



# Powering towards our net zero economy

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Find out how the CEFC is helping  
finance our renewable energy  
system of the future, via the  
Rewiring the Nation Fund.



Australian Government



# Rewiring the Nation

Rebuilding our energy system is a large and complex task. Grid and transmission infrastructure projects require substantial capital, expertise and time to bring online.

For investors, these challenges are further compounded by macro-economic factors, including global uncertainty and supply chain disruptions.

As just one of many nations undergoing an energy transformation, Australia is in a race for capital, equipment and expertise. Through the RTN Fund the CEFC is charged with investing \$19 billion on behalf of the Australian Government in a range of projects essential to the achievement of our net zero emissions ambitions.

We are pleased to share this information explaining our approach to this critical national investment program.

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## Acknowledgement of Country

The CEFC acknowledges the Traditional Owners and Custodians of this land, and we pay our respects to all Elders, past and present. We recognise their continuing connections to country, water and culture.



# Powering towards our net zero economy

The Australian and global economies are undergoing a seismic shift similar in scale and impact to that brought by the industrial revolution of the 19th century, the arrival of the car in the 20th century and the remarkable digital transformation of the 21st century. The energy transition reflects the ambitions of these earlier transformations.

It is no secret that the energy technologies that served us well in the 20th century are no longer fit for purpose. Global uncertainty has brought higher and more volatile energy prices. Closer to home, fossil fuels are rapidly disappearing from our generation mix, leaving a substantial gap in our energy supply. The urgency of reducing our emissions cannot be underestimated. Our world is warming, leaving Australia increasingly exposed to bush fire, flood, drought and temperature extremes.

Australia is perhaps uniquely placed to address both these challenges concurrently: low-cost renewable energy on the planet's sunniest continent can fill the fossil fuels gap, while also making a material difference to our emissions.

The gap in our energy supply can be readily filled by renewable energy, the cheapest form of new generation and in abundant supply in Australia. Renewable energy is also the key to broader decarbonisation across our economy.

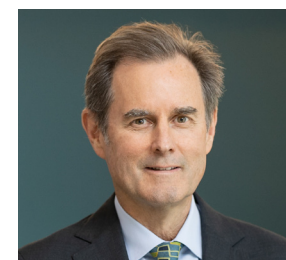
## Purpose, collaboration, urgency

The CEFC was established to drive investment in our clean energy transition, reflecting the essential role of both public and private sector capital in cutting emissions across our economy. Working alongside borrowers, sponsors, and co-investors we have seen our lifetime investment commitments through our core fund deliver more than \$52.1 billion in total transaction value, towards our net zero economy of the future.

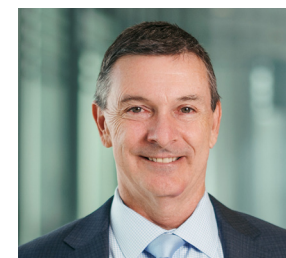
We recognise that our grid and transmission infrastructure must be reinforced and strengthened so they can absorb increased output from our massive solar and wind resources, which are located in places that are optimised for their generation. It is this experience and sense of purpose that drives our approach to investment commitments via the RTN Fund. With an additional \$19 billion we are charged with addressing the financial barriers that may impede the critical transformation to low cost and low emissions renewable energy, while working to ensure the lowest consumer cost impact.

We do not underestimate the scale or complexity of this challenge, nor do we shy away from the urgency of the net zero transition. As Australia's specialist 'green bank' we know the value of collaborating with government, regulators, industry and investors in delivering on this critical task.

We trust this material provides insights into the operation of the RTN Fund, and the role of the CEFC in addressing the financing barriers to Australia's clean energy transition.



**Ian Learmonth**  
CEFC CEO



**Paul McCartney**  
CEFC CIO – RTN



## A modern energy system for a modern economy

Today's electricity system has come a long way since the day in 1888 when Tamworth flicked the switch on 21.5 km of electric street lighting, an Australian first.

At the time, the City of Light had a population of 4,000 and Australia an economy around one per cent the size it is today. It took almost three decades before Tasmania gave us our first 100-kilometre transmission line. Since then, our reliance on electricity has skyrocketed, accompanied by incredible feats of engineering, from large-scale solar and wind to batteries, transmission and Snowy Mountains Hydro-electric scheme.

In less than a decade we have become home to some of the world's biggest batteries. Our boundless enthusiasm for rooftop solar is self-evident. And substantial investment in large-scale solar and wind has put our regional and rural economies at the centre of the clean energy transition.

