To whom it may concern,

**Climateworks Centre submission on the Powering the Regions Fund**

Climateworks Centre welcomes the opportunity to respond to the government’s consultation on the Powering the Regions Fund (PRF). Climateworks specialises in accelerated climate transitions for Australia, Southeast Asia and the Pacific in line with a 1.5°C limit. An independent non-profit organisation, it was co-founded in 2009 by the Myer Foundation and Monash University and works within the Monash Sustainable Development Institute.

Climateworks supports the government’s creation of funds such as the PRF to support rapid economic transition to a net zero emissions economy. This fund is part of a suite of policy measures that can prepare Australia to thrive in a net zero emissions world and position our natural assets in mineral resources and renewable energy capacity. The government has an opportunity to design the PRF to support Australia’s climate policy priorities, emissions reductions targets and long-term goal of net zero emissions in line with the Paris Agreement. This is especially urgent given the window to keep global warming within 1.5 degrees is open, but narrowing.

Climateworks recommends that:

- The PRF includes an explicit objective to meet Australia’s emissions reductions targets, in line with the Paris Agreement.
- The criteria for funding includes that actions will lead to transformative change in line with sectoral or regional emissions reductions pathways in line with Australia’s emissions reductions targets.
- Funding is subject to an expectation that recipients have robust net zero emissions transition plans or explain the absence of such plans.
- PRF funding be put towards the development of renewable energy industrial precincts (REIPs) through a national place-based industrial decarbonisation program to coordinate the design and implementation of REIPs across the country. We recommend implementing the national program with two levels of governance:
  - A Transition Authority (or equivalent), administered by a secretariat at the federal level with an advisory group comprising state and territory departmental officials.
  - State- and territory-based coordinating bodies (within existing frameworks where possible or as separate entities).
- PRF funding be used through a co-investment model for implementing REIPs, alongside funds from other relevant federal programs and agencies (e.g. National Reconstruction Fund, ARENA and CEFC) and state and territory programs.

Climateworks also recommends the following complementary actions:

Co-founded by Monash University and The Myer Foundation and working within the Monash Sustainable Development Institute.
Develop sectoral pathways for emissions reductions aligned with the Paris Agreement to guide the allocation of funding

Finalise the Australian sustainable investment taxonomy as part of the Sustainable Finance Strategy currently in development

Alignment and cooperation with state and territory policy to enable greater gains and opportunities to leverage funding available in those jurisdictions.

Thank you for taking the time to consider our submission. Climateworks supports the creation of the PRF as a key part of a broader package of emissions reduction and industrial and innovation policies. We encourage the government to design all aspects of the fund in a way that maximises Australia’s opportunities to thrive in a net zero emissions world. We would welcome an opportunity to brief your team and explore our responses in further detail.

Yours sincerely,

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Industrial decarbonisation

Climateworks supports the federal government’s focus on industrial decarbonisation and transformation via the suite of policies under the Powering Australia Plan. Climateworks’ Australian Industry Energy Transitions Initiative (Australian Industry ETI) brings together key Australian industry participants\(^1\) to accelerate action towards achieving net zero supply chains by mid-century. Our findings highlight cross-cutting themes that are central to effective decarbonisation of industrial regions:

- Large-scale investment and deployment of renewable energy, energy infrastructure and measures that improve energy system efficiency and flexibility, will underpin and improve affordability and reliability of decarbonised energy systems
- Coordination across different aspects of the industry and energy systems brings multiple benefits
- Collaboration between entities yields private and public economic benefits as well as reducing barriers
- Action to enable swift deployment of technologies – whether mature, not yet commercial or emerging – sets the groundwork for transformative changes.

Investment mandate

The investment mandate for the PRF is an important opportunity to further Australia’s policy priorities and long-term goal of net zero emissions in line with the Paris Agreement as well as Australia’s 2030 emissions reduction target.

Climateworks acknowledges the government’s intention for the PRF to support industrial decarbonisation and emission reduction targets. To complement these policy goals, Climateworks recommends the government include an explicit objective for the PRF to meet Australia’s emissions reductions targets and be in line with the Paris Agreement.

