



CROW Newsletter – in collaboration with ErinEarth

The first several articles and annotations are from Ben Holt, Education Officer with ErinEarth.

Why pay attention	The Climate Council still does not believe that the new federal target is in line with scientific advice.
content	<p>“It is very promising to see a ‘National Transition Plan’ on the table and a stronger 2030 target from the Albanese Government. But it will need to be strengthened significantly to effectively tackle climate change and protect Australians into the future.</p> <p>“The solutions to the climate crisis and the energy crisis are one and the same. A lot more renewable power and storage to reduce energy prices, reduce pollution and protect Australia from global energy price shocks.”</p> <p>The Climate Council recommends that Australia cut its emissions 75 percent (based on 2005 levels) by 2030, and aims to reach net zero by 2035.</p>
source	https://www.climatecouncil.org.au/resources/labors-2030-emissions-targets-must-aim-higher/

Why pay attention	It can be tricky to figure out your own household eco strategies – use websites like maketheswitch.org.au to help.
content	<p>Free online resources like MakeTheSwitch.org.au offer advice about why and where to start, but one of the main things to consider before switching, Ms Edwards says, is to have a plan.</p> <p>"You may not be able to afford to [transition to electricity] all in one hit and ... you don't want to replace appliances that are still working, but [they] are going to die at some point and you want to have a plan in place to switch to all electric."</p>
source	https://www.abc.net.au/news/2022-07-12/gas-switching-to-electricity-jenny-edwards-retrofitting-the-home/101216242

Why pay attention	It’s interesting to see that Australia is going to be one of the first places in the world to undergo a clean energy transition.
content	<p>“Australia is one of the parts in the world where the rest of the world can (see) what this transition is going to look like. And it is a challenge. And we can’t shirk it, and we can’t wish it away. What we need to be doing is thinking through how we accomplish this ... that the power system ends up more reliable, more resilient, affordable as well as decarbonised. Finding these end solutions are hard, but they’re essential.”</p>
source	(paywall) https://www.theaustralian.com.au/business/renewable-energy-economy/out-of-time-exaemo-boss-audrey-zibelman-backs-green-revolution/news-story/c65f5a13a92eb78cb4331951ae7ee1bf

Why pay attention	It's important to understand how quickly perspectives on climate are changing. Stop for a minute and ask yourself, when you were 20, were your concerns about climate so great that it influenced your thought about having kids?
content	Two out of five young Australians are hesitant about having kids because of climate change, while Australia has ranked 30th of 39 countries on environmental conditions that affect the wellbeing of children.
source	https://www.theage.com.au/environment/climate-change/why-climate-change-is-making-kids-hesitant-about-having-their-own-children-20220520-p5an90.html

Following the social licence idea of last newsletter -

This two minute video highlights the importance, for the renewable energy transition, of fairly compensating farmers for the use of their land for required transmission lines -

<https://www.abc.net.au/news/2022-06-12/farmers-call-for-compensation-for-hosting-power/13926008>

Generally speaking, using locally produced electricity can reduce the need for transmission of electricity. But in the case of residential rooftop solar, excess solar generation during the day can cause a problem for the local electricity distribution network. Community and household batteries seem like a solution to this, but they can charge too quickly early in the day and then may not lessen the peak of the solar generation. This article proposes a solution:

Impact of residential battery energy storage systems on the peak reverse power flows from distributed photovoltaic systems

<https://www.sciencedirect.com/science/article/abs/pii/S2352152X22008258>

Highlights

- Analysed real-world performance of batteries to reduce solar export peaks
- Non-coordinated batteries are charging too quickly to mitigate the export peaks.
- Six sets of control strategies were modelled to counter this constraint.
- Limiting the battery charging power to 27% of its rated power was the best control.
- Using the same control on a community-scale battery is even more effective.

Renewable Industrial hubs – BIG opportunities with green processing of minerals, green metals, green industries

If we want to decrease the need for transmission lines in the renewable energy transition, it makes sense to locate industrial demand near to the source of renewable generation. That is what renewable industrial hubs can do, sometimes making use of already disturbed land or existing transmission lines around old coal mines or fossil fuel generation facilities.

In Barcaldine (about 600km west of Gladstone) Queensland, Ross Garnaut's Sunshot Energy proposes to bring together industries to capitalise on the fact that firm renewables can provide electricity so much cheaper than other sources, and with zero emissions (as well using as the rail and road infrastructure there).

A good background article is this (somewhat older Dec 2020) article

<https://reneweconomy.com.au/garnauts-sunshot-to-create-australias-first-renewable-energy-industrial-park-69942/>

The first stage of the project would include "protected agriculture", such as industrial scale greenhouses, which in Queensland require more energy during the day to be kept cool (when solar panels generate) rather than at night to be kept warm as in other parts of the nation. The renewable

industrial hub will also produce green hydrogen, from which zero emission urea, ammonia and fertiliser can be produced. Currently there is a supply crunch with these products leading to very high prices, which could be undercut with local production.