The unplanned and early exit of coal generation has raised the spectre of energy scarcity and potential grid instability, despite Australia's abundant renewable energy advantages. These factors point to the essential role of the RTN Fund in addressing financing barriers in a timely manner so we can build a more robust, integrated energy system that is fit for purpose for our net zero future.



“

The economic transformation associated with the shift to net zero is the biggest economic change since the Second World War, and it will happen much faster.”

**Net Zero Economy Agency**





# Australia's 'green bank'

Like other green banks, the CEFC invests to fill market gaps and collaborate with market participants to lead investment where it will have the greatest impact. This requires deep sector experience, investment expertise and portfolio strength.

The RTN Fund of \$19 billion is a significant expansion of our investment capacity. We are focused on facilitating the timely delivery of grid and transmission projects and using our capital to extend the benefits of grid transformation to consumers, including by helping to lower consumer energy costs.

Through the RTN Fund we are spearheading investment in transmission infrastructure, long-duration storage, electricity distribution network infrastructure and distributed energy resources. Through the CEFC General Portfolio, our initial \$10 billion appropriation, we will also invest in renewable energy projects including those related to the Australian Government's [Capacity Investment Scheme](#), which is targeting an additional 32 GW of renewable capacity by 2030, as well as large-scale battery storage.



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Cost of project financing is a major component of the cost of clean energy. The financial methods that green banks use are aimed at reducing these costs and making capital more affordable and available to clean energy projects. The result is more clean energy being deployed at lower cost. Consumers save money, developers and investors get to build more projects, and dirty, polluting energy sources get replaced.”

Coalition for Green Capital



# National energy transformation

## Where we are today



### Across the eastern states:

The National Electricity Market (NEM) represents the five physically connected east coast areas of Queensland, NSW/ACT, Victoria, Tasmania and South Australia. It generates around 200 terawatt hours of electricity annually, to meet about 80 per cent of Australia's electricity needs, across a transmission system of some 40,000 km.



### In Western Australia:

The South-West Interconnected System (SWIS) provides power to more than 1.2 million customers across a 7,750km transmission system centred on Perth. In the Pilbara, the North-West Interconnected System (NWIS), delivers power to major towns and resource projects. It includes a number of interconnected electricity networks with different owners.



### In the Northern Territory:

The Power and Water Corporation provides electricity transmission and distribution services across more than 1.3 million square km. It also supplies electricity generation, distribution and retail services to 72 remote communities through its wholly-owned Indigenous Essential Services entity.

## Where we are heading

National, State and Territory authorities have identified investment priorities for energy system renewal, with varying capital, technology and timing requirements reflecting specific geographic and population factors. These plans have added urgency with the rapid exit of substantial coal generation from our energy mix over the next decade.

All priorities recognise that investing in transmission is part of the lowest cost way to supply electricity to homes and businesses as Australia transitions to a net zero economy. CEFC capital may not be required for all priority projects. Equally, the CEFC can invest in related projects which may complement transmission priorities.

As reflected in the [CEFC Investment Mandate](#), the CEFC Board may seek and consider the advice of the Rewiring the Nation Office (RTNO), the Australian Energy Market Operator (AEMO) and/or the Australian Energy Infrastructure Commissioner (AEIC) with respect to investments relevant to the RTN Fund. The CEFC Board may also take into account advice from the nominated national Minister, and relevant State or Territory Energy Ministers in considering whether a project is a priority for the delivery of national, State or Territory emissions reduction targets.

→ Refer Appendix A.





## Market fundamentals

### Energy system imperative



We are changing the way we produce and use electricity. In terms of production, the rapid exit of coal generation has profound implications for our energy system. As much as **46 per cent** of coal generation will exit our energy system by 2030, and 100 per cent by 2038.

In terms of energy use, over the same period, electricity demand is forecast to nearly double, to support economic and population growth alongside widespread electrification, from electric vehicles to home electrification, industrial processes, the growth of data centres and the two-way flow of energy.

AEMO analysis shows the NEM requires about 6 GW of additional renewable energy capacity every year to 2030 to reach 82 per cent renewables. By comparison, the current rate of additional capacity is just below 4 GW. Within the next decade, 4,000 km of new transmission corridors is required, alongside upgrades to about 1,000 km of existing lines. The scale of this investment task is considerable, as are the broader economic, energy and emissions benefits.



Renewables have the lowest cost range of any new-build energy technology, even when considering additional integration costs such as storage and transmission.”

CSIRO GenCost

### Emissions imperative



The electricity sector is the largest single source of our emissions, at 32.6 per cent. Any transition to a low emissions economy must start with energy transformation, the critical gateway to the decarbonisation of other areas of economic activity, including growing transport emissions.

