CROW Newsletter

Making a noise about climate change

October, 2021

Climate change seems to have been the flavour of the month

This month provided much more climate news than could possible be fitted into a simple newsletter. There was plenty of news about climate science, technology and finance, but the real action was in politics and policy.

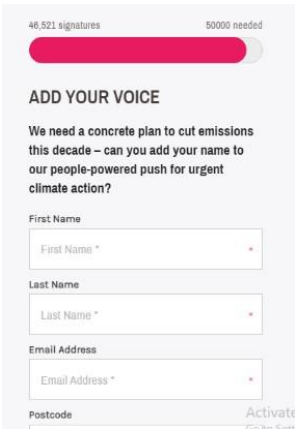
There was good news, which you will find plenty of below, and bad (Federal) news which can thankfully be ignored because, as I write this, it is going nowhere slowly. And there was weird news when the Murdoch press suddenly went all climate change concern (while still, of course, managing to blame the Australian Greens Party for previous lack of action).

And at our local Wagga level there has been a great response already to the **Net Zero Emissions Wagga Webinar** which we hope will help all of us respond to the draft Community Strategic Plan when the draft is released for comment early next year.

If you have not already, you can register for the webinar HERE.

Call for the Australian Government to cut emissions this decade

This is a very good time to remind the Federal Government that there is no time to waste.



Please join over 40 000 other Ausralians who have signed this Petition by clicking on the image.

Climate change is accelerating faster than previously thought. This is the decisive decade: we need urgent climate action now But the Australian Government is standing still. Our emissions reduction target for 2030 is far weaker than our strategic allies, and we risk missing out on the jobs and economic benefits that climate action will bring (2).

Click on the image to follow the link.

POLITICS AND POLICIES

"Inching towards 2050" – the federal government is acting too slowly

If you type "Inching towards 2050" into Google you get results about Australia's climate change policies from the ABC, Sky, The Guardian, Australian Financial Review and the Monthly amongst others. Here is part of Crikey's version from Bernard Keane.

"… we have yet another round of the "inching towards 2050" game, with Treasurer Josh Frydenberg — the man who used to be the next prime minister — making the anodyne observation that capital markets are moving more quickly than the government on climate (and being applauded by press gallery journalists for doing so) and speculation that the Nationals will agree to a deal on a 2050 net-zero target, doubtless in exchange for yet more billions of taxpayer dollars.

"In the real world, Energy Minister Angus Taylor is still trying to push through his 'CoalKeeper' tax — which would require every household to pay up to $400 a year to keep coal-fired power stations going — in a meeting with state energy ministers today. 2050 in the streets, CoalKeeper in the sheets, as it were, with the press gallery dutifully averting its collective eyes."

Taylor has also announced $350 million for Carbon Capture and Storage. Sounds good but the delivery date is the end of this decade, CCS has sucked in enormous amounts of money previously without producing useable results and, one suspects, it is just another attempt to prolong the life of fossil fuels

NSW steps up: 50% by 2030, pushing EVs and hydrogen production

The NSW government has committed to an ambitious new emissions reduction target, pledging to **halve greenhouse gas pollution by 2030.**The 50 per cent target is a steep increase on the government's previous 35 per cent goal to reduce emissions below 2005 levels by 2030. Premier Gladys Berejiklian (remember her) said "Our net zero plan is expected to attract more than $37 billion in private-sector investment into NSW,"

The NSW Electric Vehicle Strategy is the NSW Government's plan to accelerate the State's vehicle fleet of the future. It outlines the government's commitments to increasing the uptake of electric vehicles to ensure New South Wales shares in the benefits. The Strategy includes rebates, phased removal of stamp duty for EVs, targets for NSW Government fleet, incentives for council and private fleets and major investment to ensure widespread, world-class EV charging coverage.
The Strategy is intended to increase EV sales to 52% by 2030–31 and help NSW achieve netzero emissions by 2050.

NSW is set to attract more than $80 billion of investment, drive deep decarbonisation and establish itself as an energy and economic superpower with today's launch of the **NSW Hydrogen Strategy.**
Treasurer and Energy Minister Matt Kean said the strategy, which will provide up to $3 billion in incentives, will set the State up as a global hydrogen leader and is forecast to increase the size of the NSW economy by more than $600 million by 2030.
"Hydrogen will not only help the State halve our emissions by 2030 and get to net zero by 2050, it will create new opportunities for our heavy industry, and an economic bonanza of investment and jobs," Mr Kean said.

