



# CROW Newsletter

Making a noise about climate change

July, 2021

**Remember when they said that the carbon price would isolate Australia's climate response out in front of other countries? Well we sure fixed that.**

## [Australia's ranking in getting to Paris target – 37/193](#)

Australia's global ranking on progress towards meeting the UN Sustainable Development Goals continues to be dragged down due to a lack of meaningful policies on climate change.

In the [latest country ranking published by the Sustainable Development Solutions Network](#), Australia ranks 37th out of a total of 193 countries, with Australia's ranking continuing to be weighed down by high fossil fuel use and lacklustre emissions reduction targets.

## **And the rank for climate action – 176/177**

In the 2020 edition of the Sustainable Development Report, Australia's score for "climate action" saw it rank second last, sitting 176th of 177 countries assessed, with oil and gas heavy Brunei the only country that received a worse score.

Sitting almost at the bottom of the 'climate action' ranking, Australia scored lower than fossil fuel heavy countries, including Kuwait, the United Arab Emirates, Norway and Qatar.

## **POLITICS AND POLICY**

### [Have you been wondering why shopping parking lots are full of big, diesel utes?](#)

Join the dots:

- The biggest item in the federal budget in May was the \$18.1 billion in business tax write-offs for capital expenditure
- The biggest increase by far in last week's March quarter GDP was capital expenditure – on machinery and equipment, up 10.3 per cent
- Eight of the top 10 vehicles sold in Australia in May were utes or SUVs, and sales rose by an average 90 per cent.

You might say that it's a magnificently successful effort to engineer a ute-led recovery.

But it's more complicated and less intelligent than that.

For a start, none of them are made here.

We don't do much of that kind of thing any more.

And second, while the rest of the world is encouraging greater take-up of electric vehicles to help meet demanding carbon emission targets, Australia is spending a fortune to encourage the take-up of diesel vehicles.

In May there were close to 80,000 utes and SUVs sold in Australia, close to double the number of last May, four times the number of passenger cars sold and four times the total number of electric cars sold in Australia in the past 10 years. Just in May.

### [Top economists want budget support for electric vehicles](#)

**(... that's if we can't have a carbon price)**

From a survey in the Conversation.

Australia's top economists overwhelmingly back government measures to speed the transition to electric cars in order to meet emission reduction targets.

An exclusive poll of 62 of Australia's preeminent economists — selected by their peers — finds 51 back measures to boost the take-up of electric cars including subsidising public charging stations, subsidising the purchase of all-electric vehicles, and setting a date to ban the import of traditionally-powered cars.

Only 11 oppose such measures, three of them because they prefer a carbon tax. Six of the 51 who supported special measures said they did so reluctantly, as their preferred alternative would be a carbon price or a carbon tax, rather than subsidising “one alternative out of many to reduce emissions”.

## **Barrier Reef – Prof. Lesley Hughes responds to Sussan Ley**

Environment Minister Sussan Ley is wilfully misinterpreting UNESCO’s decision to classify the Great Barrier Reef as ‘in danger’ ([Australia shouldn’t be poster boy for climate change perils, 30 June](#)) by suggesting that UNESCO thinks Australia alone can solve climate change. The Federal Government has spent a lot of money on reef management strategies ranging from water quality improvements to heat resistant corals—but it has done embarrassingly little to actually reduce emissions.

Unlike most of its international trading partners and allies, the Federal Government is still refusing to commit to a net zero target, and continues to waste taxpayer money funding new fossil fuel projects. Minister Ley herself is sitting on approval papers for a coal mine expansion in NSW while rejecting a massive renewable energy hub in Western Australia.

Climate change is the single greatest threat to the Great Barrier Reef. While addressing climate change certainly requires global cooperation, until the Federal Government takes emissions reduction seriously, it has no grounds to claim it is doing enough to protect one of the world’s most precious natural assets.

## **The gas industry, CSIRO and the Bureau of Meteorology**

The Australian Government has made an ad about how it makes everything good \*\*\*\*, and it’s surprisingly honest and informative.

(Actually this short video is from the Juice Media Group. It is alarming in what it reveals about the gas industry taking over public science organisations. And there is a **strong language warning**).

[Click here to watch it.](#)

**But wait, there’s more.** [Inpex](#), owners of a major off-shore gas project (WA) have pushed into the great kids science education program, Questacon which runs out of Canberra. [In their own words](#):

*“INPEX and Questacon aimed to inspire the next generation to think about the shifts in global energy production, while educating tomorrow’s workforce about sustainability.”*

... which is PR speak for subverting Questacon to produce a very dodgy, factually incorrect “educational” video about how important gas is supposed to be in our energy transition. You can see the video [here \(from the four minute mark\)](#).

## **SCIENCE AND TECHNOLOGY**

### **Cool burning - Aboriginal technology that protects the environment**

From [Landcare Australia](#)

Indigenous communities used fire across Australia, and in some areas this created expansive grassland on good soils that in turn encouraged kangaroos to come and were later hunted for food. Historians and researchers believe selecting what areas to burn, when, and how often, was part of Indigenous knowledge of the land. The result was a mosaic of trees and grasslands that meant the highly combustible Eucalyptus forests were not likely to create intense bushfires.

