Group. This may cause actual results to differ materially from those expressed or implied in such statements.

There are a number of other important factors that could cause actual results to differ materially from those projected in such statements, including (without limitation) a significant change in the Group's financial performance or operating environment; a material change to law or regulation or changes to regulatory policy or interpretation; and risks and uncertainties associated with the ongoing impacts of the COVID-19 pandemic, the conflict between Russia and Ukraine, the Australian and global economic environment and capital market conditions.

Forward looking statements may also be made – verbally and in writing – by the Group's directors or management in connection to this document. Such statements are subject to the same limitations, qualifications and assumptions set out in this document.

Subject to applicable disclosure requirements, the Group expressly disclaims any obligation to update or revise the information, measures, or forward-looking statements contained in this document, whether to reflect any change in its expectations regarding those forward- looking statements, any change in events, conditions or circumstances on which any statement is based, or otherwise.

Glossary

ABA
Australian Banking Association.

ANZSIC
Australian and New Zealand Standard Industrial Classification.

APLMA
Asia Pacific Loan Market Association.

APRA
Australian Prudential Regulation Authority.

BNZ
Bank of New Zealand Limited, a subsidiary of NAB Group.

CCCA
Collective Commitment to Climate Action.

CDP (formerly Carbon Disclosure Project)
Not-for-profit organisation that runs a global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. It provides a dataset of environmental and climate metrics.

Climate Vulnerability Assessment (CVA)
The Climate Vulnerability Assessment (CVA), a Council of Financial Regulators (CFR) initiative led by APRA, was an exercise adopting scenario analysis to assess the nature and extent of the financial risks that large banks in Australia may face due to climate change.

Climate-related opportunities
Refers to the potential positive impacts related to climate change on an organisation. Efforts to mitigate and adapt to climate change can produce opportunities for organisations, such as through resource efficiency and cost savings, the adoption and utilisation of low-emission energy sources, the development of new products and services, and building resilience along the supply chain. Climate-related opportunities will vary depending on the region, market and industry in which an organisation operates.

Climate-related risks
Refers to the potential negative impacts of climate change on an organisation. Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events (e.g. cyclones, droughts, floods, and fires). They can also relate to longer-term shifts (chronic) in precipitation and temperature and increased variability in weather patterns (e.g. sea level rise). Climate-related risks can also be associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses and reputational considerations.

CO_2-e
Carbon dioxide equivalent (CO_2-e) is a measurement used to compare emissions from various greenhouse gases based on their global warming potential. Other gas amounts are converted into the equivalent amount of carbon dioxide to provide a single emissions metric. Conversion factors vary based on the underlying assumptions.

Environmental year
Year ended 30 June, in alignment with relevant environmental regulatory reporting requirements.

Exposure at Default (EAD)
EAD represents the expected exposure at default, taking into account the repayment of principal and interest from the balance sheet date to the default event together with any expected drawdown of a facility.

Exposure at Default (EAD) for use in financed emissions and target setting
EAD as used in financed emissions baselines and for setting sector targets is as per EAD definition, however excludes off-balance sheet market related EAD, covering derivatives and performance guarantees to rehabilitate existing thermal coal mining and oil and gas assets. Australian Energy Market Operator (AEMO) bonds have also been excluded as they are a requirement to participate in domestic electricity and gas markets for any entity not regulated by the Australian Prudential Regulation Authority.

Financed emissions
Indirect greenhouse gas emissions attributable to financial institutions due to their involvement in providing capital or financing to the original emitter. Financed emissions are included within Category 15 'Investments' of the Greenhouse Gas Protocol Standard.

Financial year
Year ended 30 September.

Full-time equivalent employees (FTE)
Includes all full-time, part-time, temporary, fixed term and casual employee equivalents, as well as agency temporary employees and external contractors either self-employed or employed by a third-party agency. Note: This excludes consultants, IT professional services, outsourced service providers and non-executive directors.

Gentailers
Vertically integrated power companies operating in the National Electricity Market, where generators own and operate a retail arm.

Greenhouse gas (GHG) emissions
Gaseous pollutants released into the atmosphere that amplify the greenhouse effect. Gases responsible include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride.

Greenhouse Gas Protocol
Comprehensive global standardised frameworks to measure and manage GHG emissions from private and public sector operations, value chains and mitigation actions. The GHG Protocol supplies the world's most widely used GHG accounting standards.

Group
NAB and its controlled entities.

ICMA
International Capital Market Association.

IEA
International Energy Agency.

IEA NZE 2050
Refers to the International Energy Agency's Net Zero by 2050 scenario and report published May 2021.

