CLIMATE CAPITAL FORUM | Investment for Australia's Post Carbon Economy

# Net Zero Fund: Proposed Design Consultation
# Climate Capital Forum Submission

The Climate Capital Forum welcomes the opportunity to provide input to the Australian Government's design of the Net Zero Fund (Fund).

**The Net Zero Fund should act as the Commonwealth's catalytic capital provider** for industrial and manufacturing decarbonisation. It should take higher risk, take patient, longer term public equity positions and/or accept lower rates of return where markets will not, and coordinate closely with the Net Zero Economic Authority (NZEA) and Clean Energy Finance Corporation (CEFC) to deliver large scale, regional and transformational outcomes. By embedding flexible instruments, targeted concessionality and strong regional linkages, the Fund can leverage the expanding role of carbon pricing under the Safeguard Mechanism and accelerate Australia's path to a competitive, decarbonised industrial economy that aligns with and accelerates our Future Made in Australia (FMIA) and net zero before 2050.

**Submission Authors and the Climate Capital Forum**

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The Climate Capital Forum (CCF) is a network of investors, climate finance experts, decarbonising companies, environmental organisations and philanthropists who came together to provide public interest policy advice on how Australia can lead the world in decarbonising, renewable energy and cleantech innovation.

## Consultation Question One: What are the types of projects or capital expenditure that should be supported to achieve the Net Zero Fund's objectives?

### 1.1 Types of Projects and Capital Expenditure to Support

The Net Zero Fund should prioritise transformational, capital-intensive first of a kind (FOAK) in the domestic context projects that directly reduce industrial emissions or enable clean-manufacturing capacity. Eligible expenditure should include:

**a. Industrial Decarbonisation Projects**

- Electrification of industrial heat – cement, alumina, steel, fertiliser, and food-processing sectors.
- Green hydrogen-ready equipment and hydrogen substitution for industrial feedstock.
- Energy-efficiency upgrades and process-optimisation retrofits for legacy plants.
- In preparation for an expansion of the Safeguard Mechanism post its 2026 review to lower the initial 100,000tpa threshold progressively down towards 25,000tpa to lead Australia's delivery on its new 62-70% emissions reduction target by 2035.

**b. Development and manufacturing of Renewable and Low-Emissions Technologies and Services**

- **Domestic production of renewable-energy components** such as transformers, inverters, switchgear, cables, heat pumps, electrolysers, biogenic fuels, wind towers and transmission towers (creating demand pull for domestic production of green steel).
- **Transition to low-carbon transport solutions**, including fleet electrification or zero-carbon transport solution and service infrastructure developments
- Establishment of **Green and Net Zero Manufacturing Precincts** integrated with firmed renewable-energy supply leveraging common user public infrastructure.
    - Globally, 20 industrial clusters across 10 countries have joined the World Economic Forum's *Transitioning Industrial Clusters Initiative*, collectively representing 626Mt of potential $CO_2$-e reduction and $362bn in GDP value.
    - Australia can leverage its $5 billion Net Zero Fund to create similar **Renewable Energy Industrial Precincts (REIPs)** in Gladstone, the Hunter Valley, and other REZ-adjacent regions (as per BZE).

- REIPs could generate 45,000 new jobs, $13bn in annual revenue by 2032, and up to $38bn in private investment leveraged from $6.3bn in federal funding.

**c. Circular Economy Facilities**

- National scale-up of solar-panel, battery, scrap steel and wind-component recycling to recover rare-earths, aluminium, lithium, and glass, and feed our green electricity powered electric arc furnaces (EAF) to create green steel domestically.
- Support product-stewardship schemes and circular-design manufacturing consistent with Australia's Circular Economy Framework targets (doubling circularity by 2035) and ensure community social licence to operate.

**d. Emerging Energy-Intensive Industries**

- **Green data centres and AI computing hubs** powered by firmed renewables – providing anchor offtakers for new solar, wind, and battery storage infrastructure developments across regional Australia, bring jobs, investment and decarbonisation.
- **Low-carbon materials** – green cement, iron, and aluminium projects (FOAK demonstrations of low-emissions manufacturing).
- **Green fuels and e-chemicals** – e-methanol, green ammonia, and sustainable aviation fuel production, leveraging the new $1.1bn Cleaner Fuels Program.
- **Lithium battery value chain** - from upstream novel, decarbonised battery materials processing through cell and battery making. Australian capacity in the complete value chain is essential.

