



Australian Government



CEFC scenario analysis - Basis of preparation

October 2025



The CEFC is a corporate Commonwealth entity established by the Australian Government under the *Clean Energy Finance Corporation Act 2012* (CEFC Act).

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1. Purpose of the document

This document presents the CEFC's approach to climate scenario analysis, including the evaluation of climate-related risks and opportunities across our investments. It outlines the underlying rationale, applied methodologies, alignment with applicable regulations, standards, and recognised best practice in assessing both physical and transition risks and opportunities.

This document underpins the climate scenario analysis included in CEFC's Commonwealth Climate Disclosures in its *Annual Report 2025*. It is complementary to the CEFC *Climate-related risk and opportunity procedure*, which details our overarching framework for managing potential climate-related impacts.

2. Introduction

The Commonwealth Climate Disclosures (CCD) policy and the Australian Accounting Standards Board's (AASB) Australian Sustainability Reporting Standard (ASRS) S2 requirements both include expectations on the use of climate-related scenario analysis. Under the CCD year 1 requirements, the strategy pillar focuses on the operational element of an entity's performance only. Broader scenario analysis to assess climate-related risks and opportunities along the entity's public policy delivery chain is anticipated as part of year 2 requirements. CEFC has chosen to test the delivery of its public policy obligation (its investment activity) in its scenario analysis ahead of it becoming mandatory, to better understand the impact on our investment portfolio now and in the future.

The CEFC exists to facilitate increased flows of finance into the clean energy sector and to facilitate the achievement of Australia's greenhouse gas emissions reduction targets, including net zero emissions by 2050. CEFC investments are considered well positioned to benefit from the transition to net zero and therefore are expected to have limited transition risks relative to market contemporaries. However, we are not immune from the physical risks of climate change given the indiscriminate nature of physical hazards to assets, the scale of our investments across multiple sectors and geographies, specific technology dependency and supply chain impacts.

CEFC completed its inaugural scenario analysis in 2024 which was disclosed in the *Annual Report 2024*. This document builds from that foundation and documents our approach to climate scenario analysis.

Investment

The most material climate-related risks and opportunities relate to CEFC investment activities and related portfolio of commitments. The CEFC has a diverse portfolio of investments across the Australian economy, with more than \$12 billion of on-risk commitments. Hence, our scenario analysis and resulting assessment of climate-related risks and opportunities is focused on the CEFC investment portfolio. This year we have strengthened and enhanced our assessment and reporting of scenario analysis.

Corporate

CEFC climate-related risks and opportunities relating to our corporate operations are less material; we lease four offices which are our primary centres of corporate activities. The CEFC discloses its operational emissions targets and performance within its annual reports, aligning with the Australian Government's commitment to achieve net zero in government operations by 2030.

3. Approach

This Basis of Preparation (BoP) summarises the CEFC's approach to transition and physical climate-related risk through desktop scenario analysis assessment.

The CEFC considered materiality as defined by the CCD, evaluating and disclosing meaningful information where we found that it has, or may have, a significant impact on CEFC policy delivery and/or its financial prospects. To determine material impacts, we considered both the relevance and potential impact of the information. The CEFC's scenario analysis considers both our public policy position and the long-term nature of our asset base. It goes beyond short-term financial product impacts, assessing long term impacts to enable informed decision making across the life cycle.

We took a 'value at-risk' forward-looking approach. We considered separate and distinct approaches for physical and transition risk to enable a rigorous materiality assessment considering the identified risk drivers for both and suitable applied scenarios.

CEFC continued to leverage the 2023-24 transition risk assessment which was based on the Network for Greening the Financial System (NGFS)¹ scenarios which are widely used for stress testing. All material tangible assets were assessed for physical risk using the Intergovernmental Panel on Climate Change IPCC scenarios² up to June 2025.

Transition risk

Our approach largely aligns with the Cambridge Institute for Sustainability Leadership's *Transition Risk Framework*³ methodology. The framework is structured around three steps:

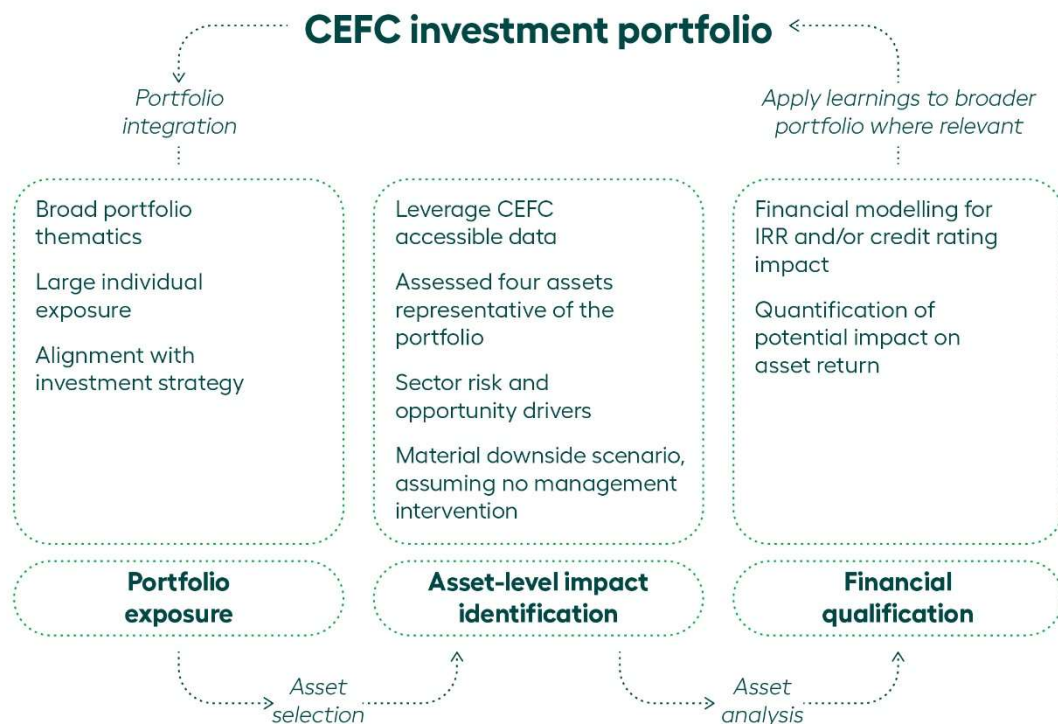
- Understanding the portfolio risk exposure
- Assessing and quantifying the impact at an asset level
- Qualifying the financial impact across the portfolio.

¹ NGFS developed set of hypothetical climate pathways to help financial institutions and policymakers understand the potential impacts of climate change.

² IPCC is the leading international body for assessing climate science, including the development of scenarios that explore potential future emissions pathways. The CEFC draws on IPCC scenarios based on Shared Socio-economic Pathways (SSPs). The socioeconomic and technological factors that the SSPs include are population growth, economic growth, urbanisation, trade, energy, and agricultural systems.

³ Cambridge Climate Wise Principles is a framework developed by the University of Cambridge Institute for Sustainability Leadership (CISL). The principles aim to help companies integrate climate transition considerations into their strategies, operations, and reporting.

Figure 1: Transition risk and opportunities assessment scope and portfolio analysis



CEFC exists to facilitate increased flows of finance into the clean energy sector and to facilitate the achievement of Australia's greenhouse gas emissions reduction targets. Given this investment focus, our working hypothesis was that CEFC's portfolio was relatively well insulated from transition risk. To test this hypothesis, the CEFC conducted a transition-focussed climate scenario analysis on four selected CEFC assets, within our most materially impacted sectors.

The objectives from the exercise included:

- Assessing CEFC assets for transition risk "blind-spots"
- Demonstrating the climate scenario analysis approach and methodology which can be expanded across other assets
- Disclosing climate related impacts on our portfolio.

a) Asset selection and materiality:

In selecting the assessed assets and/or entities to examine transition risk, the following materiality criteria have been considered:

- CEFC's existing and expected large commitment exposures
- Relevance to a broader subset of the current portfolio; applicability to other assets in the portfolio
- The sector and technology alignment with CEFC's investment strategy and CEFC portfolio diversity
- Sufficient accessible information available to conduct analysis.

b) Scenarios used:

The transition risk assessment is conducted against the NGFS sub scenarios:

- Net Zero 2050 - 1.5 degree aligned: Global warming is limited to 1.5°C (with a 50% chance) through stringent climate policies and innovation, reaching global net zero CO2 emissions around 2050
- Delayed Transition - 2 degree aligned: Annual emissions do not decrease until 2030. Strong policies are needed to limit warming to below 2°C
- Current Policies - 3 degree aligned: Business as usual scenario, only currently implemented policies are preserved, leading to high physical risks.

c) Sensitivities – risk drivers, inputs and parameters:

The transition risk assessment considered key relevant variables, including price, volume, unit cost, capital expenditure, and asset value. A detailed financial analysis was then conducted on two or more of the most material risk drivers. These drivers, inputs, and parameters were tailored to the specific sector, asset or entity type, and the nature of CEFC's exposure.