Interim sector decarbonisation targets
Refers to targets set at intervals towards over-arching net zero by 2050 targets. NAB's first tranche of interim targets are set for 2030. Also referred to as 'sector targets'.

LMA
Loan Market Association.

LSTA
Loan Syndications and Trading Association.

NAB
'NAB' or the 'Company' means National Australia Bank Limited ABN 12 004 044 937.

NatHERS
Nationwide House Energy Rating Scheme is administered by the Australian Government and accredits a number of tools that can measure and rate a home's energy efficiency.

Natural capital
The stock of renewable and non-renewable natural resources (e.g., plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people.

Net zero by 2050
Net zero emissions' refers to achieving an overall balance between greenhouse gas emissions produced and greenhouse gas emissions taken out of the atmosphere. NAB's approach is informed by the UNEP FI Guidelines and pathways to net zero that are aligned with limiting warming to a maximum of 1.5 degrees Celsius above pre-industrial levels by 2100.

Network for Greening the Financial System (NGFS)
A group of authorities willing, on a voluntary basis, to exchange experiences, share best practices, contribute to the development of environment and climate risk management in the financial sector, and to mobilise mainstream finance to support the transition toward a sustainable economy.

NZBA
Net Zero Banking Alliance.

Operational environmental measures
Refers to environmental-related performance measures within NAB's operational control. This includes Scope 1, Scope 2, and selected Scope 3 emissions (excluding financed emissions). It also includes broader operational environmental measures such as waste generation, water usage and energy consumption.

Paris agreement
Refers to the agreement adopted within the United Nations Framework Convention on Climate Change in December 2015 and entered into force in November 2016. The agreement commits all participating countries to limit global warming to well-below 2°C, striving for 1.5°C above pre-industrial levels, to build resilience to adapt to impacts of climate change, and regularly increase efforts over time.

Paris Agreement Capital Transition Assessment (PACTA)
Building off a vast climate-related financial database, the PACTA tool aggregates global forward-looking asset-level data (such as the production plans of a manufacturing plant over the next five years), up to parent company level. The tool then produces a customized, confidential output report, which allows investors to assess the overall alignment of their portfolios with various climate scenarios and with the Paris Agreement.

PCAF
Partnership for Carbon Accounting Financials.

Scope 1
This includes direct emissions from within an organisation's boundary. These emissions are from sources that the organisation owns or controls such as:

- Combustion of fuel in boilers, furnace or generators that are owned or controlled by the reporting company.
- Generation of electricity, steam or heat in equipment that is owned or controlled by the reporting company.
- Business travel in vehicles such as company cars or corporate jets that are owned or controlled by the reporting company, colleague commuting in company-owned or controlled vehicles, such as company cars.
- Hydrofluorocarbon emissions from company-owned or controlled refrigeration or air-conditioning equipment.

Scope 2
Indirect emissions from electricity that is used by the organisation but is generated outside the organisation's boundary by another company, such as an electricity provider. This is called 'purchased electricity'. This includes indirect emissions from purchased or acquired electricity, steam, heat or cooling.

Scope 3
All other indirect emissions that occur outside the boundary of the organisation as a result of the activities of the organisation including indirect emissions from:

- Business travel in non-company owned or controlled vehicles, such as rental cars, colleague cars, rail and commercial planes.
- Combustion of fuel in boilers or furnaces not owned or controlled by the reporting company.
- Colleagues commuting in vehicles not owned or controlled by the reporting company, such as light rail, rail, buses and colleagues' cars.
- Energy used by colleagues working from home.
- Third-party production or manufacture of materials and resources used by the reporting company, such as furniture, paper and equipment.
- Indirect losses resulting from the transmission of electricity and other fuels.
- Emissions generated through the investments a company makes, see definition for 'Financed emissions'.

SME
Small and medium-sized enterprises.

Soil organic carbon
Soil organic carbon refers to the carbon components of soil organic matter.

Streamlined Energy and Carbon Reporting (SECR)
Reporting of emissions sources required under the United Kingdom's Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018.

TCFD
The Financial Stability Board Task Force on Climate-related Financial Disclosures.

Thermal coal
Coal that is almost exclusively used as a fuel for steam-electric power generation.

UN SDGs
United Nations Sustainable Development Goals.

UNEP FI
United Nations Environment Programme Finance Initiative.

UNEP FI Guidelines
UNEP FI Guidelines for Climate Target Setting for Banks.

Verra
Organisation that manages the Verified Carbon Standard program which allows certified projects to turn their greenhouse gas (GHG) emission reductions and removals into tradable carbon credits.

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