We are **ranked 55** in terms of population, but **CSIRO research** suggests we are the world's 14th highest emitter. This means our share of global emissions, at just over one per cent, far exceeds global per capita emissions.

Data from the Bureau of Meteorology and CSIRO shows that Australia is already experiencing **significant climate change**. Our climate has warmed an average 1.48°C since national records began in 1910. Our oceans are acidifying, having warmed by around 1°C since 1900. An increase in extreme fire weather, and in the length of the fire season, has occurred across large parts of the country since the 1950s.



Australia's reputation as an open economy with transparent, stable legal and governance systems and a highly-skilled workforce makes it an attractive investment destination. Sustainable finance ... can be a significant competitive advantage for Australia.”

Climate Change Statement 2023



## Market fundamentals

### Renewable energy imperative



Analysis from the Clean Energy Council shows that renewables represented almost 40 per cent of Australia's total generation in 2023, a lift of almost 10 per cent in a single year. Construction and new financial commitments to large-scale storage also ballooned, with 27 battery projects under construction in 2023, up from 19 a year earlier. As promising as these figures are, they highlight the challenge of reaching 82 per cent renewables by 2030.

Our existing electricity and grid infrastructure was built to support a large and relatively centralised generation mode, principally, power generated from massive coal-fired generators, transmitted thousands of km to energy consumers.

The Australian Energy Market Commission (AEMC) reported 583 renewable energy projects were in the connections queue awaiting registration in December 2023. This means the energy network of our net zero future needs to be notably more decentralised to address connection delays and limit curtailment events for renewable energy generators.



Of the 56 renewable energy projects under construction as of December 2023, 38 were large-scale solar projects, down from 48 at the same stage in 2022."

Clean Energy Council

### Global imperative



The International Energy Agency estimates global electricity transmission and distribution grids need to expand by around two million km each year to 2030. In parallel, its analysis suggests the growth in global installed renewables capacity will need to triple, to 11,000 GW, by 2030.

The investment requirements are equally ambitious. According to *Energy Transition Investment Trends 2024*, a report published by BloombergNEF, investment in electricity infrastructure and grids needs to increase from US\$310 billion in 2023 to an average annual US\$700 billion by 2030. The annual investment task for renewable energy lifts from US\$623 billion to US\$1,317 billion over the same period. While these are undoubtedly big numbers, it's important to consider them in context: new investment in fossil fuel was US\$1,098 billion in 2023.

Perhaps more important is the emissions context. Global emissions need to fall from 57 Gt CO<sub>2</sub>-e in 2022, to around 33 Gt CO<sub>2</sub>-e in 2030, to meet the 1.5°C target of the Paris Agreement.



The case for transforming the global energy system in line with the 1.5 °C goal has never been stronger. August 2023 was the hottest on record by a large margin, and the hottest month ever after July 2023."

International Energy Agency





# About the RTN Fund

Through the \$19 billion RTN Fund, the CEFC is focused on investments that facilitate the timely delivery of grid and transmission projects and extend the benefits of grid transformation to consumers.

RTN Fund investments reflect the commercial rigour of the well-established CEFC investment approach. Importantly, RTN Fund investments complement and extend the impact of existing and new CEFC investments across our broader portfolio, particularly in the areas of renewable energy and large-scale battery storage.



The RTN Fund investments are intended to reduce the funding costs of building the required grid electricity infrastructure needed for the energy transition.”

## The CEFC

## Addressing financing barriers

As with all our investments, through our RTN-related transactions, the CEFC seeks to use our capital to address financing barriers. With respect to the RTN Fund, these include:



Address gaps in the capital structure where existing financing arrangements have proven intractable.



Bring investment certainty to priority transmission projects to enable transactions to close and construction to proceed.



Support scale-efficient investment to future proof the grid to accommodate additional low cost renewable energy generation as it comes online, further improving community outcomes.



Assist project proponents to overcome global supply chain challenges, created by unprecedented demand for decarbonisation and geopolitical concerns around energy security.



Work with regulators to update cost recovery arrangements for transmission and distribution infrastructure so that the benefits of RTN Fund concessional finance are passed through to consumers in the form of lower energy costs.



Consider measures when making RTN Fund investments which can benefit electricity consumers, including through the use of concessional finance.



