



As the crow flies

(Straight to the point)

August, 2020

Tolland Renewal Project.

As part of the Communities Plus program, New South Wales Land and Housing Corporation is calling for Expressions of Interest from registered Community Housing Providers for the renewal of the Tolland social housing estate in Wagga Wagga. LAHC is working with the Aboriginal Housing Office on this exciting initiative.

During the month CROW put together a submission to the NSW Minister responsible (Melinda Povey) with our suggestions for the features that such a renewal project should include.

Our suggestions covered new and renovated housing, energy provision and community spaces. We will put a copy of our suggestions on the CROW website (crow.org.au) along with this newsletter.

Annual General Meeting

You will have already received the notice of the CROW Annual General Meeting. Please feel free to Zoom in and join in the usual blood sport of the hotly contested executive positions as left and far left factions battle for control.

Or just become a regular attender at our meetings. All are most welcome.

POLITICS AND POLICIES

A letter worth reading from a surprising source

A few quotes from a longer letter from Trent Zimmerman (LNP Member for North Sydney) to Senator Malcolm Roberts (PHON Senator from some other planet). The whole letter is very worthwhile reading and can be found [HERE](#).

“You recently wrote to me to demand that I provide reasons as to why I have been a voice for action on climate change within the government and the basis for my view that climate change as a result of human activity was even occurring.

This I am happy to do because climate change poses such enormous risks to our future but also, if we get our response right, opportunities for Australia including the people of Queensland you represent.

... “Scepticism is a good thing – most of humankind once thought the world was flat after all. But even if you thought that so many scientists were wrong or part of a global conspiracy to hoodwink us all, isn’t what we are witnessing before our very own eyes in our weather patterns enough to make you pause for just a second and think that maybe they could be right?”

[Narrabri gas is just a last desperate NCC vanity project](#)

The controversial Narrabri gas project for New South Wales, Australia enters the final stages of approval with over 400 people presenting to the Independent Planning Commission who will determine its fate.

The project is the most hotly contested resource project in the history of the state with over 23,000 submissions, 98% of which objected to the project.

The very last thing the world needs is more gas.

Far from seeing the “gas powered recovery” our politicians desire, we are seeing a gas fired depression around the globe.

Domestically, the industry is faring little better., Santos, the proponent of the Narrabri gas project, wrote off a further \$950m from its failed Coal Seam Gas to Liquefied Natural investments in Australia. Their total write-downs since 2014 are close to \$8bn!

Globally, renewables continue to overwhelm new fossil fuel and nuclear power station builds. Since 2010 renewables have grown by approximately 148% whilst nuclear plus fossil fuels have declined by 38%.

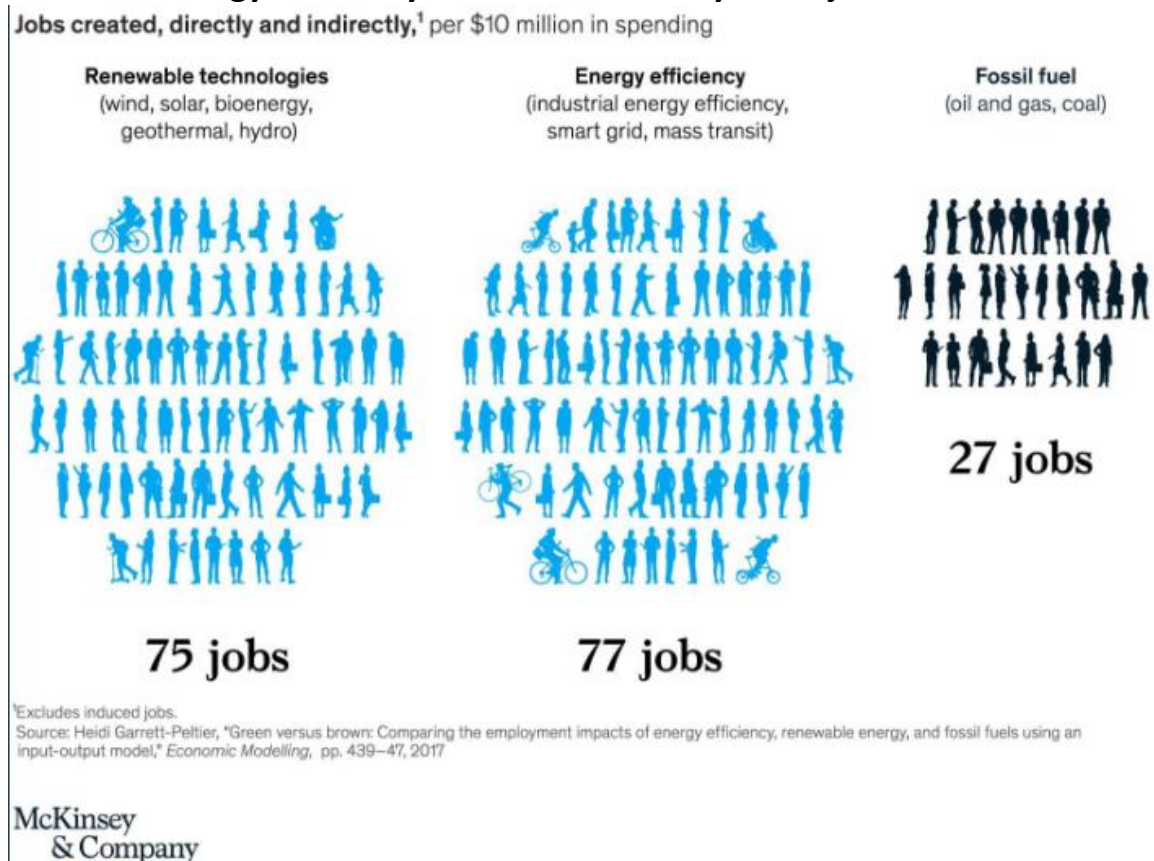
This year alone, 200 gigawatts of renewable power plants have already been built, compared to only 100 gigawatts of fossil fuel energies and nuclear.