In addition to the four key areas of focus for the PRF, we recommend the criteria for funding includes that actions will lead to transformative change in line with sectoral or regional emissions reductions pathways in line with Australia’s emissions reductions targets. We recommend that this applies equally to the Safeguard Transformation Stream and the Industry Decarbonisation Stream. We note that application of the fund to Safeguard covered entities could create the risk of windfall gains from public funding through the generations of Safeguard Mechanism Credits.

We further recommend criteria for funding includes an expectation that recipients have robust net zero emissions transition plans in place or be asked to explain the absence of such plans. A mandate with that expectation would further strengthen market signals regarding climate risk and growing requirements for decarbonisation planning. This would reinforce the government’s forthcoming requirements for internationally-aligned mandatory corporate disclosures on climate change. The PRF is a significant opportunity to support Australian industry while meeting the new expectations of governments and community in embedding net zero transition planning into business and industry and aligning with international standards on sustainable finance.

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\(^1\) The industry participants are: Australian Gas Infrastructure Group, APA Group, BHP, BlueScope Steel, BP Australia, Fortescue Metals Group, Orica, Rio Tinto, Wesfarmers Chemicals, Energy & Fertilisers and Woodside; Aurecon and Schneider Electric; Westpac; AustralianSuper; Cbus; HSBC Australia and National Australia Bank; ARENA and CEFC.
Complementary government action

In addition to specific design elements of the PRF, Climateworks recommends that the government develop a greater understanding of the least-cost emissions reduction pathways by sector and region that can deliver Australia’s economy-wide emissions reduction goals. As part of the consultation on the National Reconstruction Fund (NRF), Climateworks has recommended that the proposed development of sectoral co-investment plans under the NRF includes emissions reductions pathways. These could compliment the regionally focused work of the PRF and help prioritise investment opportunities for both funds.

Climateworks recommends:

- Allocation of the PRF is guided by sectoral pathways for emissions reductions aligned with the Paris Agreement. Climateworks has recommended including sectoral pathways in the implementation plans for the National Reconstruction Fund and suggests that these could guide allocation of both Funds. Aligning support and incentives from the PRF with these pathways will advance their achievement and support private-sector action.
- Finalising the Australian sustainable investment taxonomy as part of the Sustainable Finance Strategy currently in development to provide consistent definitions of what constitutes sustainable investment would bolster the investment mandate of the NRF and other public and private investment to help achieve emissions reduction goals.
- Aligning with state and territory policy to enable greater gains and opportunities to leverage funding available in those jurisdictions.

In addition to supporting domestic policy outcomes, a well-designed PRF can support Australia’s position in global markets as the world transitions to net zero. Significant shifts are already taking place as global supply chains decarbonise. Australia’s trade partners and competitors are already investing in transition and have expectations around access to low- and zero-carbon goods and services. As carbon border tax adjustments come into force, the global market for decarbonised goods will become more competitive. Just as the Inflation Reduction Act in the United States is incentivising private sector emissions reduction, so too can the PRF, in combination with other funds, play a similar role and support positioning Australia as a global leader.

Supporting regional Australia’s contribution to emissions reductions

Climateworks has structured this submission response around the four key areas of focus for the PRF. For additional detailed information on the nature of industrial decarbonisation, opportunities, challenges and ways governments, investors and industry can resolves these, please see our reports from the Australian Industry ETI. The report *Setting up industrial regions for net zero* presents a range of emissions reduction opportunities across five high-emitting industrial regions (Climateworks Centre and Climate-KIC Australia 2022). The third report from the Australian Industry ETI is forthcoming and will provide a high-level of detail on decarbonisation pathways for five heavy industry supply chains: iron and steel, aluminium, other metals, chemical and liquefied natural gas (Climateworks Centre and Climate-KIC Australia 2023). This work provides helpful guidance for government action to support successful industrial decarbonisation and regional economic development. Climateworks has taken insights from this work and from our work on REIPs to provide advice on the design of the PRF. Achieving the scale of decarbonisation potential identified through the Australian Industry ETI work will require substantial investment. Total energy expenditure is estimated to be 12 per cent greater than business as usual over the same time period. This work identified that by 2050, cumulative investment to transition the energy system in Australia could be as high as A$440 billion, including A$220 billion for renewable electricity generation, A$130 billion for transmission and A$50 billion for storage. The modelling identified a further A$190 billion by 2050 for investment in low-emission industry technologies, electrification and energy efficiency – an 81 per cent increase in investment compared to business as usual (Climateworks Centre and Climate-KIC Australia 2023).
1) How should the PRF best be delivered with a regional focus?