A Community heading for net zero - Barcaldine

Positioned in one of Queensland's renewable energy zones, the Barca;dome Remewab;e Energy Zone will feature a large-scale solar farm and biosteam turbine generator. This renewable energy will be used to produce fresh fruit and vegetables in glasshouses, green ammonia, hydrogen, and urea for stock feed.

Stage 2 funding, allocated to Sunshot Energy, will allow the Zone to expand to include green hydrogen, ammonia and urea production. Sunshot Energy is working in partnership with the Central West Queensland Remote Area Planning and Development Board (RAPAD), with support from the Barcaldine Regional Council

Details from the ABC story on Barcaldine can be found **HERE**.

Is "Electrify everything" the best catchcry for local and regional policies on emissions reduction.

Speaking from San Francisco, Sydney-born inventor Saul Griffith explains how Australia can rapidly get most of the way to net zero emissions using existing technology.

Also an entrepreneur and adviser to US presidential campaigns, Dr Griffith is one of the most prominent global advocates for an approach best summed up as "electrify everything". "If I had to choose the country for whom electrifying everything is the best economic win in the shortest amount of time … it is Australia," he said.

Key points:

- "Electrify everything" is the cheapest, fastest route to emissions cuts, experts say
- Households would replace petrol cars, gas heaters and other items with electric alternatives
- These changes would be minimally disruptive, but provide large emission reductions

See also: **Running homes and cars on electricity alone would save households $5,443 a year, report finds**

Video here>

Led by Saul Griffith, inventor, engineer and entrepreneur, Rewiring Australia builds on the success of the Rewiring America movement to collectively illustrate the positive outcomes for Australia and the world in mobilising rapid decarbonisation and 'electrifying everything'.

You can check out the Rewiring Australia website feature on Electrifying Everything **HERE** for more information or to sign up for regular updates.

BZE – Let's lose the coal and triple our exports

Beyond Zero Emissions argues that coal exports are just in the way of Australia becoming a major exporter by using our advantages in renewable energy.
You can click on the heading to find more information and access to the full report. Or click on the image below to watch a short video.

- Australia can grow a new green export mix worth $333 billion per annum, almost triple the value of existing fossil fuel exports
- Pursuing this opportunity will boost regional economies and jobs through transitioning existing manufacturers to renewables and supporting the sector to develop new green industries

- **Australia's economy is only at risk if we fail to recognise that our fossil exports will dramatically drop off as our biggest trading partners adopt net-zero targets.**

2050 is too late. Transgrid says we can do 100% by 2035

One of Australia's largest transmission network operators, presiding over the nation's most coal dependent state, says the national grid could – and should – be 100% renewable powered by 2035, with all coal generation phased out completely by 2032.

Transgrid, which manages and operates the high voltage electricity transmission network in New South Wales and the ACT on Tuesday released its Energy Vision – a 70-plus page report exploring six possible scenarios for the National Electricity Market out to 2050.

Based on detailed modelling undertaken in partnership with the CSIRO, ClimateWorks Australia and The Brattle Group, the report details an “unstoppable” transition that, in five out of six scenarios, takes the NEM to more that 70% renewables by 2035 and more than 90% by 2050.

But the most impressive trajectory is in the scenario called Deep Decarbonisation – the only scenario consistent with the Paris Agreement’s targeted 1.5°C limit on warming – where the supply of renewable energy on the NEM is forecast to reach an astonishing 91% as early as 2030.
“In this scenario, Australia achieves net zero emission and a 100% renewable power system by 2035, internal combustion engine vehicles are completely phased out by 2050, replaced primarily by electric vehicles, and hydrogen is used for heavy transport, industry and peaking electricity generation.”

Is Australia becoming a dumping ground for clunkers?

(H/t Grant Adams)
More than 80 per cent of the global car market now follows 'Euro 6' vehicle emission standards, including Europe, the United States, Japan, Korea, China, India and Mexico. But Australia has resisted signing up to the standards, which would require more stringent restrictions on pollutants in petrol, and require new cars to emit far less particulate matter than currently allowed.

In a submission to a federal parliamentary inquiry into road safety, ACT Transport Minister Chris Steel warned the refusal to adopt Euro 6 standards was not only bad for the environment, but also endangered road users.
"[It has] led to Australia becoming a dumping ground for manufacturers of less efficient, costly and polluting vehicles," Mr Steel said.
"Vehicles which comply with the latest emissions standards also generally incorporate a range of modern safety features, so the increased uptake of these vehicles would deliver both environmental and safety benefits."