**d. Energy efficiency of buildings**

DCCEEW states that the commercial building sector is responsible for around 25% of overall electricity use and 10% of total carbon emissions in Australia. While some progress has been achieved through the adoption and development of the NABERS scheme and other green building certifications, significant inefficiencies in commercial and industrial buildings still persist.

- **Commercial and industrial building retrofits leading to significant energy efficiency improvements** moving towards a near-zero emissions building standard and where possible integrate energy-positive building principles.
- **All new builds funded by the NZF should require a high energy efficiency standard compliance** by default.

**e. Common and Social Infrastructure**

Major clean-energy projects are being delayed because community infrastructure – housing, schools, and health services – is not keeping pace.

Government should:

- Treat enabling social infrastructure as essential public project infrastructure.
- Encourage development of REIPs such as Lansdown (Townsville) and Kwinana (WA).
- Co-ordinate with state and local governments to plan housing, education, and health capacity alongside industrial growth to build regional community buy-in.
- Incentivise PPP models for housing and essential services to enable clean-industry workforces at speed and scale for this major new opportunity for regional Australia.

This approach reduces delays, lowers costs and improves regional labour-market efficiency, and strengthens social licence for long-term industrial activity. It supports the Treasurer's pillars of a more dynamic and resilient economy and will reduce affected communities' resistance given they are made a key part of the solution.

## 1.2 Scale and Composition of Investment

- Large industrial decarbonisation projects typically require $500m–$4 bn and up to $8n per facility.
- Manufacturing precincts and component factories require $100–500m.

A typical blended capital stack could include:

| Source | Estimated Share | Role |
|---|---|---|
| Private sector capital | 50–70% | Majority equity or senior debt once projects are de-risked |
| NRF Net Zero Fund | 20–30% | Concessional equity or debt; first-loss tranche or risk guarantee |
| Complementary SIVs (CEFC, ARENA, NAIF, EFA) | 10–15% | Early-stage grants, concessional debt, VC and enabling infrastructure finance |

This mix can achieve leverage of 1:3 to 1:5 (public to private capital, particularly once FOAK facilities derisk domestic deployments of new technologies) while crowding in institutional capital, both domestic $4.1 trillion super pool, plus strategic foreign corporate capital (noting beyond capital, the latter also brings both demand offtake and world leading clean

technologies, plus Green Energy Statecraft benefits and enhances global supply chain diversity). The Fund should retain discretion to take a larger public share where projects serve national strategic interests (e.g. supply-chain sovereignty, domestic content, regional employment, build-out of critical infrastructure required for a low-carbon economy, in addition to delivering on the climate science-based decarbonisation objective).

### 1.3 Existing Commercial Barriers to Investment

Projects are struggling to reach final investment decision (FID) because of:

- **High upfront capital expenditure** and the uncertain offtake for low emissions products due to the 'grey discount' (or lack of an explicit green premium) government procurement (e.g. Defence as offtaker for low-carbon fuels and batteries) can help bridge this gap, as can government as purchaser of first resort as proposed in the Clean Commodities Trading Initiative and the planned Critical Minerals Strategic Reserve. These initiatives should exist along value chains to encourage all desired industrial development.
- **Policy uncertainty** and absence of any explicit price on embodied decarbonisation in Asian trade (we need a path to an Asian carbon border adjustment mechanism (CBAM), to extend and leverage the EU emissions trading scheme (ETS) and EU CBAM), which in turn undermines offtake for decarbonised products or demand-side incentives.
- **Limited risk appetite of financiers** for emerging technologies and regional projects, absent of an effective, high price on carbon emissions.
- **Grid connection delays** and enabling infrastructure bottlenecks (due in large part to the disinformation and mis-information being spread by fossil fuel vested interests).
- **Fragmented and duplicative funding programs** across government and states, with differing and complex application processes leading to extended lead times for application preparation and submission and developer lethargy.
- **Uncoordinated Industrial Energy Generation Development** - all proposed grid-connected industrial energy generation development should be mapped along with existing grid generation development to maximise the systemic outcome of both sources e.g. 5 of the 6 green iron production facilities proposed by the Superpower Institute would be grid connected. With a successful Renewables Superpower outcome orders of magnitude more generation, much of which can be grid-connected, is required and will positively impact general grid performance outcomes.
- **Lack of development-stage capital** – the "valley of death" between grant funding and commercial readiness remains a major obstacle, particularly given the policy contradictions of continuing to provide $12bn annually of fossil fuel subsidies