Recommendation: Deliver PRF in the context of a national place-based industrial decarbonisation program and associated co-investment partnership between federal, state and territory governments.

Climateworks recommends the PRF be designed and delivered as part of a broader industrial strategy to catalyse industrial transition and, alongside work by the National Energy Transformation Partnership, create an energy system that can support the transition. Part of this broader industrial strategy could include establishing a national place-based industrial decarbonisation program (Program), delivered by the federal government in partnership with state and territory governments. The purpose of this Program would be to accelerate regional industrial decarbonisation while ensuring the transition of regions occurs in a coordinated and collaborative way, prioritising those regions most at risk of negative impacts from industrial transition.

Climateworks recommends such a Program designate REIPs across the country in regions most impacted by the transition (Climateworks Centre 2023). REIPs are a cluster of existing or new industrial businesses (e.g. manufacturers) powered by 100 per cent renewable energy, which could include both renewable electricity and renewable heat. The development of REIPs presents an opportunity to leverage multi-user infrastructure and existing workforce skills. Precinct-level efforts, such as demand-side response, sector coupling and integrated hydrogen systems to balance energy loads from renewables, can allow for more effective use of transmission, distribution and storage infrastructure as part of decarbonisation transformation.

Climateworks welcomes the PRF objectives – Objective 1: Decarbonising Existing Industries as part of the Industry Decarbonisation Stream, Objective 2: Developing New Clean Energy Industries, and Objective 3: Workforce Development – that align closely with the four ‘pillars’ that support effective implementation of REIPs: coordination and skills development; building enabling infrastructure; decarbonising existing industry; and attracting new industries (Climateworks Centre 2023)

PILLAR 1: COORDINATION AND SKILLS DEVELOPMENT

Coordination could include bringing stakeholders together at the design stage to co-design roadmaps showing how REIPs can be developed, including land use and infrastructure planning. Skills and training programs also need to be designed to support an appropriately skilled workforce and workers transitioning to new clean industries.

Regional REIP roadmaps should have ambitious decarbonisation goals and be co-developed to align key stakeholders, such as industry, investors, governments and communities, with the vision and milestones for deploying infrastructure, energy systems and technology solutions. Roadmaps should target the development of new markets such as hydrogen, green metals and renewable energy export. The federal government, in collaboration with state and territory governments, can play an important role in aligning regional leaders on common goals, developing roadmaps and managing a flexible implementation of REIPs across regions.

Through a national Program, the federal government could determine REIP locations across Australia, along with program guidelines and objectives. Climateworks suggests these guidelines include best practice principles for developing regional roadmaps and shared vision for long-term REIP goals. The federal government could provide co-funding, tendered to and matched by state and territory governments, for roadmap development by consortiums. These consortiums could include industry players, investors, community alliances (such as the Hunter Job Alliance) and other actors.

Creating place-based roadmaps allows them to respond to a given region’s unique assets, capabilities and challenges. Regional differences may include: the energy systems that power each region; the policy and regulatory contexts; the diverse mix of industries; and physical and geographical differences such as land availability and access to ports. They also need to be flexible, build on what is already happening, spread risk, address existing and future infrastructure needs, create investor certainty, create a social licence for the transition and incorporate multiple technology solutions.
Roadmaps need to be iterative and flexible, able to anticipate and adapt to change and allow for new technologies, changing regulations, an increase in ambition and new entrants. The roadmap development process should also consider existing infrastructure and avoid stranded assets and the lock-in of long-term emissions, especially given the long asset life cycles in heavy industry.