## Eligible investments

RTN-related investments are expected to lower Australia's emissions by enabling the transition of our energy system to one based on at least 82 per cent renewables. Eligible investments may include:

- 1 Priority transmission projects identified by AEMO and other transmission network authorities
- 2 Opportunities to enhance benefits to electricity consumers, including additional renewable energy generation facilitated by RTN investments.
- 3 Long duration grid storage and enhanced electricity distribution network infrastructure, including distributed energy
- 4 Measures to strengthen the security, reliability and affordability of the grid, including demand management resources
- 5 Enhancements to grid infrastructure to support a hydrogen hub or offshore electricity project

## Investment approach

The CEFC has a strong track record in facilitating difficult transactions, investing ahead of market participants to address financial, technical and/or commercial market gaps. This experience is vital to the success of grid modernisation, where financial barriers to investment reflect a complex regulatory environment, involving both private sector and Government-owned operators.

### Financing arrangements

While all CEFC RTN investments must be financial assets, we have a flexible approach to the structure of our financing arrangements, within the context of the CEFC Act and Investment Mandate. We can invest at scale and across the capital structure. We can also finance both regulated and non-regulated businesses and/or projects.

RTN Fund investment decisions seek to balance the terms required to facilitate individual projects with the ability of the CEFC to recover capital through repayment or refinance with a view to re-investing returned capital. By de-risking investments and actively managing or refinancing assets, the CEFC also aims to build market confidence and "crowd in" additional capital while contributing to the delivery of public policy benefits.

The RTN Fund does not provide grants. CEFC finance is expected to be repaid in full, although at a lower rate of return compared with an equivalent or comparable commercial transaction.

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We've reached a major milestone following 12 months of profound change as industry and governments at all levels continue to work together with a renewed focus on a timely transformation of our energy system.”

**Clean Energy Council**





## Investment approvals

The independent CEFC Board is responsible for approving CEFC investments. The Board has well-established **Investment Policies and Investment Guidelines** explaining its investment approach. These extend to the RTN Fund.

The CEFC undertakes a thorough evaluation of the commercial merits and relative investment attractiveness of prospective investments. The selection of particular investments is influenced by the anticipated emission reduction outcomes and impacts, the risk profile of the investment and having regard to the relevant risk settings for CEFC capital. The risk profile includes consideration of factors including, but not limited to, financial, ESG and reputational considerations.

### Investment Advisory Committee

The CEFC RTN Investment Advisory Committee provides the CEFC Board with an additional level of review and evaluation of the more complex and large-scale transactions likely to be considered for potential investment by the RTN Fund.

The Committee assesses the risks and mitigants of a particular transaction, and whether a proposed transaction is consistent with Australian Government policy objectives, taking into account matters such as project delivery risk, proposed financing structures and commercial factors. The CEFC Board retains overall responsibility for investment decisions, including those related to the RTN Fund.

## Concessional finance

Concessional finance, which the CEFC has used sparingly since it began investing, will necessarily play a more significant role in RTN Fund investment commitments given their additional scale and RTN policy objectives. Concessional finance is a loan made on more favourable terms than the borrower could otherwise obtain in the market. It may include non-market characteristics such as alternate risk positions, lower finance costs, deferred payment arrangements and longer loan tenors. For regulated projects, the use of concessional finance lowers the cost to deliver projects and this benefits electricity consumers in the form of lower energy costs and/or helping to accelerate or to ensure priority transmission projects proceed. CEFC concessionality arrangements are determined on a case-by-case basis.

### Investment returns

The level of concessionality represents a noncash 'opportunity cost' to the CEFC, based on the difference between a nominal loan value at the concessional rate and the fair value at the market or assumed rate of finance on equivalent terms. Notably, the provision of concessional finance does not represent a grant from or a loss to the CEFC.

CEFC finance is expected to be repaid in full, together with investment returns (fees and interest) although at a lower rate of return compared with that of comparable risk adjusted market offerings. CEFC concessionality arrangements are determined on a case-by-case basis, with individual financing details commercial in confidence.

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RTN objectives include delivery of the energy transition without unnecessary delay and a lowering of cost to consumers, particularly households and businesses in remote, rural and metropolitan areas. Concessional finance can help to achieve the objectives.”

### CEFC Investment Policies



## Financial risk

As a public policy investor, the CEFC seeks the minimum level of risk required to achieve RTN objectives. The specific types and levels of risk taken are specific to each project. In each case, they are assessed as required, to enable a project to proceed or overcome unnecessary delays.

The CEFC Board acknowledges the heightened project and concentration risk of the RTN Fund exposure of \$19 billion to largely new build transmission and storage infrastructure.

The Australian Government has recognised this in providing the CEFC Board with the ability to take elevated risk in the RTN Fund, with the elevated risk appetite expected to be a valuable tool to catalyse investment where appropriate.

The CEFC RTN Investment Advisory Committee provides an additional level of investment and progress review and evaluation of large, complex RTN Fund transactions.

