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Energising Australia's green bank

How the CEFC could catalyse massive private capital for net zero transition

- *Australia's net zero ambitions will require significant public capital to mobilise the massive investments necessary.*
- *IEEFA believes expanding the role of the Clean Energy Finance Corporation (CEFC) could address financial market inefficiencies, reduce risk and stimulate private capital, while avoiding a counterproductive competition with overseas initiatives such as those in the US or the EU.*
- *The CEFC's current strategy, primarily based on debt and equity co-investments, may struggle to attract sufficient levels of investment, and there is a need for new risk capital solutions to significantly accelerate private capital mobilisation.*

To meet its ambitious target of net-zero emissions by 2050, Australia will need to secure an enormous amount of private investment.

The [capital commitments required have been estimated](#) at AUD1.5 trillion by 2030 and potentially AUD7-9 trillion by 2060. To meet this demand, amid a growing trend domestic capital flight, Prime Minister Anthony Albanese recently hinted at an [imminent government announcement](#) on the issue. This signals potential heightened support to expedite the nation's energy transition, amplifying existing public finance assistance and fostering a favourable policy environment.

In this paper, IEEFA proposes that the government should expand its public capital offerings to address existing financial market inefficiencies and reduce financial risks. This could drive more private capital and ultimately develop a market led by private capital providers.

Public capital is going to be essential to mobilise the massive investment needed for the energy transition for several reasons. Asset-heavy decarbonisation solutions such as green steel, energy storage technologies, green ammonia and offshore wind generation projects offer massive potential, but they will require substantial capital at early stages in their lifecycle to scale up and bring costs down towards break-even. Public finance support is crucial for these nascent solutions because they do not align with conventional venture capital, private equity, or bank financing models.



Meanwhile, there is growing global competition to attract private capital and skilled labour, primarily through leveraging large public capital incentives. For instance, the [US Inflation Reduction Act \(IRA\)](#) is expected to allocate more than USD1.2 trillion to climate and clean energy initiatives by 2032, while China leads with hundreds of billions in clean energy infrastructure. The [EUR1 trillion European Green Deal](#) drives decarbonisation across the EU.

In November 2023, industry superannuation funds in Australia issued a [caution](#) that they are increasingly being enticed by overseas carbon transition initiatives like the IRA. Indeed, two major Australian funds, [IFM and Aware Super](#), recently announced a commitment to invest GBP15 billion in Britain and Europe’s infrastructure and energy transition over the next five years. This trend of capital flight can be expected to intensify unless the Australian government provides viable alternatives.

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Ultimately, relying solely on market forces for Australia to achieve its decarbonisation targets may prove inadequate, especially considering the absence of an effective price on carbon externalities.

Unfortunately, [Australia appears to be falling behind](#) internationally in providing comparable public finance support, both in terms of the scale and the variety of financial mechanisms. This lag leaves us at risk of eventually incurring higher total costs due to a delayed energy transition. While there have been welcome policy measures at both the federal and state level, it is now the time to unleash the full potential of public finance, amassing the investment required at the speed and scale needed for a cost-effective transition.





Filling the funding gap – The untapped potential of the CEFC

The government, through the Australian Renewable Energy Agency (ARENA) and Clean Energy Finance Corporation (CEFC), has effectively utilised public capital to attract private investment and expedite the development of clean energy infrastructure in Australia. While ARENA provides government support in the form of grants, the CEFC predominantly employs a co-investment approach, with risk-return mandates bolstered by rigorous due diligence and knowledge creation. It offers tailored co-financing solutions such as flexible debt and equity finance, green bond investment through alternative listed or unlisted funds, and discounted finance for small-scale businesses, electric mobility and households.

These are crucial mechanisms that have been quite successful in Australia. Yet they represent only two extremes of the public finance spectrum (i.e. grants and co-investment); great untapped potential lies in between, in the form of various “catalytic” financial mechanisms.

What is “catalytic capital”?