The development of REIPs presents an opportunity to leverage existing workforce skills while also laying the foundations to attract new workforce participants to regional areas. A national Program could augment the broader skills agenda and federal training programs such as the New Energy Skills Apprenticeship Program. The national Program could identify where skill gaps are expected to exist within REIPs through the development of the regional roadmaps. The PRF could also support workforce development in REIP locations by providing funding for community infrastructure, such as housing that enable skilled workers to remain in or to relocate to REIP locations. Social aspects including gender equity and indigenous employment criteria could also be considered with funding decisions and would broaden the impact of the funding.

Supply chain roadmaps for heavy industry can align suppliers, finance, consumers and decision-makers on the vision and milestones for the development of technology solutions, by providing greater clarity and investment confidence. These could be undertaken by a relevant, independent body to complement regional decarbonisation roadmap work, which is already happening in parts of Australia (such as the Western government’s planned ‘Sectoral emissions reduction strategies’). Equity owners may have a role in connecting industry partners and supply chains, as large financial institutions such as superannuation funds and insurance companies may be stakeholders in many companies within a supply chain.

**PILLAR 2: BUILDING ENABLING INFRASTRUCTURE**

This pillar focusses on building critical infrastructure, such as energy transmission and network infrastructure, and enabling the development of REIPs by supplying renewable energy. Other infrastructure to set up successful precincts could include green hydrogen pipelines to industrial users, and upgrades to ports and roads. This pillar is addressed by other federal government policies and programs such as Rewiring the Nation and the National Energy Transformation Partnership may contribute to supporting this pillar.

**PILLAR 3: DECARBONISING EXISTING INDUSTRIES**

Through the PRF, or existing innovation funding and funds supporting industrial decarbonisation, the federal government can help existing emissions-intensive industries to decarbonise by grants and financing:

- Research and development for technologies to support decarbonisation
- Renewable electricity generation, storage and firming to support industrial decarbonisation
- Renewable heat and feedstock supply technologies
- Capital outlays for heavy industry upgrades (existing industry to buy, construct, install or commission new facilities and/or equipment; establish new manufacturing processes; or for process design and engineering directly related to their capital investment), and
- Industrial material and energy efficiency, including the circular economy.

Critical for enabling the PRF to be accessible to the depth and breadth of industry across Australia will be building early supply, demand and the enabling infrastructure that allows new markets such as hydrogen and green metals to develop and scale. Policy levers beyond the PRF include: facilitating offtake commitments, guaranteeing the purchase of green products through government procurement, feed-in tariffs, mandates and certification schemes for green products such as green metals and hydrogen.

Assessment criteria for selecting projects, other than emissions reductions, could include:

- Ability of proposed technology and process changes to create transformational change in the sector and bring forward technology cost reductions
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- Compatibility with the development of new export markets – Climateworks has recommended that the co-investment plans proposed under the NRF include export market analysis which could guide assessment.
- Compatibility with future energy requirements
- Capability and expertise to enable Australia to maintain and grow market share in existing industries, and expand into new industries where Australia has natural advantage, and
- Addressing skills capacity gaps.

PILLAR 4: ATTRACTING NEW INDUSTRIES

Climateworks recommends that the development of REIPs, in regional areas most affected by the transition to net zero, are prioritised in the PRF’s design. Attracting new businesses to REIPs will be important for industrial regions to become centres for innovative zero emissions solutions (including but not limited to renewable hydrogen production) and opening up new export markets.

PRF funding can go towards attracting green hydrogen and other new businesses to REIPs, such as green steel and aluminium producers, clean technology manufacturers and material recycling facilities.

2) If any regions are to be prioritised, what factors should be considered?

Recommendation: Design the PRF to support the establishment of REIPs and prioritising regional areas most at risk of negative impacts from the transition to a net zero global economy.

Climateworks analysis has identified 11 possible REIP locations across Australia (see Figure 1 below). These are predominantly existing industrial regions with large emissions-intensive industry, and where there is proximal renewable energy supply and workforce potential. Additional locations may be suitable for establishing REIPs, and we are aware that some states and territories are considering additional locations.