(undermining our energy security) and lack of a clear upward trajectory in the price of Safeguard Mechanism Credits (SMC) and Australian Carbon Credit Units (ACCU). The Forum recommends a DARPA-style approach to high-risk innovation projects, accepting that some failures are an essential part of breakthrough success.

- **Regulatory and environmental-approval bottlenecks**, including shortages in planning and ecology expertise, increasing project costs and timelines. We need a sustained acceleration of approval systems, a fast no or a considered, but time limited yes.
- **Single Front Door** - CCF applauds Treasurer Chalmers' establishment of a Single Front Door for international investors, but this now needs to be delivered on, particularly in providing consistency and speed of evaluation of DFAT's FIRB decisions, and ensuring all government departments are aligned on the strategic national interest of collaborating with our key trade partners in delivering on best in class decarbonisation solutions and supply chain resilience as national priorities, as we rebuild Australia's workforce capabilities to then take this forward.

Addressing these barriers will be critical to achieving the Fund's goals of rapid, large-scale industrial decarbonisation and clean-manufacturing growth.

## Consultation Question Two: What financing mechanisms are best suited for these investments, based on the mechanisms available to the National Reconstruction Fund e.g. loans, equity, guarantees?

Current investment settings are too risk-averse, overly complex, and too slow to disburse, and too reliant on debt funding that risks crowding-out rather than crowding-in private capital. To accelerate investment while maintaining accountability, the **Net Zero Fund** should adopt more flexible, innovation-friendly instruments that crowd in private capital and fill the current gap between research grants and fully bankable commercial projects.

### 2.1 Financing Mechanisms to Accelerate Investment

- **Equity stakes with optional buy-back or step-down arrangements** upon project de-risking, combined with income-contingent milestones, conditional forgiveness, or flexible workout provisions.
- **Future Fund** - CCF advocates for a new $10-20bn equity and infrastructure mandate in renewable energy powered resource value-adding to be given to the Future Fund, given their deep financial market expertise, strong governance and excellent long term track record in managing risk-returns. This would have immediate impact, and complement the existing SIVs with a greater focus on grant and debt funding, whilst also noting the Future Fund could crowd-in private superannuation capital which is constrained by the Sole Purpose Test to maximise risk-adjusted returns noting again the absence of a firm, legally binding whole of economy carbon price is handicapping private capital deployment. This ongoing market failure means 'leaving it to the market' will inevitably fail, and the recent Insurance Council of Australia report highlights we all collectively bear the economic and social cost.
- **Broader risk tolerance and concessional lending** to unlock high-risk, high-impact projects that commercial lenders will not yet finance.
- **California Energy Commission and DARPA-style innovation funding** to back transformative technologies and early-stage ventures capable of delivering step-change decarbonisation, and incentivising world-leading cleantech investors to deploy in partnership here in Australia, bringing their technologies and robotics with them. Many world-changing technologies—including the internet, GPS, and robotics—were made possible through similar approaches. California's CalSEED and CalTESTBED are two early stage non-dilutive and especially non-matching grant funding programs designed to accelerate the commercial use of novel net-zero

technologies; analogues like New Energy Nexus and EnergyLab's AusSEED and AusTESTBED proposals are desperately needed in Australia to support emerging startups.

- **Faster approval and deployment processes**, acknowledging that if funding is not committed within this term of government, political and economic windows for industrial transformation may close.

These mechanisms would enable the Net Zero Fund to take a catalytic role, mobilising private investment while de-risking technologies critical to industrial decarbonisation and domestic manufacturing capability.