Catalytic capital, by accepting disproportionate risks or providing concessionary returns, can have a positive impact in facilitating third-party investment that might otherwise be challenging. It has the potential to expedite innovative solutions to social and environmental issues, offering project developers greater freedom in shaping their business models, and attracting co-investors with diverse risk and return preferences. The benefits of catalytic capital can be categorised under six key categories, known as the “six Ps”:

- **Price:** below-market investments.
- **Pledge:** loan guarantees.
- **Position:** subordinated debt or equity positions.
- **Patience:** longer terms before exit.
- **Purpose:** flexibility in adapting capital investments to the enterprise’s needs.
- **Perspicacity:** discerning opportunities that ordinary investors may overlook.

The CEFC’s capital has primarily delivered the benefits of Position through equity exposure, Purpose in a few cases, and to some extent, Price.

IEEFA believes the CEFC’s strategic role should be expanded to exploit these mechanisms, fill the gaps in the current approach and achieve more comprehensive and effective outcomes. This would also enable Australia to avoid being drawn into massive dollar-for-dollar public spending to compete with overseas initiatives like the US’s IRA. The Australian treasury floated the possibility of enhancing the CEFC’s role in a [consultation paper](#) in November 2023. However, the approach proposed in the paper is not sufficiently radical and ambitious to achieve the intended objective.

As Australia’s green bank, the CEFC has led the way in channelling public funds towards clean energy projects for the past decade. It has invested in very early-stage, technologically viable assets that would not otherwise have access to any form of capital.



In fiscal year 2022-23, the CEFC demonstrated an impressive ability to attract private capital, achieving a mobilisation rate of AUD5.02 for each dollar of public funds. This marked a significant increase from previous years, where the rate was [AUD2.82](#) in private capital per dollar of public funding. While it is unclear what impact the higher interest rate environment has had, the increased private capital mobilisation in 2022-23 has been attributed to strategic investments in transformative projects, including its AUD100 million commitment to the NSW Waratah Super Battery, and its largest-ever investment, at AUD222.5 million, in Victoria's 756-megawatt Golden Plains Wind Farm.

It is encouraging that even with a more profit-oriented, and therefore less catalytic form of public capital offered by CEFC, private investors have responded quite generously. It also indicates that if the CEFC provides more catalytic forms of public capital, we can expect even higher mobilisation of private capital.

While there have been many [propositions](#) to increase public funding to accelerate investment in energy transition, there has been little discussion on which kind of public capital offering would be most effective and catalytic. Ideally, it should be a portfolio of bespoke financing offerings that a public financing institution should provide. In IEEFA's view, there is one major financial instrument in particular that is missing or has not been utilised in the current portfolio of government public capital offering, and that is the credit enhancement mechanism.

Designing the right tools

The CEFC predominantly uses debt (primarily senior debt in the capital structure) and equity structures via co-investment, with a few instances of interest rate buy-down offerings. This form of capital delivers the key catalytic benefits of Position, through equity exposures, Purpose in a few cases, and Price to some extent (see the text box above). It targets a mandated [2%-3% return](#) (at portfolio level) above the five-year Australian government bond rate on its allocated capital, which currently stands at AUD30.5 billion over its lifetime.

The fact that the [Australian Ethical Infrastructure Debt Fund](#), a commercial debt fund focused in the clean energy space, is proposing a comparable return profile suggests that private investors are starting to offer similar costs of financing. It indicates that the CEFC should focus on providing bespoke financing solutions that should be more catalytic. This also implies that the level of additionality the CEFC could offer in its investments may need to be re-evaluated in certain segments, particularly as it is currently constrained by its return mandate.

This form of capital, which is primarily constrained by a need to generate returns (given its use of taxpayers' money) and minimal discounting, would not deliver the necessary scale. More importantly, it would not sufficiently mitigate the existing financing uncertainties pertaining to the energy transition infrastructure sectors. This requires proactively designing a full suite of de-risking tools, including risk capital beyond the existing equity co-investments. Given that the majority of energy transition projects fall within the infrastructure asset class, it is crucial to minimise risk in debt investment, which forms the majority of the capital structure for any infrastructure asset.