Figure 1. Possible REIP locations across Australia

In addition to our work on REIPS, the 2022 Australian Industry ETI report Setting up industrial regions...
CLIMATEWORKS CENTRE presents a range of opportunities across five industrial regions - Pilbara, Kwinana, Hunter Valley, Illawarra and Gladstone (Climateworks Centre and Climate-KIC Australia 2022). These five regions combined contribute A$166 billion to Australia’s gross domestic product (GDP) and account for about one-eighth of Australia’s total emissions. Potential emissions reductions in the heavy industry supply chains of these regions in 2050 are equivalent to 88 per cent of Australia’s current national emissions. While each region is unique with its own context, stakeholders, advantages and challenges, cross-cutting themes have emerged that are central to the effective decarbonisation of industrial regions:

- Large-scale investment and deployment of renewable energy, energy infrastructure and measures that improve energy system efficiency and flexibility, will underpin and improve affordability and reliability of decarbonised energy systems
- Coordination across different elements of the energy and industry systems brings multiple benefits
- Collaboration between entities yields private and public economic benefits as well as reducing barriers
- Action to enable swift deployment of technologies – whether mature, not yet commercial or emerging – sets the groundwork for transformative changes.

Regional variation means the optimal location of new electricity and hydrogen infrastructure will depend on a combination of complex factors including access to lower-cost, firmed renewable electricity (capable of providing supply that can match industrial demand; access to a skilled workforce; as well as important access to water and bulk material handling ports. The east coast of Australia has many established bulk commodity ports and these are the most likely centres of activity. This particularly applies to coal exporting ports that may be looking to diversify their industry over time as coal exporters are expected to face a declining world market. On the west coast where there are fewer existing bulk commodity ports, this opens the possibility of new, dedicated port facilities being developed to maximise access to key energy and mineral resources highly suited to a net zero global economy.

3) What is the best way to design and deliver support within any prioritised regions, or otherwise achieve the objective of regional transformation?

**Recommendation: Deliver support within prioritised regions through a co-investment partnership model with state and territory governments. The model should include a prioritisation framework for ensuring fair funding allocation across jurisdictions.**

Given the pace required to decarbonise industry in line with Australia’s commitments under the Paris Agreement - and for regional areas to seize the opportunities available in a future ‘green’ economy, government funding needs to be pooled together to have a greater impact and to attract rapid investment from the market. The scale of finance needed is in the billions for each region (Climateworks Centre and Climate-KIC Australia 2022).

Through the Program, Australian governments can call forward a greater scale of investment by establishing a ‘co-investment partnership’, where funding is pooled from the PRF alongside other relevant federal programs and agencies (e.g. National Reconstruction Fund, the CEFC, ARENA) and state and territory funds. This can to ensure that the transition in these regions occurs in a coordinated and collaborative way that builds on existing initiatives, unlocking further levels of private investment into industrial regions. An accompanying prioritisation framework would ensure fair funding allocation across jurisdictions.

A national Program could include funding to support the achievement of the PRF’s Objectives 1–3. through coordination with state and territory governments and for the federal government to establish a secretariat with membership comprising representatives from state and territory departments working on REIP-like initiatives to promote cross-communication and knowledge sharing.
Support Beyond the National Program

Coordinating delivery of the Program and the PRF with a broader strategy for innovation would also assist to achieve greater impact. This would draw on complementary actions to increase technology uptake and market development. Beyond grants and financing and the coordination of regional roadmaps and sectoral strategies, key government actions identified from our work could include:

- Measures to support early market development and set early market signals for example through government procurement, or some form of underwriting, contracts for difference etc.
- A regional and national workforce plan to invest in and develop the skills for the transition, at the scale required, including within key regions
- Treasury plans for the development and adoption of an Australian investment taxonomy (development underway) to provide transparent and credible definitions of what constitutes sustainable investment
- Facilitation and support for industry, communities and other regional stakeholders on developing a shared vision and regional decarbonisation roadmaps and managing the flexible implementation of solutions for the region
- Coordinating support for research, development, demonstration and deployment of the range technical solutions needed to decarbonise
- Supporting market development for new and emerging supply and demand, to enable future domestic and global opportunities.