## RTN Fund oversight

### 1 Clean Energy Finance Corporation

The financing arm of the RTN Fund, the CEFC has access to \$19 billion to invest in priority grid-related developments, together with the private sector and Government agencies.

### 2 Rewiring the Nation Office

Operating within the Department of Climate Change, Energy, the Environment and Water, the RTNO has access to \$1 billion to invest in grid-related developments which are not eligible for CEFC investment finance.

### 3 Australian Energy Market Operator

AEMO provides technical advice on network infrastructure requirements, including priorities identified in its Integrated Systems Plan.

### 4 Australian Energy Infrastructure Commissioner

The AEIC helps address community concerns about large-scale solar and wind farms, energy storage facilities and new major transmission projects.

“

Consideration of proposed returns from RTN Fund investments are made in the context of project delivery risk; the proposed financial instrument; loan tenor relative to investment life cycle; financial model and sensitivity analysis and matters related to proposed concessionality.”

**RTN Investment Advisory  
Committee Charter**





# RTN benefits

The scale of the RTN program offers benefits beyond the core focus areas of emissions reduction and renewable energy transition. Particular benefits will flow to rural and regional areas and may include:

1

Local employment and skills development opportunities in large-scale infrastructure developments and/or local businesses

2

Downstream economic activity for local suppliers, including equipment, education, accommodation, catering and entertainment

3

Additional income for landholders, providing an ongoing revenue stream to complement farming returns

4

Dedicated income streams for community benefit programs, co-developed with asset developers and communities.



“

The effects of the transformation will be felt by all Australians, and there will be significant opportunities for regional communities and Northern Australia to benefit from the transition. It is important that communities are engaged closely on these effects and potential opportunities to maximise benefits.”

Climate Change Statement 2023



## Electricity prices

RTN Fund investments will consider measures that can benefit electricity consumers which may include downward pressure on retail electricity prices. Refer to CEFC Investment Policies:

**Solving investment gaps** – Where financing arrangements have proven intractable under existing arrangements, the RTN Fund can work creatively to solve for gaps in the capital structure to enable the transaction to close and construction to proceed.

**Elimination of unnecessary delay** – Grid investment enables more low emissions, low-cost generation to connect to the system prior to market exits, which will help to suppress prices. RTN Fund participation will (a) unlock new generation, and (b) eliminate unnecessary delays, bringing forward market, emissions and consumer benefits. Overcoming unnecessary delay may necessitate earlier and greater use of concessionality by the RTN Fund to stimulate earlier investment decisions. Downstream economic activity for local suppliers may include equipment, education and accommodation.

**Strategic procurement and delivery** – To deliver efficiencies of scale through equipment procurement and construction contracting. This is particularly relevant where global supply chains have been severely tested by unprecedented demand for decarbonisation and geopolitical concerns around energy security. There are also cost and social benefits in optimising the deployment of workers to projects that are built sequentially.

**Lower finance cost** – The RTN Fund may use concessionality for projects that lowers the cost of finance which may directly or indirectly benefit electricity consumers by lowering energy prices. Where there is a direct pass through, this is a known amount and can be measured in dollar terms.

### Case study

## Energy market rules change benefit consumers, grid

The Australian Energy Market Commission confirmed two new rule changes to facilitate lower costs to consumers as well as faster delivery of critical transmission infrastructure needed for the energy transformation.

1. The rule change on concessional finance will allow the benefits of concessional finance for transmission and distribution projects provided by government funding bodies, including the RTN Fund, to be passed back to consumers in the form of lower network charges.
2. The rule change on financeability seeks to improve the ability of transmission network service providers (TNSPs) to efficiently finance the timely delivery of major projects by modifying the timing of depreciation to manage cash flows. This will deliver benefits to consumers in the short and long term, without providing additional revenue to TNSPs in real terms over the life of the assets.

The CEFC was pleased to contribute to AEMC considerations on these two important matters.



## Employment

The energy transition requires a large skilled workforce across every discipline. Preliminary modelling for [Jobs and Skills Australia](#) shows that Australia will need 26,000- 42,000 more electricians in the next seven years, with the broader clean energy supply workforce likely to grow from 53,000 workers today to 84,000 by 2050.

In the NEM alone, [AEMO forecasts](#) the demand for skilled people directly employed to build new energy infrastructure will increase from approximately 48,000 in 2025 to more than 66,000 by 2030.

In assessing all its investments, including the RTN, the CEFC is required to give consideration to *“the provision of local employment opportunities in the delivery of clean energy technologies”* where practical.

As an investor, the CEFC does not directly make employment decisions at the project level. This is a matter for project proponents. However, across our portfolio – including and beyond the RTN Fund – we seek to use our capital to indirectly influence positive outcomes through our investment deliberations.

