CROW Newsletter
February 2023

First, one item on the challenge, then news on responses that we are seeing

"Emissions Gap Report 2022" by the United Nations Environment Programme (UNEP)
"This report tells us in cold scientific terms what nature has been telling us all year, through deadly floods, storms and raging fires: we have to stop filling our atmosphere with greenhouse gases, and stop doing it fast," said Inger Andersen, Executive Director of UNEP.

"We had our chance to make incremental changes, but that time is over. Only a root-and-branch transformation of our economies and societies can save us..."
https://www.unep.org/resources/emissions-gap-report-2022

Wagga Council begins using renewable electricity – and saves big $$
On 1 January of this year Wagga Council's contract started for the purchase of electricity from renewable sources for nearly all of its electricity (negotiated as part of a consortium). In one fell swoop this reduces Council's energy related emissions (i.e. not including emissions from the tip or wastewater) by something like 70%. And the contract comes with big savings, something in the order of $300,000/yr, or more, and increasing each year. (The contract is known as a Renewable Electricity Power Purchase Agreement.)

An ever-growing roster of people are leaving their jobs to pursue careers combating climate change
"Many job seekers are now looking to work in companies aligned with climate goals." And this year, "more people were employed by clean energy companies than by fossil fuels, according to a report by the International Energy Agency."
https://www.bloomberg.com/news/features/2023-01-05/how-to-quit-your-job-to-fight-climate-change

NSW commits to new interim target of 70% emissions reduction by 2035
This new 2035 target updates NSW's net-zero-emissions-by-2050 strategy. It seems likely that this new target will be adopted as part of Wagga Council's community net zero emission targets, as was the previous update with its interim target of 50% reduction in emissions by 2030.
https://www.abc.net.au/news/2022-12-23/nsw-new-greenhouse-emissions-target/101804218

NSW EPA to require companies to show how they will hit net zero and then nudge them to improve
Thanks to the court case brought (and won) by the Bushfire Survivors for Climate Action (BSCA) the Environmental Protection Agency is taking a more active role in mitigating greenhouse emissions.
https://www.theguardian.com/australia-news/2023/jan/20/nsw-environment-watchdog-to-require-big-polluters-to-show-how-they-will-hit-net-zero-and-then-nudge-them-to-improve

Federal Government – Safeguard mechanism
"Australia's big polluting sites will have to reduce greenhouse gas emissions by nearly 5% a year but will face no limits on the use of carbon offsets under the Albanese government's plan to deal with industrial emitters."
https://www.theguardian.com/environment/2023/jan/10/australias-big-polluters-must-cut-emissions-by-nearly-5-a-year-but-can-use-offsets-to-get-there

Electric vehicle sales nearly double in Australia in 2022
33,410 new electric vehicles were sold in Australia in 2022 – not far off doubling the 17,243 figure of 2021. While this is still at a low 3.1% of motor vehicles sold in Australia, supply of EVs has not kept up with demand over the past year and EV sales may increase dramatically as EV supply catches up in 2023.
https://www.drive.com.au/news/australias-best-selling-electric-cars-2022/

More Tesla electric Model 3s were sold in Australia last year than Camrys
which ended Camry's 28 years run as the best selling mid-sized car in Australia.
https://electrek.co/2023/01/10/tesla-ends-camry-best-selling-run-drew-reaction-from-toyota/

BP starts rolling out electric charging network
Many BP petrol stations across Australia will soon form part of a new network of 600 electric-car fast charging stations. The network is called "BP Pulse". The chargers are manufactured by an Australian company Tritium.
https://www.drive.com.au/news/bp-pulse-ev-chargers-open-in-australia/

Two ultra-fast charging stations to be built in Wagga
As part of the first round of the NSW Government's co-funding for an EV ultra-fast charging network, Wagga Wagga will gain one charging station at the BP station in Gumly (4 charging bays) and another to be built by Tesla at Glenfield (6 charging bays). These stations will include some bays capable of charging at 350kW, which could add over 200km of range in ten minutes for some EVs. The NSW announcement (in 2022) said the sites would be rolled out over four years - https://www.nsw.gov.au/driving-boating-and-transport/nsw-governments-electric-vehicle-strategy/infrastructure-funding

Wagga gets NSW grant co-funding for several "destination" EV chargers (HT Grant)
Destination chargers are slower chargers that EV drivers can use when stopped for some time at a restaurant, motel, shopping centre or the like. WWCC is set to receive $23,796 from the state government to co-fund the installation of four destination chargers at: the Visitor Information Centre, Apex Park, Bolton Park and Morrow Street. These are expected to be ready this year. https://wagga.nsw.gov.au/the-council/news-and-updates/news-articles/february-2023/council-receives-nsw-destination-ev-charging-grant

Cars to help power the grid – South Australia approves a bidirectional charger
South Australia is the first jurisdiction in Australia to approve a charger that can provide energy from an electric vehicle to the grid (V2G) as well as charge an electric vehicle. Such bidirectional chargers can (if the vehicle has the capability, as some EV brands do) help balance the grid and make money selling energy to the grid at peak times. Bidirectional chargers are expensive at the moment, but prices seem likely to drop before long.
https://www.pv-magazine-australia.com/2023/01/20/south-australia-gives-vehicle-to-grid-technology-green-light/