The credit enhancement mechanism is a prominent risk mitigation tool that a typical green bank or a public financial institution like the CEFC should adopt to address specific risks, mobilise the required scale of investments, and help bring about a robust financial market in this space.



Credit enhancement mechanisms represent a highly catalytic application of public capital, enhancing the likelihood of debt repayment, and de-risking investments for financiers. They can be provided through various structures and instruments, including:

- **Loan loss reserves (LLRs).** These offer partial risk coverage to lenders by covering a predetermined percentage of loan losses. For instance, an LLR may cover losses up to 10% of the total principal in a loan portfolio.
- **Loan guarantees.** These provide full or partial coverage for potential losses on a capital provider's loan portfolio.
- **Debt service reserves.** These are funds set aside to cover potential delays or defaults in loan payments, often specified as a portion of the total bond amount, such as a six-month reserve or 10%.
- **Subordinated debt capital.** A subordinated/senior capital structure allows two types of capital in a loan. Subordinated capital, set at 10%, absorbs initial losses, attracting senior capital, which only faces losses after subordinated capital is exhausted, functioning like an LLR. Sometimes, subordinated debt instruments are referred to as mezzanine financing.

These instruments can play a pivotal role in attracting private lenders and investors to ventures like green hydrogen and large-scale battery projects. They are especially suited to sectors or projects that have conducted demonstration pilot projects but face challenges in scaling up due to a dearth of debt capital. A green bank like the CEFC, with government backing, is better placed in terms of delivering on a concurrent strategic national interest objective to underwrite such instruments than the private sector. Providing affordable and well-designed credit enhancement mechanisms can significantly reduce the overall borrowing costs of clean energy infrastructure projects by multiple percentage points. This can be especially beneficial in the current environment of high interest rates. Furthermore, [it has been observed](#) that well-designed credit guarantee mechanisms can mobilise five times more private capital than other instruments like loans and lesser capital commitments.

(While the impact of guarantees on mobilisation is evident, caution is needed when comparing inherently different instruments. Mobilisation ratios, while valuable for assessing the efficient use of public capital, should be evaluated in conjunction with other conditions to ensure proper incentivisation.)

Credit enhancement instruments can also benefit the relatively mature sectors such as large-scale renewable energy generation projects, which still face market inefficiencies such as Australia's current lack of long-tenor debt capital, which is currently primarily provided only at [5-7 year loan tenors](#), and low loan-to-project values of 50%-60%. It would be far better to match some of the debt to the tenor of the power purchase agreement, which can extend 10-25 years, as is done in the US, UK and India, for example. While such short-tenor debt increases the refinancing risk for the project developer, it also creates uncertainties among institutional investors such as superannuation funds. The CEFC can also address this barrier by providing long-tenor concessional debt. However, it will lock CEFC's capital for longer term.

The appropriate credit enhancement tool can absorb the risk of loss of debt capital invested by senior lenders. As a result, it can be used as a negotiating tool to convince lenders to reduce interest rates or provide longer loan terms, as well as providing higher loan-to-project values (70% debt of the project cost once development/construction risk is removed). Emerging



technologies including storage, green hydrogen and electric vehicles would gain tremendously from the improved viability afforded by longer-tenor, lower-cost financing. Additionally, the CEFC can leverage the federal government's forthcoming Capacity Investment Scheme to help develop the missing long-tenor clean energy infrastructure debt markets that are needed in Australia.

Credit guarantee mechanisms have been employed by several public financial institutions globally. Government guarantee programmes around the world are helping to reduce capital costs for climate-tech businesses and projects.