## 2.2 Suitable Financing Mechanisms

The National Reconstruction Fund Corporation (NRFC) already has the flexibility to use loans, equity, and guarantees, but noting the NRFC has yet to build up the staff and board confidence and depth of track record of the Future Fund, ARENA and CEFC. These instruments should be strategically deployed to address market gaps as outlined below:

| Mechanism | Application | Benefits |
|---|---|---|
| Concessional Loans | Retrofits and electrification upgrades in established industries | Immediate emissions reduction; repayable over 10–15 years |
| Equity and Infrastructure Investments | New green manufacturing and industrial precincts | Aligns public and private interests; enables long-term value capture, and allow SIVs to take on some of the project-on-project development risks for associated firmed renewable infrastructure |
| Guarantees / First-Loss Positions | Unlocking private senior debt for high-risk technologies | Reduces financing costs and risk premiums |
| Convertible Notes / Hybrid Instruments | Scale-up of early-commercial technologies | Allows upside participation and flexible exit pathways |
| Revolving Credit Facilities | Working-capital support during decarbonisation transitions | Provides short-term liquidity during retooling or scale-up |

| | | |
|---|---|---|
| Early Stage Net Zero Sector Technology Development Fund | Outsourced if necessary, non-matched grant funding to Net Zero startups | A relatively small fund designed to loss-lead on technology development can kick-start later stage investment by ensuring much more innovation is brought to testable maturity. |

**Public-Private Partnerships (PPPs)** should also be considered for large-scale strategic investments. For example:

- Co-investing in heavy-lift jack-up feeder vessels to overcome offshore-wind installation bottlenecks.
- Jointly developing green-iron, green-steel and green-hydrogen production capacity, following the Swedish government's example in supporting H2 Green Steel through financial guarantees..
- Such investments can address critical market failures and deliver long-term national productivity gains.

### 2.3 Corporate Financing Scope

Corporate-level financing should be explicitly within the Net Zero Fund's scope.
This includes **equity or convertible financing** to:

- Strengthen the balance sheets of domestic manufacturers scaling low-emissions technologies.
- Enable vertically integrated decarbonisation—for example, iron/steel, critical minerals/advanced materials or data-centre operators investing in captive renewables.
- Support mergers and partnerships that consolidate Australia's clean-energy supply-chain capability.

**Convertible equity instruments** can align with the Fund's public-purpose mandate while providing the Commonwealth with upside participation in high-growth sectors such as renewable manufacturing and data-centre decarbonisation.

*Example scenario – Green Data Centre Platform:*
A domestic manufacturer of modular, high-efficiency cooling systems for renewables-powered data centres seeks expansion capital. The Net Zero Fund provides a tranche of ordinary equity, bolstering the company's balance sheet and attracting

institutional co-investment.

In another scenario, a domestic steel producer partners with a hyperscale data-centre operator to develop a co-located renewable-energy campus. The Fund participates via a convertible note that converts to equity once operational milestones—such as verified carbon reductions—are achieved, aligning government support with measurable outcomes.

## 2.4 Parameters of Concessional Support

To attract capital while maintaining commercial discipline, concessional support should be structured as follows:

| Parameter | Recommended Setting |
|---|---|
| Interest Rate | 2–3% above the 10-year government bond rate (lower for priority regions and/or where First Nations and/or local content requirements and/or public values from supply chain enhancements are incorporated) |
| Equity Return Target | 4–6% internal rate of return (IRR) for public-equity investments |
| Risk Tolerance | Up to 30% first-loss exposure for demonstration, FOAK and regional projects |
| Forgiveness Clauses | Contingent forgiveness tied to verified emissions or social outcomes |
| Repayment Periods | 10–15 years for industrial retrofits; 7–10 years for manufacturing finance |
| Co-Funding Requirement | Minimum 50% private capital commitment or CEFC/NAIF/EFA debt co-investment or ARENA grant funding. |

## 2.5 Removing Barriers to NRF and Net Zero Fund Investment

The **Net Zero Economy Agency (NZEA)** noted in its July 2025 *Submission to the Economic Reform Roundtable* that specialist investment vehicles are too risk-averse, too slow, and insufficiently differentiated. The Climate Capital Forum supports the following reforms:

- Lower minimum transaction thresholds to engage SME ($10–100m range).
- Accept higher risk or lower returns for regional and technology-first projects. Simplify application processes and align with the *Future Made in Australia Front Door* for efficient targeting.
- Establish a rapid-assessment window (≤90 days) for regional or emissions-critical projects.