While there is much excitement about future prospects for exporting hydrogen, there are already competitive industrial advantages to using Australia's ability to generate electricity extremely cheaply with renewables (and using locally sourced minerals) as Garnaut noted last December:

"None of the government, the opposition nor AEMO plans recognises the extent of the opportunity of early major investment in the new zero emissions industry. AEMO presents a 'hydrogen superpower' vision, premised on large-scale exports of renewables-based hydrogen from the 2030s and accelerating in the 2040s. It misses the much bigger opportunity, starting now, for competitive production of zero emissions goods embodying renewable electricity and hydrogen."

<https://cpb-ap-se2.wpmucdn.com/blogs.unimelb.edu.au/dist/a/142/files/2022/04/Catch-the-energy-superpower-tide-to-defeat-recovery-headwinds-Article-5.pdf> (12 Dec 2021)

The Barcaldine Renewable Energy Zone project was also covered here –

<https://www.abc.net.au/news/2021-10-10/qld-outback-barcaldine-renewable-energy/100436900>

Since first proposing the Barcaldine project, it has received, from the Queensland government, \$300,000 for a feasibility study of the first stage - a 30-megawatt solar farm with intensive horticulture – and \$380,000 for a feasibility study of the second stage looking at producing zero-carbon hydrogen from renewables to produce ammonia and urea for domestic and global markets. Altogether, the project has received about \$1.5 million from various sources (LGA and State).

As of last April, Sunshot is also being provided up to \$1 million by the WA government for a similar project, a large battery and Hydrogen Industrial Hub in Collie -

<https://reneweconomy.com.au/garnauts-sunshot-eyes-800mwh-battery-and-new-green-hydrogen-hub-in-w-a-coal-centre/>

News in the last couple days suggests that the Barcaldine, Qld project has some momentum: "Renewable zone takes next step"

<https://cqtoday.com.au/news/2022/07/19/renewable-zone-takes-next-step/>

The project will also involve "First of its kind mobile pyrolysis" (biochar production).

(More info available in the Sunshot *Barcaldine Renewable Energy Zone* report or factsheet [here](#).)

Business Council of Australia - "Australia's opportunity to create 395,000 clean export jobs"

Much like the Renewable Energy Hub idea above (and also called "Sunshot"), the ACF (Australian Conservation Foundation), WWF-Australia, ACTU and BCA have collaborated in releasing a report on Australia's opportunity to create 395,000 clean export jobs, charting a path for the country through the global transition to net-zero that delivers new jobs.

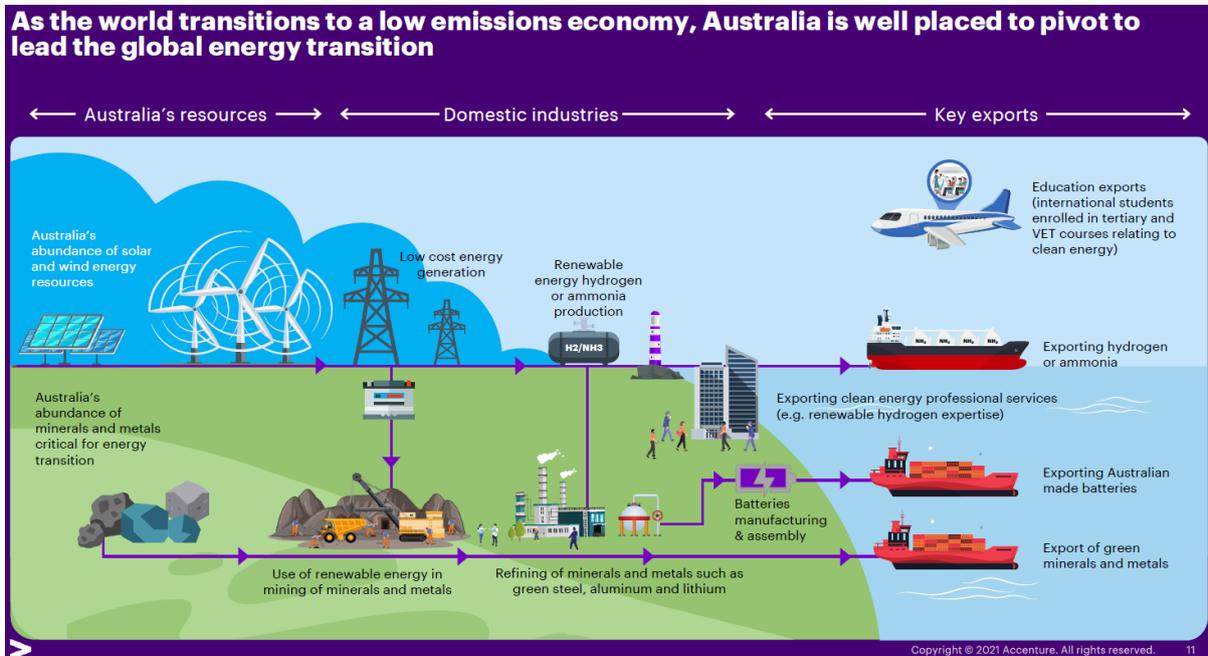
<https://www.bca.com.au/sunshot-australia-s-opportunity-to-create-395-000-clean-export-jobs>

The new analysis from Accenture shows that Australia could create 395,000 new jobs and generate \$89 billion in new trade by 2040 through investment in clean energy exports.

