



Setting up Renewable Energy Industrial Precincts

A joint proposal from WWF-Australia and Beyond Zero Emissions



Affected Agency: Department of Industry, Science, Energy and Resources

Financial Implications: \$3.3 billion over four years and \$6.3 billion over ten years

	2022-23	2023-24	2024-25	2025-26	Total
Cost of proposal (\$m)	600	725	975	1,000	3,300
Stream 1: Infrastructure and coordination funding (\$m)	100	175	250	275	800
Stream 2: Renewable manufacturing precinct upgrade funding (\$m)	250	600	800	850	2,500

Outline of proposal:

Renewable Energy Industrial Precincts support clusters of industry and manufacturers powered by 100% renewable energy. These precincts are either located within Renewable Energy Zones or connected to renewable energy generation through high-voltage transmission lines. They also have access to clean heat and renewable hydrogen production, skills development, and export infrastructure, including good transport links. Businesses within these precincts are eligible for dedicated government support including funding.

The Renewable Energy Industrial Precinct program aims are to:

- Establish seven Renewable Energy Industrial Precincts across Australia (one in every state plus the Northern Territory);
- Create and secure thousands of ongoing, good quality jobs in regional industries;
- Ensure Australia capitalises on growing global demand for zero-carbon products;
- Position Australia as a global leader in zero-carbon sustainable manufacturing.

Modelling commissioned by Beyond Zero Emissions and WWF-Australia has found that two potential REIP locations (Gladstone and the Hunter Valley) have the potential to create 45,000 new ongoing jobs by 2032.¹

The Renewable Energy Industrial Precinct program would provide \$3.3 billion in total funding between 2022-23 and 2025-26, and \$6.3 billion over the next decade for two grant streams designed to leverage private sector investment:

- \$800 million for infrastructure and coordination funding;

¹ [Renewable Energy Industrial Precincts: Economic Analysis Summary Report](#). Beyond Zero Emissions. July 2021.

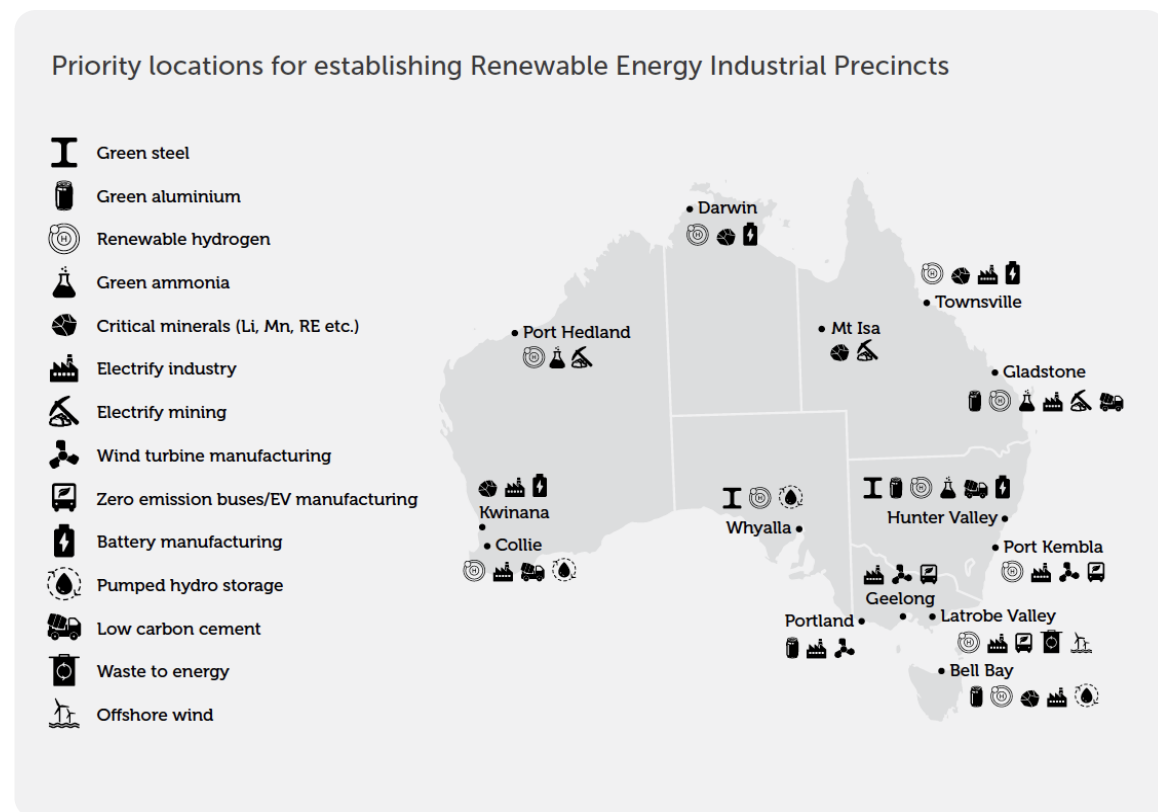
- \$2.5 billion for renewable manufacturing precinct implementation funding.