Other reasons to collaborate are not necessarily place-based. Sectoral actors can come together to understand and even create demand for green products as well as identify markets and customers. Firstly, the aggregation of perspectives and data sharing can help build confidence in future demand at a national and global scale. Secondly, companies across industries may work together to pool early demand and supply so that scale can be reached for an appropriate buyer. For example, multiple chemicals companies may work together to produce green ammonia at scale for a large buyer during the time that production is constrained by a lack of green hydrogen. Governments can act as a customer, procuring green products for government-owned projects through mandates and commitments, and can have a higher tolerance for risk due to their wider criteria for procurement beyond least cost.

Another reason to collaborate is to support the development of new technology. Collaboration may enable faster development of new technology, followed by early deployment and rapid scaling. It is important to note there may be sensitivities when competitors work together, but there are multiple examples of partnerships that have managed this potential issue, although generally in smaller partnerships such as joint ventures.

Further efforts to demonstrate and share appropriate models for multi-stakeholder collaboration as well as navigate anti-competitiveness regulation can help build comfort in deeper collaborative partnerships. An example of a collaboration opportunity within a supply chain is the common challenge faced by iron ore miners and steelmakers around the potential incompatibility of certain ore types with hydrogen DRI technology.

A Potential Timeframe for the National Program

The Program could be designed and delivered in three stages:

**Stage 1: Program establishment (2023–24).**

- Establish a program secretariat at the federal level with an advisory group comprising state and territory departmental officials
- Establish program guidelines and objectives (including setting long-term REIP goals and vision)
- Design a co-investment partnership model with a framework that prioritises fair funding allocation across jurisdictions
Stage 2: Coordination and planning (2023–24).

- Support state and territory governments to determine priority REIP locations
- Convene stakeholders in two initial REIP locations to develop REIP roadmaps, undertake relevant strategic land-use and infrastructure planning and identify gaps and fund skills development

Stage 3: Program implementation (2024–32).

- Announce federal co-funding support for at least seven REIP locations by 2025
- Deliver at least seven REIPs over 10 years through coordinating co-funding with state and territory governments. Funding can be administered through state and territory governments using competitive tender processes (reverse auctions, or similar) to call for consortiums (industry players, investors and other actors) in REIPs to indicate what support they need to meet the long-term REIP goals and vision and what co-investments the private industry participants would make

Governance

We recommend the federal government initiates or facilitates two levels of governance for the national Program:

- A Transition Authority (or equivalent), administered by a Program secretariat at the federal level with an advisory group comprising state and territory departmental officials, with the mandate to:
  - Support jurisdictions to identify priority REIP locations to unlock regional economic opportunities
  - Establish program guidelines and objectives, including setting long-term goals and vision for priority locations
  - Reach an agreed approach with state and territory governments to developing roadmaps for priority locations and co-funding roadmap development, and
  - Design, with state and territory governments, a national co-investment partnership model and funding prioritisation framework to scale up funding to priority locations

- State- and territory-based coordinating bodies, established within existing frameworks where possible or as separate entities. These bodies could act as intermediaries between the Transition Authority and local industry and community, leveraging their understanding of the local context.
  - Functions could include co-designing roadmaps, administering co-funding, engaging with community, helping to identify priority projects, connecting industry to funding opportunities and identifying local workforce gaps.

Other countries are already supporting the economic development of green industries e.g. the Inflation Reduction Act and comparable programs in Europe and the United Kingdom. A national Program, designed and delivered now, would set Australia up to be competitive in future markets that prioritise low-emissions products and services. Australia’s international competitors are already investing in decarbonising their industries, including through place-based approaches.

Beyond Climateworks, the REIP concept has been supported by organisations from the business and research communities as well as civil society. This includes related work through the Australian Industry ETI and Beyond Zero Emissions as well as Australian Conservation Foundation, WWF-Australia, Australian Council of Trade Unions and Business Council of Australia.
References


Climateworks Centre and Climate-KIC Australia (2023) [Forthcoming] *Pathways to industrial decarbonisation: Positioning Australian industry to prosper in a net zero global economy*, Australian Industry Energy Transitions Initiative, Phase 3, Climateworks Centre.