With the arrival of Europeans, much of this practice has given way as fire became feared rather than harnessed as a tool to manage the scrub. The result was the grass plains gave way to thick scrub and bushland that was prone to intense bushfires.

For more details and a great video see Australian Story [How Indigenous fire management practices could protect bushland](#).

Or read more here: [The world's best fire management system is in northern Australia, and it's led by Indigenous land managers](#)

### [For the goonan in your life – the empirical evidence that CO<sub>2</sub> causes global warming](#)

The local paper has recently featured a few letters trawling over all the discredited challenges to climate science. You know: the hacked emails, Gore has a waterfront mansion, Tim Flannery said the dams would be empty, 'they' said the Arctic ice would be gone by 2030. All that stuff. And, best of all, "No-one can show me 'empirical evidence for CO<sub>2</sub> causing global warming."

It's nice to see all the old furchies making a comeback no matter how many times they have been discredited. Here is a response to the 'empirical evidence' furchy. (I'm not saying that this will convince a goonan – nothing much will – but it may help other people listening in.)

First empirical evidence in science is not the same as a mathematical proof. It's not like proving that the angles of a triangle add to 180°. "CO<sub>2</sub> causes global warming" is a hypothesis based, like a legal case, on a 'chain of evidence' And it is the only hypothesis that fits all the relevant real world observations that scientists have made over the last 200 years.

There are four key sets of observations in this chain of evidence:

1. The Earth and the moon are virtually the same distance from the sun, so why do we experience much less heat and cold than the moon? The answer is because of our atmosphere. The laws of physics tell us that without the atmosphere, the Earth would be approximately 33°C cooler than it actually is.

2, What keeps this heat energy in the earth's atmosphere? **Greenhouse gases** that 'capture' energy, and then emit it in random directions. The primary greenhouse gases – carbon dioxide (CO<sub>2</sub>), methane, water vapour, nitrous oxide and ozone – comprise around 1% of the air. The main atmospheric gases, nitrogen and oxygen, are not greenhouse gases

3. **CO<sub>2</sub> has increased by nearly 43% in the last 150 years.** We know, from bubbles of air trapped in ice cores that, before the industrial revolution, the amount of CO<sub>2</sub> in the air was approximately 280 parts per million (ppm). In June 2013, the NOAA Earth System Research Laboratory in Hawaii announced that, for the first time in thousands of years, the amount of CO<sub>2</sub> in the air had gone up to 400ppm (In 2021 it is 417).

4. **The smoking gun.** The final proof that CO<sub>2</sub> is causing the increases in temperature. We know that CO<sub>2</sub> traps energy at very specific wavelengths, while other greenhouse gases trap different wavelengths. Spectroscopic measurements at the earth's surface show which wavelengths of energy are being **radiated back** to the surface instead of escaping to space. Among the energy spikes being radiated back to Earth are those caused by ozone, methane, and nitrous oxide. But the CO<sub>2</sub> spike dwarfs all the other greenhouse gases, and tells us something very important: **most of the energy being trapped in the atmosphere corresponds exactly to the wavelength of energy captured by CO<sub>2</sub>.**

Click on the heading for the full Skeptical Science article. But you can also try: [Climate Change: How Do We Know?](#)

For a more technical, though readable description see: [Empirical Evidence for the Greenhouse Effect and Global Warming](#)

## Oh, and while we're talking about the Arctic ice furphy, here is the latest news.

Rapid and drastic melting last summer of the area predicted to be the Arctic's final refuge of ice has been pinned to unusual meteorological conditions and climate change, with scientists suggesting the '[Last Ice Area](#)' (LIA) is more vulnerable than previously thought.

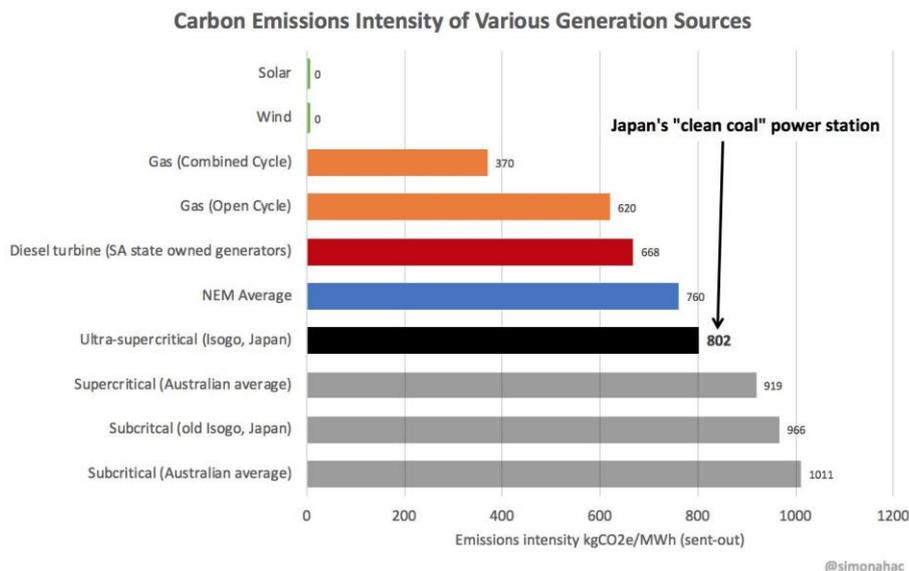
The LIA is a region north of Greenland and Ellesmere Island in the Canadian territory of Nunavut that is predicted to harbour **the last vestiges of Arctic summer ice once climate change claims the rest of the polar region's permanent ice by around 2040**. When that happens, it's believed the area will become the final haven for wildlife that depends on sea ice for its survival.