### Net Zero Economy Agency

The rapid exit of coal generation has profound implications for our energy system. As much as 50 GW of coal and gas power will exit our energy system by 2050, as ageing and faltering assets near the end of their operational life. Over the same period, electricity demand is forecast to nearly double, to support economic and population growth, alongside widespread electrification.

The [Net Zero Economy Agency](#) is responsible for promoting orderly and positive economic transformation to ensure Australia, its regions and workers realise and share the benefits of the net zero economy. Tasks include catalysing investment in new industries and jobs, particularly in emissions-intensive regions and supporting workers impacted by the net zero transition, particularly workers in coal-fired power stations and dependent mines, transition to new opportunities.

### Relevant factors in CEFC investment deliberations may include:



#### Application of Australian Industry Participation Plans:

This requires project proponents to describe how they will give full, fair and reasonable opportunities to Australian industry to participate in a project.



#### Application of the Buy Australian Plan:

This uses Australian Government purchasing power to maximise opportunities for Australian businesses in major infrastructure projects and other procurement opportunities.





## Community engagement

In investing through the RTN Fund, the CEFC is required to consider, where practical, that “*social licence for the deployment of clean energy technologies is essential to their success*”.

Government planning authorities, project owners and developers have the leading role in community engagement, from approvals through to construction and delivery.

The Australian Government has [accepted in principle](#) the recommendations of the AEIC independent [Community Engagement Review](#) on renewable energy infrastructure developments related to Australia's energy transition. The recommendations canvass improvements to site selection, planning and approval processes, and noted the importance of keeping communities informed about the energy transition and equitably sharing the benefits.

### CEFC approach

As an investor, the CEFC welcomes these recommendations, which inform our investment deliberations. Across our portfolio, we work closely with our counterparties to extend the benefits of our capital beyond a specific investment, including where we do not own or operate the assets in which we invest.

The CEFC may also seek the advice of the AEIC on RTN Fund investments with respect to community engagement, reflecting the role of the AEIC in helping community members address their concerns about wind farms, large-scale solar farms, energy storage facilities and new major transmission projects and identifies and promotes best practices, working with stakeholders from all levels of government, industry and the community.

## Case study

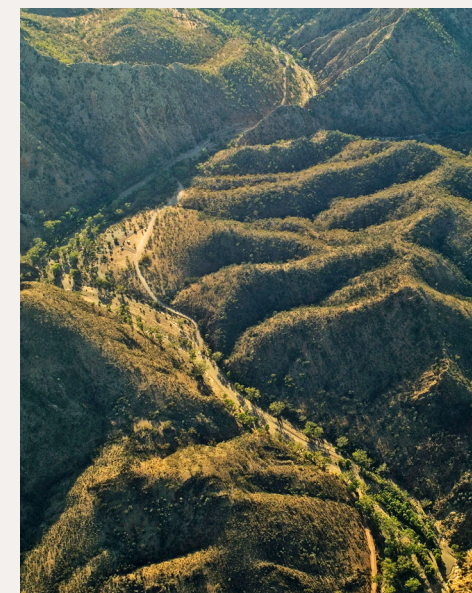
### Biodiversity benefits from wind, battery project

**\$99m**  
CEFC commitment

The CEFC committed \$99 million to the second part of Goyder South Stage 1 Wind Farm and the Blyth Battery in South Australia.

Neoen has transferred ownership of 1,000 hectares at [Worlds End Gorge](#) to the Government of South Australia, paving the way for a new national park in the state's Mid North.

The initiative emerged from Neoen's native vegetation offset strategy for its 412 MW Goyder South Stage 1 wind farm, currently under construction. It represents a long-term collaboration between Neoen, host landowners, Traditional Owners the Ngadjuri Nation, the Regional Council of Goyder and South Australia's Department of Environment and Water. The new national park will permanently preserve the environmentally and culturally significant Worlds End Gorge.



→ [Learn more](#) about South Australia's biggest wind farm



First Nations investment screening

CEFC investment proposals are screened for impacts on Aboriginal and Torres Strait Islanders through the [CEFC First Nations Screening Approach](#). These considerations also form part of our RTN-related investment decisions.

In developing the investment screening approach, the CEFC benefited from the advice of First Nations representatives, government agencies, investors and industry participants. As part of our screening approach we seek to:



Identify and assess the impacts of CEFC investments on First Nations people



Positively benefit First Nations people through CEFC and counterparty activities



Avoid or mitigate negative impacts that may be associated with these investments.