- Mandate place-based allocation targets for transition regions and First Nations partnerships.
- Increase risk appetite with a two-year grace period on return requirements for strategic greenfield FOAK value-add projects (e.g. green iron, DRI, recycled-steel, green critical minerals processing and battery manufacturing).
- Expand the streamlined, one-round application model used in the Capacity Investment Scheme (CIS).
- Introduce provisions for equity stakes to be gifted to the Commonwealth in return for public subsidies to strategically important but commercially stressed value adding industries (e.g. green aluminium, copper, nickel, lithium & zinc smelting).

## 2.6 Addressing the Development-Capital Gap

Many projects fail at the **project-development phase** because of the absence of available development capital. The Forum recommends a **California Energy Commission** and **DARPA-inspired program** within the Net Zero Fund to address this gap, including:

- Agile, challenge-based grant competitions for complex green-technology and digital-industrialisation challenges.
- Funding "outside performers" for short, high-impact assignments with clear success metrics.
- Acceptance of project failure as a normal part of innovation and technological progress.

This model would underpin the *Future Made in Australia* ambition with the same entrepreneurial boldness that gave rise to the internet, GPS, and modern robotics—ensuring Australia can lead in clean-industry innovation.

California's CalSEED and CalTESTBED are two early stage non-dilutive and especially non-matching grant funding programs designed to accelerate the commercial use of novel net-zero technologies; analogues like New Energy Nexus and EnergyLab's AusSEED and AusTESTBED proposals are desperately needed in Australia to support emerging startups.

## Consultation Question Three: How can the Net Zero Fund complement established financing vehicles such as the Clean Energy Finance Corporation?

### 3.1 Operating model and roles

The Net Zero Fund should coordinate and tier risk across public finance bodies rather than duplicate their functions. The Net Zero Economy Agency should act as a central gateway that allocates proposals to the most suitable vehicle by stage and risk. CEFC and NAIF can continue to focus on proven and scalable technologies, while the Net Zero Fund aligns more with ARENA in deliberately targeting earlier stage, higher risk industrial decarbonisation and manufacturing investments that fall outside CEFC's current mandate. Joint planning with states and territories should prevent overlap and delays, for example by aligning federal and Victorian funding for offshore wind port upgrades.

### 3.2 Joint products and blended structures

Where projects require both concessionality and scale, adopt joint structures that pair each vehicle's comparative advantage:

- **First loss or equity from the Net Zero Fund** combined with **senior debt from CEFC** to unlock bank debt for higher risk technologies.
- **Shared due diligence frameworks** for technology readiness, emissions accounting, and social impacts to cut duplication and time to decision.
- **Early awareness provided to later-stage public financing vehicles** of projects already being supported by earlier stage vehicles. Application stage should ideally include dialogue with later stage funding vehicles, with resulting Letters of Intent contingent on successful early stage support acquisition. This would provide the stability of long-term financing planning and funding sequencing for the projects and easier/faster project pipelines for the different vehicles.
- **Co-investment in common user infrastructure** in industrial precincts, including transmission, hydrogen and storage, to de-risk multiple proponents at once.

### 3.3 Leveraging CEFC capabilities for rapid implementation

To move quickly while maintaining discipline, the Net Zero Fund should:

- Second experienced CEFC investment and risk staff during initial deployment phases.
- Use CEFC financial modelling, governance and credit processes where suitable to shorten set-up time.
- Build a shared project pipeline screened by NZEA and CEFC to coordinate sequencing and avoid crowding the same “sweet spot” of risk
  Net Zero Fund_ Proposed Design.
- Establish joint assessment panels that include NRF, CEFC, NZEA, institutional investors and regional advisers to accelerate approvals and promote best practice on abatement and readiness.
- Leverage CEFC relationships with super funds and banks to form co-financing syndicates and scale proven models quickly, leveraging public-private financing collaborations to crowd-in private capital that can't explicitly fully factor in carbon risks in the absence of a credible whole-of-economy carbon price.
- Publish real-time lessons from demonstrations to lift ecosystem capability and reduce repeat transaction costs across the market.