A bright clean energy future for Australia

Australia's natural advantage

With our abundant sun, wind and access to critical minerals like lithium and copper, we can power our lives and our industries with renewable energy and have enough to sell to other countries.

Australia has one of the highest potentials for renewables in the world; our renewable output could meet our energy demand 400 times over, using only 0.1% of our total land mass.

Job stability in renewable energy

Analysis by the Sunshot Alliance representing Australian business, workers, and environment groups shows that if Australia harnessed the renewable energy opportunity our economy could be transformed, adding over $100b in value and over 400,000 good, reliable jobs in renewable industry and manufacturing by 2040.

Demand for skilled labour in large-scale renewable energy is forecast to double from around 12,500 jobs in 2022 to 25,000 in 2027.

In the next decade coal and gas related jobs are set to drop by 6,000 or more than 50%, but the renewable energy workforce can more than fill this gap. Growth in renewables jobs can outpace this decline.

Central QLD and other regional communities have great advantages with highly skilled people and abundant sun and wind. While the fossil industry declines, wind, solar and renewable industry & manufacturing will create new jobs and career pathways for local workers and young people.

"I always thought the sun rises every day, we've got this endless source of energy, it's crazy we're not making the most of it."

"It's a stable future for me, it's a good opportunity to set myself up."

Nathan Berryman,
Foreman at Energy Renaissance

AUSTRALIAN CONSERVATION FOUNDATION | Nature needs us, now

How the energy transition is working for communities

Case study: Geelong's Big Battery

Inclusive hiring, training and fair wages at Geelong Big Battery Construction firm UGL completed the Geelong Big Battery on time & budget while engaging a diverse workforce and delivering training & apprenticeship opportunities under wages & conditions negotiated with the Electrical Trades Union. 'Top up' labour during peak periods was sourced via a local contracting business with a union agreement, further benefiting local workers & the community.

Case study: Western Australia's first steel mill: Collie Green Steel Mill

The Collie green steel recycling mill will use an electric arc furnace powered by renewable energy, turning scrap steel from Western Australia into rebars for domestic use and export.

The plant will abate 800kt of CO2e per year and create 200 long-term jobs in the area, and up to 2000 indirect jobs. The project is in the advanced stages of development and expected to begin operations in 2026.
This is in part a result of Collie's Just Transition plan which has brought together industry, community, unions and government to maximise opportunities for Collie as it transitions from a coal-based community.

"Friends of mine still working in the mines are worried about what the future holds, and how long of a career they have left to go in that industry"

Case study: Recyclable battery manufacturing in the Hunter Valley

Energy Renaissance is an innovator in Australia's clean-tech sector, making simple, safe, Australian recyclable batteries and tech, designed to withstand the harsh conditions of remote Australia. Energy Renaissance focus on local sourcing where 92% of battery components are Australian, driving economic development and job creation in the Hunter region. Beyond employment, the operation promotes diversity with special initiatives for indigenous inclusion and gender equality.

"Renewables are a big growing industry. The whole world is going in this direction, and I want to be a part of it."

What are renewable exports?

Commitments made around the world by countries and major companies to decarbonise are changing global markets forever. Rio Tinto has committed to reducing its emissions by 50% by 2030 and the International Energy Agency says if governments are serious about the climate crisis, there can be no new investments in oil, gas and coal.

If we continue to rely on exporting our fossil fuels, Australia will be left behind. But with the right choices we can turbocharge a bright future, with great jobs and a stable climate.

Renewable exports are a broad range of products and services powered by renewable energy which can be used in Australia and sold to our trading partners overseas.

- **Renewable hydrogen and ammonia:** We can make **green hydrogen** with 100% renewable energy. Hydrogen is a fuel that produces no carbon pollution when burnt. Renewable hydrogen could power manufacturing, heavy transport like shipping and metal refinery like steel – industries that are energy-intensive and very hard to decarbonise.
- **Critical minerals mining and refining:** Using responsible methods, we can mine, process and then export critical minerals that are essential for clean energy technologies, like lithium, cobalt and nickel for big batteries.
- **Green metals:** We can mine and process metal ores (like iron ore) and export high-value metals such as aluminum and steel produced using 100% renewable energy.
- **Battery production:** We can export batteries manufactured in Australia, many of the components would be made from minerals that are mined and recycled right here at home.
- **Education and training:** Australia is home to world-class research centers on solar and wind energy and high-quality education institutions. Driven by growing demand for skills in the clean energy sector, we can attract international student enrolments in clean energy and environment related fields of study at Australian Universities and VET institutions.
- **Engineering, ICT and consulting services:** We can export services required to scale clean energy projects globally, including engineering and project management, construction, research and technology, systems integration, and much more.

The 2023 Sunshot analysis found by 2040, Australia could achieve:

- $121b critical minerals revenue
- $96b green iron & steel revenue
- $39b battery supply-chain revenue
- $32b green hydrogen & ammonia revenue
- $26b green alumina & aluminum revenue.

Building a renewable energy industry that is good for the environment.

If you care about nature, renewable energy is the way to go, because climate change is one of the biggest threats to nature.

To create a stable climate where nature thrives, we must transform the way we power our lives by replacing coal and gas with wind and solar. This means powering everything we can – our homes, transport, cities, farms, manufacturing, industries and exports – with renewables.

We can't save the climate by destroying nature and there is absolutely no need, on our over-cleared continent, to knock down rainforests or threatened species habitat for renewable energy projects.

Energy projects should be built on already disturbed or cleared land, close to metropolitan and regional infrastructure hubs, away from precious wildlife habitat and protected parks and reserves.

Australia has more than 52 million hectares of severely degraded land that costs us $224 billion annually in lost ecosystem services and production capacity.

"The environment wasn't my main motivation but imagine if everyone's job had a positive impact on the environment."