Less gas power plants have been built in 2020 than in 2001.

The role of gas is smaller than it is today by 2040.

Investors are fleeing the gas industry and investment is flooding into renewables.

Renewables and energy efficiency would create many more jobs than fossil fuels



Western Sydney Green Hydrogen plant gets government approval

New South Wales will soon see construction start on its first renewable hydrogen production facility, with the Western Sydney Green Gas project being granted an accelerated planning approval by the NSW government.

The green hydrogen facility, to be built at a Jemena facility in the western Sydney suburb of Horsley Park, enjoyed a fast-tracked planning approval process being undertaken by the NSW government under the Planning System Acceleration Program, to speed up approval times and boost the NSW economy during the Covid-19 pandemic.

“The \$18 million Western Sydney Green Gas Project will be a prototype for future green hydrogen projects,” NSW planning and public spaces minister Rob Stokes said.

“Hydrogen can revolutionise the fuel and gas industry, creating opportunities for low emissions technologies and jobs.”

The [\\$18 million Western Sydney Green Gas project](#) is being developed with the support of the Australian Renewable Energy Agency, which has provided a \$7.5 million grant to help finance the project. The plant will install an electrolyser, which will use a supply of wind and solar power to convert water into renewable hydrogen.

The project will see Jemena install a 500 kilowatt electrolyser purchased from Belgium-Canadian firm Hydrogenics, which will produce enough zero emissions hydrogen to supply the equivalent of around 250 Sydney homes with gas.

MONEY

[This graph](#) is a little green shoot – it says that coal fired power is on the way out

It's that little bit at the bottom of the graph where growth in the generation of electricity from coal fired power stations has gone backwards. It's only -2.9 Gigawatts, and COVID probably helped, but it is a start.

Coal's Demise

Growth in coal power generation halted in 2020



[And Australia can lead the way in killing coal](#)

“It is inevitable. It is just who we are and what we are,” AEMO boss Audrey Zibelman says, “We are at a position where the existing coal fleet is coming to an end of its technical life and is going to retire.”

This is the conclusion she draws from the latest AEMO Integrated System Plan. Its central message is that the energy transition is inevitable, it's accelerating and there's not much point in resisting it. “This system is now experiencing the biggest and fastest transformational change in the world,”

Even a “do-nothing” business-as-usual scenario delivers a 74 per cent renewables share by 2040. A “**step-change**” could deliver **94.2 per cent renewables by 2040**. So if Australia is smart, can take advantage of its natural advantage in wind and solar, can lock in its technical know-how, and deliver a system that is smarter, cleaner and cheaper than what it has now, then it can position the country to become a renewable energy and economic superpower

[Australia's rooftop solar surges past 2.5 million installations](#)

Australia's rooftop solar market has defied the disruption caused by Covid-19, setting new installation records in the month of July, and pushing Australia past 2.5 million total rooftop solar installs.