Case study

Business, jobs, education benefits

\$295m  
CEFC commitment

The CEFC has committed \$295 million to the 900 kilometre Transgrid EnergyConnect, to unlock as much as 1,800 MW of renewable energy generation projects across SA, NSW and Victoria.

Across its portfolio, Transgrid has committed to allocate 2.5 per cent of its major projects expenditure to First Nations-owned business suppliers. For EnergyConnect, it has identified a number of actions and engagement opportunities, including in civil construction and earth works, truck driving, administration, rigging and hospitality to support the project camps.

Transgrid is working with Charles Sturt University to develop training, education and employment pipelines for Charles Sturt students and First Nations people to support EnergyConnect and HumeLink, which are centred on Wagga Wagga. It has also opened a permanent community and discovery hub in Wagga Wagga for engagement with community members, landowners and businesses.



→ **Learn more** about EnergyConnect



# Appendix A: Energy system priorities

National, State and Territory authorities have identified investment priorities for energy system renewal, with varying capital, technology and timing requirements reflecting specific geographic and population factors.

The priority projects under consideration by transmission network authorities recognise that transmission investment is part of the lowest cost way to supply electricity to homes and businesses as Australia transitions to a net zero economy.

As noted in the [AEMO draft 2024 ISP](#) for the NEM, transmission planners make the most of the existing network before considering new projects, for example by using real-time weather monitoring to maximise line use. In many cases, new transmission will complete a network that can take advantage of the NEM's geographic diversity, allow renewable energy zones to transfer their future energy to where it is needed, and maintain a secure and reliable power system.

In addition, intergovernmental agreements may be reached between the Australian Government and State and Territory counterparts. While these agreements are not binding on the CEFC Board and do not commit the CEFC to making a particular investment, the CEFC and RTNO work together to consider potential models and structures to support Government policy objectives.



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Priority projects identified by transmission network operations, including AEMO, may be eligible for finance from the RTN Fund, subject to CEFC investment analysis and risk considerations. We recognise that CEFC capital may not be required for all priority projects. Equally, the CEFC may invest in related projects to complement transmission network priorities.”

The CEFC





## National Energy Market

The draft AEMO 2024 ISP provides a roadmap for the renewable energy transition in the NEM over the next 20-30 years. The NEM accounts for the majority of our population, economic activity and energy consumption. It includes the five physically connected east coast areas of Queensland, NSW/ACT, Victoria, Tasmania and South Australia. The following projects are committed', 'actionable' or 'anticipated' projects in the ISP that maybe supported by the RTN Fund.

### Far North Queensland REZ

- 500-700MW of expected installed generation between Townsville and Cairns
- Grid connection to the Kaban Green Power Hub, which includes wind and storage.

### Gladstone Grid Reinforcement

- Upgrade to the existing transmission network in Gladstone, Queensland, adding 2,600 MW of network capacity to the NEM
- Unlock new renewable energy projects, as part of the Queensland SuperGrid plan.

### Queensland SuperGrid South

- Transmission infrastructure connecting Borumba Pumped Hydro Project to the NEM to unlock renewable energy projects
- Borumba connection features two 140km 500 kV transmission lines; Southern-Central Queensland connection features one 290km 500 kV transmission line.

### Central West Orana REZ Transmission Link

- Potential to unlock \$10 billion in wind, solar and storage projects by 2030
- Transmission infrastructure to increase network capacity by 4.5 GW
- Local communities to receive \$128 million over four years.

### New England REZ Transmission Project

- Centred around Armidale, with access to renewable energy and pumped-hydro sites
- Intended network capacity of 8 GW
- Expected to unlock up to \$10.7 billion in private sector investment, including ~1,250 construction jobs.

### HumeLink

- 500 kV transmission 'loop' linking Greater Sydney load centre with Snowy Mountains Hydroelectric Scheme and EnergyConnect
- Unlock renewable energy projects and enhance transfer capacity between Victoria and NSW
- Improve wholesale market competition, reducing customer electricity costs.

### VNI West

- Victoria to NSW Interconnector West (VNI West) connecting EnergyConnect in NSW with Victoria transmission
- 500kV double circuit transmission line to improve grid reliability and unlock additional renewable energy generation.

### EnergyConnect

- Connecting SA and NSW power grids via 330 kV transmission line with ~ 800MW transfer capacity
- Grid connection capacity to extend to Victoria and also unlock renewable energy projects.

### Marinus Link

- Underground and undersea electricity and data cable between Tasmania and Victoria
- 750 MW capacity, equal to the power needs of 1.5 million homes
- ~2,800 direct and indirect jobs and ~\$2.9 billion in direct investment in Tasmania and Victoria.