SCIENCE AND TECHNOLOGY

Iron flow batteries

… The iron flow battery units, which rely on something called “iron-flow chemistry,” will be used in utility-scale solar projects dotted across the U.S., allowing those power plants to provide electricity for hours after the sun sets. SB Energy will buy enough batteries over the next five years to power 50,000 American homes for a day.

Every battery has four components: two electrodes between which charged particles shuffle as the battery is charged and discharged, electrolyte that allows the particles to flow smoothly and a separator that prevents the two electrodes from forming a short circuit.

Flow batteries, however, look nothing like the battery inside smartphones or electric cars. That’s because the electrolyte needs to be physically moved using pumps as the battery charges or discharges. That makes these batteries large, with ESS’s main product sold inside a shipping container.

What they take up in space, they can make up in cost. Lithium-ion batteries for grid-scale storage can cost as much as $350 per kilowatt-hour. But ESS says its battery could cost $200 per kWh or less by 2025.

Can we afford to fix Australian landscapes? Short answer is “Yes”, but read on.

Australia could 'green' its degraded landscapes for just 6% of what we spend on defence

The health of many Australian ecosystems is in steep decline. Replanting vast tracts of land with native vegetation will prevent species extinctions and help abate climate change – but which landscapes should be restored, and how much would it cost? Our latest research sought answers to these questions. We devised a feasible plan to restore 30% of native vegetation cover across almost all degraded ecosystems on Australia's marginal farming land.

By spending A$2 billion – about 0.1% of Australia's gross domestic product – each year for about 30 years, we could restore 13 million hectares of degraded land without affecting food production or urban areas.

Such cost-effective solutions must be implemented now if we're to pull our landscapes back from the brink. This bold vision would transform the way we manage our landscapes, help Australia become a net-zero nation and create jobs in regional communities.

MONEY

Coal investment gets dodgier

The number of coal plants in early stages of development around the world has collapsed by 76 per cent since the Paris Agreement was signed with 41 countries committing not to build any new coal power stations.

Since 2015, 1175GW of planned coal-fired power projects have been cancelled, avoiding a 56 per cent increase in coal capacity, according to a study of what is known as the global coal pipeline, which includes coal power stations in pre-planning and financing stages through to the start of construction.

In that time, cancelled plants exceed newly operational by a factor of 3.6 to 1, according to the study of the sector by the leading global climate think tank E3G.

China accounts for 55 per cent of the world's pre-construction pipeline as well as being home to over half of the world's operating coal fleet, but its pre-construction pipeline is also shrinking, says the report.

Australia is listed as one of five "laggard" nations in the OECD that still has "small" amounts of new coal power in the pipeline, along with Poland, Mexico and Columbia.

The big money is ditching coal and heading for renewables

Andrew Forrest and Mukesh Ambani, the richest men in Australia and India respectively, have just gone public with renewable energy deals on a scale previously unthinkable. As the Coalition ramps up its fossil fuel subsidies

When the richest man in India elaborated on his firm's net-zero emissions by 2035 pledge in June this year, the parallels with Andrew Forest's net-zero emissions by 2030 (scope 1 & 2) and by 2040 (for scope 3) for Fortescue immediate came to mind.

In a landmark moment in April 2021, the global financial industry made a pledge to invest in alignment with a 1.5°C trajectory (with interim 2030 targets) as part of a new net zero emissions by 2050 alliance. By September 2021 the Glasgow Financial Alliance for Net-Zero had collective assets under management of a staggering US$90 trillion (five times the size of U.S. annual GDP by comparison).

Yesterday, Reliance Industries, controlled by Mukesh Ambani, announced the agreed US$771m acquisition of REC Solar, a global scale solar module manufacturing pioneer founded

in Norway. This will immediately give Reliance Industries the management capacity necessary to underpin one of its four proposed gigafactories already under construction at its Dhirubhai Ambani Green Energy Giga Complex on 5,000 acres in Jamnagar, Gujarat, with a near term target of 9 gigawatts (GW) of annual module manufacturing capacity globally.

Over the weekend, Forrest's FFI announced plans to build the world's largest (to-date) green hydrogen electrolyzer manufacturing plant, with a proposed 2 GW of annual capacity at Gladstone, leveraging the state's impressive action to deliver on its 50% renewables by 2030 target. This is a tenfold expansion on the world's largest operating manufacturing plant, echoing similar capacity expansions in Norway, France and the UK, and most likely China given the country's plan for 100GW of green hydrogen capacity by 2030.
This was followed up today with a second announcement that FFI, in partnership with Incitec Pivot, would build a 50,000 tonnes per annum green ammonia electrolysis facility onsite at Incitec's Gibson Island ammonia nitrate facility in Brisbane, Queensland.