Where could Renewable Energy Industrial Precincts be located?

Renewable Energy Industrial Precincts will be located in regional Australia in existing industrial areas with supporting infrastructure such as transport connections (port, rail and road), brownfield land and technically skilled workforce.

With Tasmania now powered by net-100% renewable electricity, Bell Bay is on its way to becoming Australia’s first Renewable Energy Industrial Precinct, although greater infrastructure investment, including continued support for the production and use of renewable hydrogen and other zero-emissions heat solutions are required for this potential to be fulfilled.

Priority locations for REIPs are outlined below. Fourteen potential locations across every state and the Northern Territory.



Rationale:

Australia has always relied on a competitive advantage of affordable and reliable energy but today our intensive manufacturers are at a global disadvantage due to high energy prices and high emissions intensity of our electricity production.

Today renewable energy can provide low-cost, zero-emissions energy. Australia has some of the best and most abundant renewable resources in the world, and this can give Australia's manufacturers a global edge. We need to capture the benefits of cheaper renewable power and to capitalise on the opportunity to produce low-carbon products that are increasingly in demand in Australia and internationally.

Hundreds of corporations have pledged to tackle emissions related to their supply chains. This includes global car makers such as Toyota, Volkswagen, and Mercedes that have committed to carbon-neutral production and are already prioritising suppliers with low emissions. Major Australian employers, like [Fortescue Metals](#) and [GFG Alliance](#), have seen the opportunity and are aggressively positioning themselves to seize it.

Australian manufacturers will need support to prepare for these developing markets and identify reasons to locate production in Australia rather than overseas. Other countries are already providing such support. As a percentage of GDP, Australia ranks well behind many comparable countries for projected government on-budget investment in renewable recovery and clean energy stimulus measures. While countries like the US (2.84%) and UK (2.10%) are investing more than 2% of GDP in renewable recovery, Australia is well behind at only (0.16%). Within Europe, France (1.74%) and Germany (1.06%) are investing more than 1% of GDP and in our region South Korea is investing 2.41% of GDP.

The EU, for example, is helping its manufacturers to decarbonise through its Industrial Strategy, an integral part of Europe's Green Deal, and the UK is subsidising zero-carbon industrial clusters. While Australia's extensive land and high-quality renewable resources mean we have the ability to produce some of the lowest cost zero-emissions electricity and hydrogen in the world, we are at risk of being outspent by other countries, squandering our comparative advantage.

REIPs are the mechanism through which Australian industry can capitalise on our exceptional potential to generate renewable energy. These precincts will help Australian manufacturers capitalise on the growing global demand for low-emissions products. They will also be popular with the electorate, with 89% of Australians believing Australia should be manufacturing more products domestically following the COVID-19 pandemic.²

REIPs will help secure the presence of existing manufacturers and attract new ones. They will be attractive locations for energy-intensive businesses such as aluminium smelting, steel and other metals processing; hydrogen production; chemicals production including pharmaceutical supply chains; recycling, advanced manufacturing and data centres. They could also provide a home for companies making clean technologies such as wind turbines; batteries; electric vehicle chargers; electric buses and mining equipment.