*\* The CEFC committed up to \$295 million to EnergyConnect using capital from the CEFC General Portfolio in advance of the creation of the RTN Fund.*



## Western Australia

### South West Interconnected System

PoweringWA is coordinating the delivery of transmission, renewable generation, and storage infrastructure to support the decarbonisation of WA's main electricity grid, the South West Interconnected System (SWIS). The SWIS Demand Assessment noted that with the location of world-class renewable resources at the fringe of the grid, coupled with the huge footprint of the SWIS, means more than 4,000 km of new high capacity transmission lines could be needed over the next 20 years to meet industry demand for greener energy.

## Northern Territory

The Northern Territory government is developing strategies to address the Territory's 50 per cent renewables by 2030 target. Priority considerations include the Darwin Katherine Electricity System Plan, including a renewable energy hub near Darwin; the Alice Springs Future Grid Roadmap for Central Australia and the NT remote power system strategy, to be delivered via the Indigenous Essential Services program.

### North West Interconnected System

The North West Interconnected System (NWIS) in the minerals-rich Pilbara region of WA, extends 400 km from east to west and 350 km from north to south. Horizon Power oversees the NWIS, which also includes interconnected networks operated by Alinta Energy and Rio Tinto. Additional energy infrastructure is owned by Roy Hill, BHP and the Fortescue Metals Group. Horizon Power plans transmission infrastructure to reach load centres on the Burrup Peninsula and the Maitland Strategic Industrial Estate.





## Appendix B: Glossary

**Concessional finance:** A loan made on more favourable terms than the borrower could otherwise obtain in the market. It may include non-market characteristics such as alternate risk positions, lower finance costs, deferred payment arrangements and longer loan tenors. Notably, the provision of concessional finance does not represent a grant from or a loss to the CEFC, with CEFC finance expected to be repaid in full.

**Interconnector:** A high voltage cable that connects electricity systems so that surplus energy can be shared, creating a more efficient power system. An electricity interconnector can run under the sea, underground or via overhead cabling.

**Large-scale battery:** Also referred to as grid-scale batteries, utility-scale batteries or Battery Energy Storage Systems (BESS), are networks of lithium batteries installed together and connected to the grid via inverters. They can respond rapidly to fluctuations in demand and unexpected changes in energy generation, as well as release significant amounts of stored energy during peak demand periods. When co-located with renewable energy generators they can reduce the need for investment in new transmission infrastructure.

**Renewable Energy Zone:** A designated geographic location that has been identified as being rich in renewable energy sources such as wind and solar. The location has supporting infrastructure and transmission capacity to ensure that renewable energy generated can be coordinated with demand to provide a reliable, secure electricity system.

**Transmission line (double circuit):** Transmission lines carrying three phase power can be either single or double circuit. A single circuit configuration has three conductors for the three phases while a double circuit configuration has two independent circuits on the same structure. Double circuits are used where greater reliability is needed and enable the transfer of more power over a distance.

## Appendix C: Reference materials

- AEMC final rules on new finance reforms for transmission projects
- AEMC investigates greater flexibility for interconnector
- AEMO draft 2024 Integrated System Plan
- AEMO National Electricity Market
- Australian Industry Participation Plan
- BloombergNEF, Energy Transition Investment Trends 2024
- Buy Australian Plan
- CEFC Act 2012
- CEFC Complying Investment Guidelines
- CEFC First Nations investment screening approach,
- CEFC Investment Mandate Direction 2023
- CEFC Investment Policies
- CEFC Rewiring the Nation Investment Advisory Committee Charter
- Clean Energy Australia Report 2024
- Climate Change Statement 2023
- Coalition for Green Capital Green Bank Techniques
- Community Engagement Review and response
- CSIRO GenCost 2023-24 Consultation draft
- Foreign investment in Australia
- IEA Net Zero Roadmap 2023
- Infrastructure Market Capacity 2023 Report
- Jobs and Skills Australia: clean energy workforce needs
- Neoen Goyder South project paves the way for a new national park in South Australia
- Net Zero Economy Agency
- Powering Australia Plan
- Transgrid Sustainability Report Financial Year 22





## About the CEFC

The CEFC is an experienced specialist investor with a deep sense of purpose: we're Australia's 'green bank', investing in our transition to net zero emissions by 2050. With access to more than \$30 billion from the Australian Government, we're backing economy-wide decarbonisation, from renewable energy and natural capital to energy efficiency, alternative fuels and low carbon materials. In parallel, we're focused on transforming our energy grid, backing sustainable housing and supporting the growth of our climate tech innovators. We collaborate with co-investors, industry and government, recognising the urgency of the decarbonisation task. We also invest with commercial rigour, aiming to deliver a positive return across our portfolio.

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