Example: Property Fund

The transition assessment for a single typology property fund evaluated both operating and capital expenditure, incorporating key cost-related inputs such as electricity pricing, gas replacement capital costs, and occupancy volumes. The analysis was underpinned by calculating an asset-level internal rate of return (IRR) as a primary performance parameter.

Physical risk

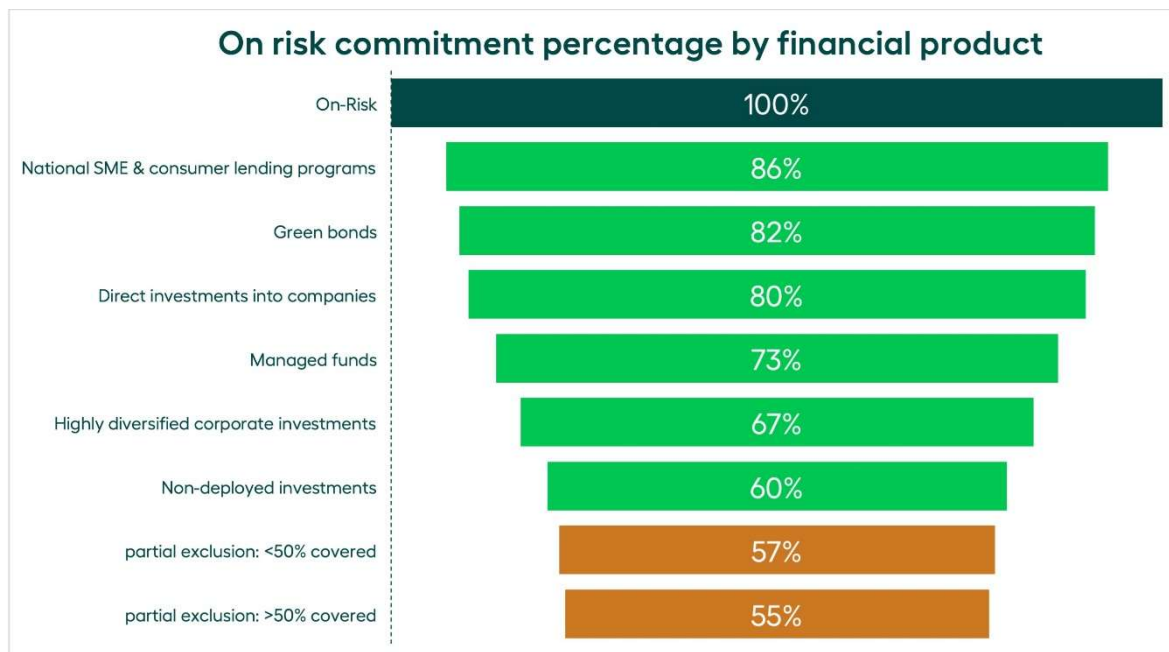
The CEFC investment in real assets are exposed to physical risk despite their objective of securing climate opportunity. While the CEFC investment mandate does not explicitly focus on adaptation opportunities, we seek to achieve adaptation co-benefits where practical. CEFC utilised the S&P Climonomics tool to conduct the assessment for physical risk. The tool estimates the Modelled Average Annual Loss (MAAL) and is defined as the sum of expected financial losses (related to operating expenses, capital expenditure and revenue impacts) resulting from climate change for the designated period.

The assessment method is financial product agnostic to debt or equity. The assessment is based on the asset type (e.g. solar farm, office building) and ownership structure (e.g. investor, owner operator).

a) Asset selection and materiality:

Given the significance of CEFC's investment portfolio relative to its operations, scenario analysis focused on financial risk relating to CEFC's investment portfolio, and financial materiality was prioritised over sector and geographical materiality e.g. transmission vs agriculture.

The assessment prioritised investments with real projects/assets, where it is possible to identify a specific site, physical risk to be identified, and hence financial impact of those risks to be estimated. Typical investment types covered in the assessment include project finance, corporate loans, and managed funds with specific assets.



b) Portfolio representation:

Below are the key drivers of assets assessed for the anticipated financial effects of physical risk. These drivers were also intended to provide a broader and more balanced representation of the portfolio, extending beyond purely financial impacts.