REIPs will:

- Attract businesses and investors, support local industries, secure existing jobs and create new jobs.
- Provide access to cheaper infrastructure and energy (electricity and heat) shared across multiple large energy users that will lower energy bills and production costs, making Australian manufacturing competitive in a global economy that is increasingly committed to net-zero emissions by 2050.
- Provide access to a skilled workforce that is trained in the development and operation of efficient, zero-emissions industrial processes.
- Provide an opportunity to commercialise new technologies and solutions onshore, by attracting start-ups to co-locate with established industry players.
- Increase the likelihood that energy-intensive manufacturers will remain in Australia.

² Roy Morgan survey. September 2020.

- Become hubs for the development of innovative zero-emissions and circular-economy technologies and solutions that Australia can sell to the world.

Strategic Policy Alignment:

The Prime Minister recently said in his address to the UN General Assembly, “We know the world is transitioning to a new energy economy. It’s no longer about if, or even when for that matter. It’s about how.”³ Following his meeting with Quad partnership leaders, the Prime Minister also foreshadowed a Clean Energy Export Plan which is critical to Australia’s entire economy transitioning.⁴ Critical to achieving this plan will be REIP to support the transition of regional economies to a clean energy future.

In addition, the REIP Program will align with the establishment of Renewable Energy Zones (REZs) by state and federal governments, as identified in the AEMO Integrated System Plan. It is assumed the establishment of REZs occurs through programs such as Bilateral Agreements rather than this program, although they are complementary and transmission connecting Precincts to the nearest REZ is essential.

Implementation:

The REIP Program will be a new \$3.3 billion program from 2022-23 to 2025-26, \$6.3 billion over ten years, to deliver, in collaboration with state governments, at least seven REIPs around Australia.⁵ The fund is proposed to be split into two funding streams.

Stream 1: Infrastructure and Coordination - \$800 million

This funding would be tendered for and matched by state and territory governments to support them to deliver the necessary strategic land use and infrastructure planning and coordination of precinct development in line with local social, economic and environmental needs including the development of decarbonisation plans. State governments could also use this funding to pay for early works of the critical infrastructure required for successful precincts, including:

- Transmission connections to sufficient renewable energy generation most likely through nearby Renewable Energy Zones;
- Hydrogen production and pipelines and a shared industrial heating network, where relevant
- Water, waste and recycling;
- Connections to port, rail and road logistics;
- Skilled labour and training programs tailored to the needs of the precinct;
- Innovation programs including incubator, accelerator, and/or R&D processes to help fill industry ecosystem gaps, create more jobs and establish new businesses.

It would also include developing programs that grow market demand for zero- and low-emissions products. State governments would work with Austrade to ensure this includes access to export markets.

Stream 2: Renewable Manufacturing Precinct Implementation - \$2.5 billion

³ [Virtual Remarks to the United Nations General Assembly](#). Prime Minister. 24 September 2021.

⁴ [Quad Leaders’ Summit Communique](#). 24 September 2021. Shanhan, Dennis and Joe Kelly, [Prime Minister Scott Morrison’s clean energy export plan](#). The Australian. 27 September 2021.

⁵ Note the program could be expanded to support at least one precinct in each state.

This funding, administered by the states in collaboration with the Federal Government would be tendered for by geographical clusters of manufacturing and industry players, backed by investors and research partners. The funding would be available to one precinct per participating state. Applicants would use the funds to achieve the timetable of reaching 100% renewable energy use according to the principles outlined below. For example, this could cover:

- Process and equipment upgrades to support existing manufacturers to adapt to the use of renewable electricity and renewable heat.
- The establishment of new businesses and manufacturing processes, including but not limited to renewable hydrogen production, green steel and material recycling facilities.
- Ensuring reliable power supply through the establishment of firming capacity such as storage and flexible demand programs and technologies.
- Procurement of low-cost renewable energy supported by government underwriting, for example through contracts for difference.

