



CROW Newsletter – in collaboration with ErinEarth

August 2022

New legislation in the US commits to the largest climate investment ever made by Congress, amounting to roughly US\$390 billion over 10 years [that's about \$550 billion Australian dollars]. Ben Holt of ErinEarth echoes Al Gore's comments about the significance of this. "Today, we are one step closer to a better future – thanks to you - everyone talking and acting on sustainability. We might all benefit from 'taking this historic moment in'."

You can read about the bill in either of the links below (which were written before the final passage and signing of the bill in the last few days):

<https://www.nytimes.com/interactive/2022/08/02/climate/manchin-deal-emissions-cuts.html>

<https://reneweconomy.com.au/unprecedented-us-senate-finally-passes-landmark-a540-billion-climate-bill/>

NSW is innovating, and taking major steps, to overcome the very large problems with connecting new renewable projects to the grid and the congestion on the grid when later renewable energy projects connect to a transmission line and cause curtailment for earlier projects. Auctions, which provide some assurance that projects won't be curtailed, are scheduled to start this month -

<https://reneweconomy.com.au/exciting-and-pivotal-moment-nsw-prepares-for-big-switch-from-coal-to-renewables/>

And on the topic of upgrading the grid -

The federal government's Clean Energy Finance Corporation [our Green Bank] has stepped in to help fund, and fast-track and expand the connection to what will be the country's biggest wind farm, and also create a new renewable energy zone in what is being hailed as a landmark deal.

The \$160 million of CEFC funds will help upsize a planned 65km high voltage transmission line, which will connect the massive 1.02GW MacIntyre wind precinct to the main grid, and also allow another 500MW of new capacity to be connected in the same area.

<https://reneweconomy.com.au/cefc-money-to-supersize-link-to-australias-biggest-wind-project-creating-new-rez/>

or see <https://www.abc.net.au/news/2022-08-11/qld-wind-farm-grid-connection-renewable-energy/101323018>

Grant brought this news to our attention. Electric aircraft may be coming to us locally sooner than we thought -

<https://www.abc.net.au/news/2022-08-03/electric-aircraft-short-passenger-flights-by-2024-aviation/101291160>

And with as much as 40% less operating costs, Rex's electric aircraft "will also help to stimulate regional aviation services between communities not currently served by scheduled flights. It'll make those routes viable for the long-term."

<https://cosmosmagazine.com/greenlight-project/rex-airlines-electric/>

This, from the US Energy Information Agency (EIA) – shows the speed at which battery energy storage is being upscaled on grids (tripling in the US in 2021). Energy storage enables the world to move towards 100% variable renewable power (which the CSIRO has shown to be the cheapest form of electricity generation) - <https://www.eia.gov/todayinenergy/detail.php?id=53199>

Other services from storage -

<https://cleantechnica.com/2022/08/01/world-1st-tesla-batteries-providing-inertia-services-at-scale/>

Tesla has revealed it has installed upwards of 33,000 of its Powerwall home battery energy storage systems in Australia, to date, accounting for a nearly 12 per cent share of Tesla’s total global installations. Local installation numbers for 2022 appear to be a **six-fold increase** on installation numbers for 2019.

<https://onestepoffthegrid.com.au/tesla-reveals-huge-number-of-powerwall-home-batteries-installed-in-australia/>

There are many ways to store energy; e.g. batteries, flywheels, or hydro schemes in which water is pumped to a higher reservoir during times of excess solar and wind generation. This plan is for quite large scale energy storage using compressed air -

<https://www.energy-storage.news/california-energy-commission-to-decide-on-4gwh-advanced-compressed-air-storage-site/>

Renewably produced (“green”) hydrogen shows promise both as a way to store energy, and as a feedstock for the production of urea, ammonia and fertiliser. This Australian company claims to have achieved “a true breakthrough” with green hydrogen production and has “raised \$42.5 million to build a first pilot manufacturing plant.”

Hysata was [launched out of the University of Wollongong last year](#), with \$5 million of funding from the Clean Energy Finance Corp and IP Group and [last June claimed a breakthrough](#) that would deliver the world’s lowest cost green hydrogen.

It says that its “capillary-fed electrolysis” (CFE) cell technology is able to deliver green hydrogen at 95 per cent efficiency (its “stack” is 98 per cent, but this translates to 95 per cent with balance of plant), well ahead of the current global average of around 75 per cent or less.

<https://reneweconomy.com.au/breakthrough-bluescope-vestas-back-42-5m-raising-for-australian-hydrogen-start-up/>

or read about it [here](#)

Rural support for community batteries is gaining momentum, where [small communities like Ballan](#) in Victoria are spearheading their own renewables projects in an attempt to access more reliable, cost-effective and cleaner energy. [from the newsletter “Climate for Change” (thanks Ben)]

While we need investment in well-designed projects to keep growing, it is good news to see - “Record clean energy spending is set to help global energy investment grow by 8% in 2022”

<https://www.iea.org/news/record-clean-energy-spending-is-set-to-help-global-energy-investment-grow-by-8-in-2022>

Similarly - <https://reneweconomy.com.au/global-renewables-investment-hits-record-high-boosted-by-solar-and-offshore-wind/>

This story is a bit of a case study in the adoption of electric buses - Transit Systems are at the front line of the ambition by NSW to electrify the entire Sydney bus fleet of 8,000 to electric, or fuel cell and is now operating around 50 buses from Leichhard, with another 100 on their way.