In a new [paper](#) in *Communications Earth & Environment*, researchers concluded that while extreme winds were the major driver of ice loss in 2020, climate change contributed to the thinness of the ice, and therefore its vulnerability to extreme events. With that in mind, they warned the LIA may not be as resilient as once thought, threatening the survival of Arctic species in this icy refuge as the planet warms.

Animals at risk include polar bears, which use the ice to hunt for seals, and walrus that forage from platforms of sea ice.

## What the HELE?

There is literally no such thing as "high efficiency, low emissions" (HELE) coal power. It doesn't exist. The most "advanced" coal power in the world, ultra-supercritical technology, has a higher emissions intensity than the "dirty diesel" generators SA bought in 2017. (From Simon Holmes a Court)



## Tasmania – nett zero in 2015, 100% renewable 2020, heading for 200% real soon.

Getting to net-zero greenhouse gas emissions and 100% renewable energy might seem the end game for climate action. But what if, like Tasmania, you've already ticked both those goals off your list?

Net-zero means emissions are still being generated, but they're offset by the same amount elsewhere. [Tasmania reached net-zero](#) in 2015, because its vast forests and other natural landscapes absorb and store more carbon each year than the state emits.

And in November last year, Tasmania became fully powered by [renewable electricity](#), thanks to the island state's wind and hydro-electricity projects.

The big question for Tasmania now is: what comes next? Rather than considering the job done, it should seize opportunities including more renewable energy, net-zero industrial exports and forest preservation – and show the world what the other side of net-zero should look like.

### [Australian invention to slash cost of green Hydrogen](#)

An Australian start-up says it has invented a new super-efficient type of electrolyser that uses [plasma, the fourth state of matter](#), to reduce the cost of green hydrogen by a factor of three.

Melbourne-based Hydrogen Systems Australia (HSA) says that today's PEM (proton exchange membrane) electrolysers produce hydrogen at a levelised cost of about \$5-7 per kilogram, while its new plasma electrolysers would produce H<sub>2</sub> for \$2/kg by 2024 (based on a power price of \$35/MWh when operating for 12 hours a day) – and could go even lower after that.

Meanwhile, in Norway

### [Nel to slash cost of electrolysers by 75%, with green hydrogen at same price as fossil H<sub>2</sub> by 2025](#)

Part of the cost savings will be due to the plasma electrolyser itself costing 90% less than PEM machines at current prices, with the rest coming from improved efficiency.

## **MONEY**

### [Hitting Paris targets will boost world economy](#)

An accelerated renewables-fuelled energy transition that aligns “sharp” changes in international investment strategies, capital markets and government policy would get the world on track to meet Paris Agreement climate targets while boosting the global economy almost 2.5% higher than is currently forecasts, according to a new report from the International Renewable Energy Agency (Irena).

The agency's latest World Energy Transition Outlook flags that wind and solar-led clean energy systems are set to “instigate profound changes that will reverberate across economies and societies” in the coming decades but will need the support of “adjustments in capital flows and a reorientation of investments” that would translate into an annual spend of some \$4.4trn.

### [Coal plant investment continues, endangering us all](#)

Five Asian countries are jeopardising global climate ambitions by investing in 80% of the world's planned new coal plants, according to a report.

Carbon Tracker, a financial think tank, has found that China, India, Indonesia, Japan and Vietnam plan to build more than 600 coal power units, even though [renewable energy is cheaper than most new coal plants](#).

The investments in one of the most environmentally damaging sources of energy could generate a total of 300 gigawatts of energy – enough to power the UK more than three times over – despite calls from climate experts at the UN for all new coal plants to be cancelled.

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Catharina Hillenbrand von der Neyen, the author of the report, said: “These last bastions of coal power are swimming against the tide, when renewables offer a cheaper solution that supports global climate targets. Investors should steer clear of new coal projects, many of which are likely to generate negative returns from the outset.”

While Asia continues to plough money into coal plants, countries across the developed world are accelerating plans to phase them out. The UK government has announced plans to bring forward the deadline for coal plants to be decommissioned by [one year earlier than planned](#), to 2024.