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The US Department of Energy runs one of the largest credit guarantee programmes, committing more than [USD25 billion](#) to support renewable energy facilities. The EU [Green Deal Investment Plan](#) proposes EUR1 trillion in financing from 2021-27, including more than EUR500 billion from the EU budget and emissions trading system. It utilises EU budget guarantees to mobilise EUR279 billion in additional public-private funding through InvestEU. In Europe, similar schemes are in place – the [Swedish export credit agency](#) has provided up to EUR675 million or 15% in guarantees for a green steel manufacturer's EUR4.5 billion debt facility, while the [Swedish debt office](#) provided an 80% credit guarantee for a EUR300 million loan for a refinery expanding renewable fuel supply. At COP28, the UAE also announced its US30 billion [Alterra initiative](#), which has allocated US25 billion for scaling climate investments and USD5 billion for risk mitigation, and has already committed USD6.5 billion globally, including in developing regions.

These various schemes demonstrate how government loan guarantees are significantly helping to mobilise private capital at large scales for lower-carbon projects and technologies around the world.

Better policies will be vital

Over its ten-year history, the CEFC has not utilised any forms of catalytic risk capital (except for equity co-investment) mentioned above due to the limitations imposed in its investment mandate as stated in section 64 of the Clean Energy Finance Corporation Act 2012 (the Act). Encouragingly, in the latest [investment mandate direction](#) issued on 20 July 2023, the CEFC was given some flexibility to provide guarantees and concessional financing. However, these were limited to projects under the Rewiring the Nation Fund, and the specific nature, size and scope of these guarantees and concessional nature were not outlined in the directive. It seems that they will mostly remain restricted as per section 69 of the Act.

Similarly, the AUD15 billion [National Reconstruction Fund Corporation](#) (NRFC), established in 2023, includes provisions for offering guarantees. However, the credit guarantee structure details are not provided yet. It is essential to note that NRFC is not solely dedicated to the energy transition sector but spans seven priority sectors. Therefore, it would be prudent to designate the CEFC as the primary entity responsible for designing and underwriting these guarantees, promoting a more streamlined process and leveraging its established capabilities regarding due diligence. Alternately, close collaboration between the two entities could be promoted.

The use of risk mitigation instruments would channel and accelerate the mobilisation of institutional private capital by providing improved risk-adjusted returns. One of Australia's largest pools of private capital lies within its [AUD1.2 trillion](#) superannuation industry (projected



to grow to AUD3 trillion by 2030) and the wider AUD3.5 trillion of super assets across Australia, including self-managed super funds. With the right policies and investment opportunities de-risked using the risk mitigation instruments we propose, superannuation funds could represent a major source of long-term, low-cost capital, critical for Australian energy transition.

The CEFC is well placed to leverage private market capacity – a key objective – given its financial market experience and track record, established independent board oversight, and institutional capacity in due diligence and risk assessment. CEFC involvement will ensure careful selection of opportunities where public funding adds value, while avoiding issues like moral hazard or crowding out private capital. We see further scope for the CEFC to utilise financial instruments such as convertible debentures, to capitalise on portfolio upside commensurate with the risks taken to stimulate investment in disruptive climate technologies.

Conclusion

Achieving Australia's net zero targets by mobilising trillions in climate investments over the coming decades demands expanding the ambit of public capital, in addition to ongoing policy reforms and technological advancements. Currently, public finance mobilisation is predominantly carried out through the CEFC, but it is crucial to move beyond that organisation's current return-mandated approach.

Drawing from successful models of public capital deployment globally, CEFC must substantially enhance its strategic role and capabilities. This includes supplementing its current approach of investment with a full spectrum of tailored risk mitigation tools, credit enhancement structures, and blended vehicles optimised for mobilising exponentially more aggregate private capital. With strategic priorities centred on astute use of taxpayer funds, impact maximisation and knowledge creation, the CEFC has the potential to power Australia's transition in a profoundly catalytic manner.

Australia has established significant public finance capabilities. Now is the time to channel this more judiciously, innovatively, efficiently and effectively.



About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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