<https://thedriven.io/2022/08/05/how-sydneys-first-electric-buses-overcame-range-anxiety/>

Some people may have their first chance to drive an electric car when they rent while on holidays. Rental car giant Hertz announced their new partnership with Polestar back in April to buy up to 65,000 electric vehicles over the next five years. Now, Polestar 2 EVs are available for Australians to rent through Hertz across many parts of the country.

<https://thedriven.io/2022/08/11/hertz-and-polestar-take-rental-evs-across-australia/>

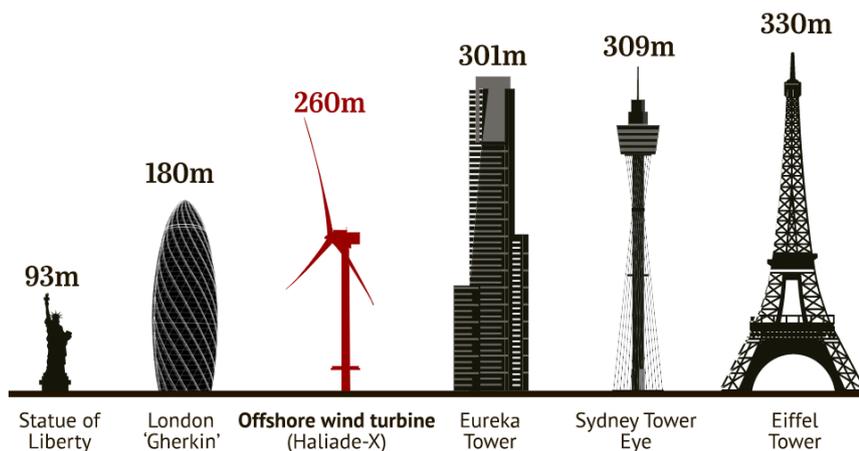
And the supply problem with electric cars in Australia may be easing a bit -

<https://thedriven.io/2022/08/15/insane-thousands-of-tesla-electric-cars-are-on-the-way-to-australia/>

“As big as two Harbour bridges: The giant wind farms you’ll see from the coast”

This article provides some good background about offshore wind around Australia, including touching on floating wind farms -

How the height compares



<https://www.smh.com.au/environment/climate-change/bigger-than-two-harbour-bridges-the-giant-wind-farms-you-ll-see-from-the-coast-20220808-p5b81a.html>

The federal government has officially begun the process to [declare Gippsland Australia’s first offshore wind project development zone](#), with public consultation now open for input. [from the newsletter “Climate for Change”]

And our State and Federal Energy Ministers made some significant decisions at their meeting last Friday (12 Aug), including to reincorporate an environmental and emission objective in the National Electricity Objectives -

<https://www.smh.com.au/politics/federal/energy-ministers-power-up-renewables-transition-with-new-deal-20220812-p5b9h6.html>

or see <https://reneweconomy.com.au/ministers-agree-to-put-emissions-into-energy-objective-to-take-control-of-capacity-work/>

From the newsletter **Future crunch**

Non-profit organisation [The Ocean Cleanup](#) has officially removed more than 100,000 kg of plastic from the Great Pacific Garbage Patch. The milestone is thanks to *Jenny*, a device that has swept over 3000 km² of ocean, capturing plastic and funnelling it into a net. A 1,000 Jennys, and the Garbage Patch is gone.

India's state-run energy transition company is planning a \$10 billion tender for 50,000 electric buses to help the world's third largest emitter decarbonize public transport. Its managing director, Mahua Acharya, says the country could electrify all its two-wheelers and public buses within the next seven years. [Bloomberg](#) <https://archive.ph/LMPGY>

Porsche says that its electric cars will be as profitable as its conventional cars within two years. Automakers have long lamented the thin profit margins on EVs, which have always been more expensive to make and held less appeal to customers. Now though, with manufacturing facilities scaling up and consumer interest on the rise, things are starting to change. [Yale360](#)

[It appears that Tesla is ahead on this, with the margins on its cars ahead of legacy car manufacturers - <https://cleantechnica.com/2022/08/05/tesla-operating-margin-1-in-industry/>]

Colombia has launched a \$245-million initiative to support the creation, expansion, and improvement of 32 million hectares of protected areas in the next decade. The country contains around 10% of the world's biodiversity and the project aims to create over 3 million hectares of new protected areas and biological corridors, and 15 million hectares of marine protected areas. [Mongabay](#)



Covering almost 4.3 million hectares, Colombia's Chiribiquete National Park works as a powerful barrier against deforestation in the northern Amazon, is crucial for the survival of indigenous peoples living in voluntary isolation, and provides ecosystem services to neighboring indigenous and rural communities. Credit: Cesar David Martínez

In case you missed it, green hydrogen now costs less than fossil gas in eight European countries. <https://www.wsj.com/articles/green-hydrogen-is-cheaper-than-Ing-in-europe-11658312552>

And another one from the newsletter **“Climate for Change”**

The ACT has joined Victoria in a move towards decarbonisation, revealing [plans to phase out fossil gas by 2045](#) in a transition towards 100% electric homes and businesses.