The renewable manufacturing precinct implementation funding would be matched by state governments and the consortiums of companies applying. It could also be supported by additional financing through the Clean Energy Finance Corporation and the Modern Manufacturing Fund. We recommend that the oversight process be administered by state governments and that the process have an EOI stage, with some funding made available to consortiums who pass this stage to develop their full tender.

Governance

We propose establishing the Renewable Energy Industrial Precincts Authority (REIPA) to design the REIP Program. The proposed program design is similar to the National Water Infrastructure Development Fund, in that funding is provided by the Commonwealth to state governments to progress priority infrastructure projects. It is administered through the National Water Grid Authority. Funding for this new authority is estimated to be \$10 million per annum drawn from the Stream 1 allocation.

The funding could then be governed through the REIPA in partnership with the states and territory through a National Partnership Agreement. We recommend that state governments be empowered to deliver the competitive tender process and select successful bids, in line with the agreed program goals and funding agreement.

We also recommend that the REIP Program work closely with the Clean Energy Finance Corporation to help unlock low-cost finance for these precincts. A delivery model that leverages CEFC finance and government direct funding in one process similar to both the NSW Empowering Homes Program and the ARENA Large Scale Solar Program could be developed.

Principles of Renewable Energy Industrial Precincts

REIPs will be established according to sustainable principles. The overarching principle is that eligible participants use renewable energy. This means:

- New projects must use 100% renewable energy (electricity plus heat energy) at the outset;
- Existing businesses must commit to 100% renewable electricity within five years;
- Existing businesses must commit to 100% renewable energy (electricity plus heat) within 10 years.

REIPs should be developed in line with the United Nations' Sustainable Development Goals (SDG). The nine as listed below are relevant to the REIP program. Adhering to these SDG principles and embedding them in the program design and assessment would set clear and globally recognised parameters for REIPs. Companies and investors value such parameters as these signals they are meeting market demands for sustainability.

Value for Money:

Alongside Commonwealth support, State governments and participating businesses will be required to contribute funds. The table below shows the potential contributions from each funding source and that this program could catalyse \$37.8 billion in private investment, based on a proposed program design where the private sector is required to contribute 60% of the cost towards establishing a REIP. This equates to a leveraging of \$6 for each dollar of federal funding.

Funding source	Total amount (over 10 years)
Australian Government (on budget)	\$6.3 billion
State and Territory governments (on budget)	\$3.15 billion
Public sector finance	\$15.75 billion
Private sector investment	\$37.8 billion

Detailed modelling undertaken for just two of the potential locations of REIPs demonstrates the significant potential economic impact.⁶ The modelling of Gladstone, Qld and the Hunter Valley, NSW shows that creating precincts in those two locations has the potential to create 45,000 new ongoing jobs by 2032 and an annual revenue of \$13 billion.

Modelling for Gladstone and the Hunter Valley:

Region	New Local Jobs	Annual Revenue
Hunter Valley, NSW	34,000	\$11 billion
Gladstone, QLD	11,000	\$2 billion

There are similar opportunities across the fourteen regions proposed across every state and the Northern Territory. It will build on existing skills and infrastructure and assist in securing existing jobs in this region with the largest need for jobs in technicians and trades. It will also support jobs and investment across the wider region and secure the future for regional communities.

⁶ [Renewable Energy Industrial Precincts: Economic Analysis Summary Report](#), Beyond Zero Emissions, July 2021.

For More Information:

[Renewable Energy Industrial Precincts Briefing Paper \(including Hunter Valley Case Study\)](#), Beyond Zero Emissions & WWF-Australia, September 2020.

[Renewable Energy Industrial Precincts: Economic Analysis Summary Report](#), Beyond Zero Emissions, July 2021.

[Regional economic impact analysis of Renewable Energy Industrial Precincts: Central Queensland REIP](#), ACIL Allen, March 2021.

[Regional economic impact analysis of Renewable Energy Industrial Precincts: Hunter Valley REIP](#), ACIL Allen, March 2021.