Electric trucks with swappable batteries (HT Grant and Neil E.)
Imagine a forklift loading a heavy battery into each side of a truck where the fuel tank used to be. Swapping out one battery and replacing it with a fully charged battery might only take about five minutes, giving the truck another 400-600km range. Janus Electric has converted seven trucks from diesel to electric and has orders for another 130. For fixed truck routes, or back to base journeys, the lower costs of operation and maintenance might make these converted trucks attractive propositions.
https://www.abc.net.au/news/rural/2023-01-08/experts-and-industry-contemplate-transition-away-from-diesel/101822916 or here or here

Australian companies to convert thousands of utes to electric in Australia
Australian company Roev is converting Hilux and Ranger utes to electric. Roev "has already received reservation requests enough to fill their [1000] conversion build spots through to the end of 2023."
https://thedriven.io/2023/01/17/electric-ute-conversions-roev-fills-2023-order-book-for-hilux-and-ranger/

And... "Victorian based electric vehicle specialist SEA Electric is partnering with Europe's Mevco in a landmark $1 billion deal to supply 8,500 electrified Toyota Hilux and Landcruiser vehicles to the mining industry [over 5 years]."
https://thedriven.io/2023/01/18/australias-sea-in-1-billion-deal-to-electrify-8500-hilux-and-landcruisers-for-miners/

World battery production capacity scaling up
For example, in the US: "A wave of new planned electric vehicle battery plants will increase North America's battery manufacturing capacity from 55 Gigawatt-hours per year (GWh/year) in 2021 to nearly 1,000 GWh/year by 2030". That is nearly a 20 times increase in 9 years, just with those plants planned now.
https://www.greencarcongress.com/2023/01/20230104-gigas.html

Some Australian battery production facilities starting
The company Renaissance is about to move into a new $28 million battery production facility in the NSW Hunter region.
https://www.pv-magazine-australia.com/2022/09/01/energy-renaissance-moves-ahead-with-battery-giga-factory/

Recharge Industries has engaged a company to build a battery production facility in Geelong. Recharge estimates that the factory will have a 2 gigawatt hour (GWh) annualised production rate by the end of 2024, rising to 6GWh in 2026 then scaling to an annual production capacity of 30GWh." The 2024 figure would be enough to power 20-30,000 EVs.
https://thedriven.io/2023/01/16/global-partner-engaged-to-build-australias-first-ev-battery-giga-factory/

Buildings and energy efficiency – switching from gas appliances
Switching from gas to electric appliances (stoves, heaters and water heaters) in the home is part of the path to lowering our emissions, and also saves money and improves health.

On the money-saving angle of switching from gas

- "Switching gas-fuelled home appliances such as cooktops and water heaters to electric versions could save Australians between $500 and $1,900 a year in energy bills, a new report says." https://www.theguardian.com/australia-news/2022/oct/13/give-up-the-gas-switching-to-electric-appliances-could-save-australians-up-to-1900-a-year-report-says
- The highly respected technology analyst group RENEW has published a report titled *Limiting energy bills by getting off gas: All-electric homes after the 2022 energy crisis*. The report calculates home energy bills for different regions of Australia and the financial benefits of switching off gas for residents in those regions. https://renew.org.au/wp-content/uploads/2022/11/Report-Limiting-energy-bills-by-getting-off-gas.pdf

On the health angle of switching from gas

- "Indoor air pollution from gas cooking stoves is bad, particularly for children. Dr Ben Ewald discusses how GPs can help patients reduce the risks." https://www1.racgp.org.au/newsgp/gp-opinion/the-overlooked-health-hazard-lurking-in-many-homes
- "Gas cooktops and heaters produce air pollutants such as nitrogen dioxide and carbon monoxide ... A child living with gas cooking in their home faces a similar risk of asthma to a child living with household cigarette smoke. Indoor gas cooking has been estimated to be responsible for up to 12% of childhood asthma in Australia." https://www.healthyfutures.net.au/gasfree

Can seagrasses fight global warming and spur sustainable development?

"... seagrasses are one of the most valuable coastal ecosystems in the world. They absorb carbon up to 35 times faster than tropical rainforests, soaking up to 10 percent of the ocean's carbon each year."
https://www.triplepundit.com/story/2022/seagrasses-global-warming/760041

Green hydrogen production massively scaling up – International Energy Agency

The IEA's yearly Global Hydrogen Review (2022) states that, based on the current pipeline of projects under construction and planned, global electrolyser capacity [for producing green hydrogen] could increase nearly a hundred times by 2030, while the cost of electrolysers could decrease by as much as 70%. While not all of the current pipeline will be realised, the scale of the increase is still impressive.
https://iea.blob.core.windows.net/assets/c5bc75b1-9e4d-460d-9056-6e8e626a11c4/GlobalHydrogenReview2022.pdf

Australian "bio-inspired" process for producing green hydrogen gains funding

A new technology - modelled on living systems - for producing hydrogen from water promises to be much more efficient in terms of energy and water use and so less expensive. The Capillary Fed Electrolysis (CFE) overcomes problems with bubble formation in more conventional electrolysis. $42 million has been raised to build a pilot plant and a commercial plant may be built near Wollongong.
https://reneweconomy.com.au/how-a-bio-inspired-breakthrough-could-unlock-economically-viable-green-hydrogen/