According to an [analysis prepared by Sunwiz](#), growth in rooftop solar systems has continued at record-smashing pace, with 275MW of small-scale rooftop solar capacity (under 100kW) installed in the month of July alone, and new state records set in NSW, Queensland, Victoria and South Australia.

“We are now 40 per cent ahead of the same time last year – the percentage growth has actually increased since June,” Sunwiz director Warwick Johnston said.

SCIENCE AND TECHNOLOGY

[H2X hopes to jump-start Australian car industry](#)

A new company based in Port Kembla, NSW, hopes to revive the car manufacturing industry in Australia, and create up to 5,000 new jobs, through the production of a new hydrogen-fuelled SUV called Snowy in 2022.

The company, named H2X Australia, has plans to produce a range of hydrogen fuel cell vehicles (FCEVs) including everything from people movers to heavy duty vehicles such as tractors and even trains.

Hydrogen as a truly clean transport option has some questions around it regarding emissions from its energy intensive production ([it requires a very high share of clean energy to ensure the fuel is low emissions](#)) and the high investment required for refuelling infrastructure.

The H2X team is headed by CEO Brendan Norman, who has held executive positions in the past with VW in Saudi Arabia, Shanghai and Singapore, Audi in Japan and South Korea, and who has worked with Grove Hydrogen and Wales-based hydrogen car maker Riversimple over the past decade.

“But the climate is always changing”

It's a standard call for climate science deniers. Here's some in-depth reading material for any denier who thinks he or she just won the argument Because climate HAS changed throughout Earth's history. And, if they read this they will know why. And hopefully they will also know why it is happening NOW. (Hint: increased carbon dioxide)

This is just a short extract, The full article is [HERE](#).

Earth has been a snowball and a hothouse at different times in its past. So if the climate changed before humans, how can we be sure we're responsible for the dramatic warming that's happening today?

In part it's because we can [clearly show the causal link](#) between carbon dioxide emissions from human activity and the [1.28 degree Celsius](#) (and rising) global temperature increase since preindustrial times. Carbon dioxide molecules absorb infrared radiation, so with more of them in the atmosphere, they trap more of the heat radiating off the planet's surface below.

But paleoclimatologists have also made great strides in understanding the processes that drove climate change in Earth's past. Here's a primer on 10 ways climate varies naturally, and how each compares with what's happening now

World's first carbon-negative hydrogen project gets green light

Australian technology company Hazer will convert biogas derived from sewage at a wastewater treatment plant in Western Australia into hydrogen and graphite using its proprietary Hazer process.

By splitting the biogas (mainly CH₄) into hydrogen (H₂) and graphite (C) using an iron-ore catalyst, carbon that would otherwise be emitted as CO₂ as the sewage decomposed is stored in the form of solid graphite, making it a carbon-negative process.

The company previously told *Recharge* that the graphite can be sold to industry for a profit, effectively offsetting the cost of the hydrogen to the point where it becomes cheaper than other forms of clean H₂.

The \$17m pilot at the Woodman Point Wastewater Treatment Plant, known as Commercial Demonstration Project (CDP), will produce 100 tonnes of hydrogen and 380 tonnes of graphite per year. Some of the hydrogen produced will be converted to electricity via a fuel cell, allowing the project to produce its own renewable power. Woodman Point already produces biogas at its facility inside large tanks known as anaerobic digesters.

It has taken more than a decade for the company to get to this stage of development. Work on the Hazer process — which originally stood for hydrogen and zero-emission research — began in 2007 at the University of Western Australia in Perth, with the Hazer company established in 2010.

Sydney 2100: a flood a day

Flooding could occur daily in Sydney by the end of this century because of climate change
Human-caused sea level rise likely caused eight out of 10 floods in the region between 1970 and 2015, a study finds

If greenhouse gas emissions remain high and no measures are taken to adapt to rising sea levels then flooding events will be a daily occurrence in Sydney by the end of the century, a study says

Flooding in localised areas around Sydney will happen almost every week by the middle of this century because of human-caused sea level rise, according to a study by scientists at the Bureau of Meteorology. The frequency of flooding around parks, gardens and footpaths had already gone up from less than two days per year in 1914 to a present day rate of about eight days per year, the study found.

If greenhouse gas emissions remained high and no measures were taken to adapt to rising sea levels then flooding events caused simply by tides would be a daily occurrence in Sydney by the end of the century, the study found.