- **On-risk commitment:** the financial impact of physical risk was assessed based on the CEFC on-risk commitment value. For each investment (where available), we assessed value on-risk per asset. For highly diversified funds and corporate loans we selected the top 5 to 10 assets by valuation. The assessment includes the drawn amount plus the undrawn amount where we have a commitment to fund
- **Sector:** the selection of assets covered all sectors with tangible assets. However, the nature of CEFC's investment universe resulted in a higher representation of some sectors, for example transmission, renewable generation and property
- **Geographical representation:** the selection of assets within a diversified investment was not determined by geographical location; for these investments the assessment focused on financial and sector materiality. However, for funds and corporate loans, higher valuation resulted in some locations, such as capital cities (Sydney, Melbourne) having stronger representation. We consider a wider selection to reflect a range of geographical locations.

The assessment is based on assessing nine⁴ hazards against specific asset typologies to measure vulnerability that results in qualitative financial risk, represented as the MAAL.

The assessment typically includes adaptation measures commonly integrated into specific asset types limited to hazards such as flooding, water stress, tropical cyclone and temperature extremes. The model incorporates commonly applied adaptation measures in the calculation of percentage value at risk and reflected in the outcome MAAL.

c) Scenarios used:

The CEFC choose the IPCC – Shared Socioeconomic Pathways (SSPs) to integrate socio-economic factors such as population growth, economic development, and technological advancements with different climate change scenarios. The assessment used three of the IPCC SSP scenarios - low, medium, medium-high, as follows:

- Low (SSP1-2.6): aligned to a 2-degree Paris agreement
- Medium (SSP2-4.5): aligned to a 3-degree Paris agreement
- Medium - High (SSP3- 7.0): aligned to a 4-degree Paris agreement.

For the CEFC disclosure, we derived results from two scenarios a Low (SSP1-2.6) and a Medium-High (SSP3-7.0).

d) Sensitivities - Risk driver input and parameters:

The assessment covered both chronic and acute risks across nine hazard types. Key inputs included asset location (latitude and longitude), total on-risk commitment, asset type, and ownership structure. These were evaluated against IPCC-SSP scenarios across different timeframes. Each location-specific risk triggered an impact function, which was assessed using selected typologies. The model estimated MAAL on these parameters.

For further details on assessment methodology, risk definitions and categorisation refer to the [Climanomics Methodology](#).

4. Refining our scenario analysis assessment

We continue to pursue opportunities to improve our climate risk assessment and scenario analysis capabilities. While CEFC's investment structures do not provide direct operational control, we are strengthening our screening processes and deepening stakeholder engagement to better understand and manage climate-related risks.

To address data limitations, we incorporate alternative data sources to build a more comprehensive view of climate risks across the portfolio e.g. using internal factors such as Loss Given Default (LGD) factors for debt. Scenario analysis remains an evolving discipline, shaped by the latest scientific insights and data availability. Our modelling approach will continue to adapt over time to reflect advancements in climate science and improve the robustness of our assessments.

⁴ Hazards include pluvial flooding, temperature extremes, coastal flooding, drought, wildfire, tropical cyclone, water stress, fluvial flooding, landslide.

Transition Risk

In FY2024-25, the CEFC reported financed emissions for the second consecutive year, providing a clearer view of the emissions footprint of our portfolio. To assess portfolio alignment with net zero goals, we conducted an internal review against elements of the Net Zero Investment Framework (NZIF) and the Science Based Targets Initiative (SBTi) Financial Institutions standard. This forms part of our ongoing commitment to improving our approach to managing transition risk. We have engaged external expertise to help us further develop our internal framework and enable better disclosures.

Physical Risk

The CEFC maintains a proactive approach to understanding and managing physical climate risk across its portfolio. In FY2024-25, we expanded our physical risk assessment to include material pipeline investments at the investment screening stage, ensuring early identification and documentation of potential physical climate impacts. Risks were categorised into chronic and acute to better understand the nature and distribution of exposure across the portfolio. We are working on expanding the assessment to incorporate specialised assets typologies to the assessment to ensure coverage for emerging sectors.

About the CEFC

The CEFC is Australia's specialist climate investor, helping cut emissions in the race towards net zero by 2050. We invest in the latest technologies to generate, store, manage and transmit clean energy. Our discounted asset finance programs help put more Australians on the path to sustainability, in their homes and on the road. CEFC capital is also backing the net zero transformation of our natural capital, infrastructure, property and resources sectors, while providing critical capital for the emerging climate tech businesses of tomorrow. With access to more than \$32 billion from the Australian Government, we invest to deliver a positive return for taxpayers.