Together, the coalition of unions, business and conservation groups identifies 5 specific actions for government to put Australia at the front of the pack:

- **Coordinated investment in 7 clean export precincts** – to link Australia's low-cost renewable energy resources and regional workforces to clean exports at precincts around the country
- **\$10 billion co-investment in new industries** – to directly support flagship projects and accelerate the scale-up of Australia's clean export industries

- **\$5 billion fund for workers and regions** delivered by a new energy transition authority with representatives from government, industry and unions to manage the disruption to regional economies and workers dependent on carbon-intensive industries
- **Support for low-carbon materials in major infrastructure projects** – to boost domestic demand, support new manufacturing capacity and lay foundations for export
- **An interim target of 6 GW of hydrogen and 3 green metals plants by 2027** – an ambitious target to galvanise collaboration between governments, industry, unions and the research and education sector to grow Australia’s clean export industry.



The report also has a map p. 20 of the jobs created in different industrial areas of Australia, including the Hunter, Newcastle, and the Illawarra.

Beyond Zero Emissions (BZE) - Renewable Energy Industrial Precincts (REIPs)

BZE also has plans for similar Renewable Energy Industrial Precincts (REIPs) with a focus on Gladstone and the Hunter:

<https://bze.org.au/repowering-australian-manufacturing/>

What is a Renewable Energy Industrial Precinct?

Renewable Energy Industrial Precincts in Gladstone, Queensland and the Hunter Valley, New South Wales will add a windfall of \$13 billion to the economy and 45,000 ongoing jobs by 2032.

Read the key findings of new research released by leading economic analysts ACIL Allen, commissioned by Beyond Zero Emissions and WWF-Australia.

\$13Bn to regional economies

45,000 ongoing regional jobs

Getting off gas – including health benefits

Much of the needed rapid reductions in emissions can be done cost-effectively by electrifying energy use in homes, transport and some commercial and industrial applications, as Saul Griffith's [Rewiring Australia project](#) explains. A good, relatively brief, presentation of Saul's ideas (about 14 minutes) is - <https://smartenergy.org.au/learning/saul-griffith-smart-energy-2022/>

<https://cleantechnica.com/2022/05/30/with-las-vote-americas-two-largest-cities-have-said-no-new-fossil-gas/>

The Los Angeles City Council voted on Friday to prohibit fossil fuels in new construction. The Council directed departments to develop a plan over the next six months “that will require all new residential and commercial buildings in Los Angeles to be built so that they will achieve zero-carbon emissions.” The plans are expected to be phased in over the next several years and will lead to widespread electrification in new buildings.//

Berkeley, California, less than 3 years ago, became the first US city to recognize all-electric buildings as the most promising solution towards decarbonization and banned fossil gas in new buildings in 2019

The Australian government Green bank is also involved in the move to all-electric:

<https://reneweconomy.com.au/cefc-tips-54m-into-ev-ready-housing-estate-using-solar-all-electric-appliances/>

According to this [ACT Greens](#) site:

[Ginninderry stage 1 development](#) has already demonstrated that all-electric suburbs are viable, comfortable, and cost-effective. Ongoing energy costs are likely to be [significantly cheaper in an all-electric home compared to one using gas](#).

And if the economic savings and emissions reductions were not convincing enough, Professor David Shearman, E/Professor of Medicine, University of Adelaide, and co-founder, Doctors for the Environment Australia, writes:

“Mandated home gas connection is mandating ill health for thousands”

<https://reneweconomy.com.au/mandated-home-gas-is-mandating-ill-health-for-thousands/>

Miscellaneous

Some of the funding for needed emission reduction changes in businesses may come from the Ellerston 2050 Fund, which has recently received investment from the government green bank, the CEFC (the Clean Energy Finance Corporation).

<https://www.cefc.com.au/media/media-release/cefc-and-qantas-super-back-companies-to-fast-track-net-zero-transition-with-2050-fund/>

The CEFC has ramped up investment in companies that are fast-tracking the decarbonisation of the economy, with a \$50 million cornerstone investment in the Ellerston 2050 Fund alongside a \$50 million commitment from Qantas Super to support the work of Australia's carbon abatement “enablers”.

These “enablers” are companies that are providing the technology and services that their customers use to reduce their carbon footprints. They represent a new area of economic growth and business development, able to capitalise on the growing wave of investment into emissions reduction.