



# As the crow flies

(Straight to the point)

August, 2019

## New format for the CROW Newsletter

The CROW newsletter is now published every month on the CROW website (go [here](#) to see it). As a consequence it is building up into a useful collection of information about many aspects of climate change.

The information in the newsletters falls into four categories: Science, Technology, Politics/Policy and Money.

In future newsletters we will group articles into these categories so that, when they appear in the website, articles in each category are easier to find and the newsletter easier to browse for the information that interests you. Of course we can't guarantee that there will be articles for each category each month, but we will try.

## And an important request – Blower Door testing participants

### Blower door testing project – we're looking for participants

Blower doors (like that pictured below) blow air out of (or into) a house to measure air leaks in the house. Fixing the leaks improves energy efficiency and comfort and lowers energy costs. Many fixes are often easily and cheaply done.



CROW has received funding through the Wagga Wagga City Council Community Grants scheme to blower door test several houses. The grant provides for a handyperson to correct some of the energy efficiency problems in the houses. Opportunities for other improvements will be discussed by the CROW team doing the blower door tests (one test before and one test after changes are made).

**Are you, or do you know someone (in the Wagga local government area) who is, interested in participating?** The project is focused on homeowners, and we'd love to have some participants who are on Centrelink benefits. Please contact William Adlong at 0412 103 015 if you can help.

The blower door itself is on loan from Charles Sturt University, as part of its commitment to community engagement. Thank you WWCC and CSU!

## SCIENCE

### Used to be volcanoes, now it's the burning of fossil fuels.

New reconstructions of Earth's temperature over the past 2,000 years, published recently in [Nature Geoscience](#), highlight the astonishing rate of the recent widespread warming of our planet.

We also now have a clearer picture of decade-to-decade temperature variations, and what drove those fluctuations before the industrial revolution took hold.

Contrary to previous theories that pre-industrial temperature changes in the last 2,000 years were due to variations in the Sun, **our research found volcanoes were largely responsible. However, these effects are now dwarfed by modern, human-driven climate change.**

Without networks of thermometers, ocean buoys and satellites to record temperature, we need other methods to reconstruct past climates. Luckily, nature has written the answers down for us. We just have to learn how to read them.

Corals, ice cores, tree rings, lake sediments, and ocean sediment cores provide a wealth of information about past conditions – this is called “proxy” data – and can be brought together to tell us about the global climate in the past.

In this paper we applied seven different methods to reconstruct global temperature from our proxy network. We were astounded to find that the methods all gave remarkably similar results for multidecadal fluctuations – a very precise result considering the breadth of the methods used.

(We) found that at no time in the last 2,000 years has the rate of warming been so high. The strength of the recent warming is extraordinary. It is yet more evidence of human-induced warming of the planet.

## [The answer to the Malcolm Roberts “no empirical evidence” furphy](#)

This excellent article is all you need to answer this rubbish argument. It is well worth copying it into a file so it can be used as needed. (Just click on the link above).

The proof that man-made CO<sub>2</sub> is causing global warming is like the chain of evidence in a court case. CO<sub>2</sub> keeps the Earth warmer than it would be without it. Humans are adding CO<sub>2</sub> to the atmosphere, mainly by burning fossil fuels. And there is empirical evidence that the rising temperatures are being caused by the increased CO<sub>2</sub>.

Each of these points is explained clearly and simply in the article. A sample from “CO<sub>2</sub> keeps the earth warmer”:

The reason that the Earth is warm enough to sustain life is because of greenhouse gases in the atmosphere. These gases act like a blanket, keeping the Earth warm by preventing some of the sun’s energy being re-radiated into space. The effect is exactly the same as wrapping yourself in a blanket – it reduces heat loss from your body and keeps you warm.

If we add more greenhouse gases to the atmosphere, the effect is like wrapping yourself in a thicker blanket: even less heat is lost. So how can we tell what effect CO<sub>2</sub> is having on temperatures, and if the increase in atmospheric CO<sub>2</sub> is really making the planet warmer?

Click on the heading to read the rest.

## TECHNOLOGY

### [Freshwater and energy In one package](#)

A device that can produce electricity from sunlight while simultaneously purifying water has been produced by researchers, an invention they say could solve two problems in one stroke. The researchers say the device is not only a source of green energy but also offers an alternative to current technologies for purifying water. These, they add, often consume large amounts of electricity and require infrastructure beyond the reach of many communities that lack basic access to safe drinking water – a situation thought to affect more than [780 million people worldwide](#).

“These people spend a collective 200m hours a day fetching water from distant sources,” said Prof Peng Wang, a co-author of the research from King Abdullah University of Science and Technology in Saudi Arabia.

With solar farms often located in arid regions, the device could provide clean water where it is needed most. What is more, the team say it could be used in a backyard or on an industrial scale.

“Having a significant amount of freshwater produced continuously on a daily basis [means] many challenging tasks can then be easily achievable,” said Wang. “The generated clean water can be used [for] cleaning solar panels to remove dust particles; it can be used to irrigate plants and crops, making desert agriculture possible.”

## Future energy in India

July 19, 2019 (IEEFA India) – India is likely to obtain 63% of its installed power capacity from non-fossil fuel sources (including hydro) by 2029-30, according to the Central Electricity Authority (CEA). This would significantly exceed the country's Paris agreement target of a 40% share of installed power capacity from non-fossil fuel sources by 2030.

The CEA report estimates that growth in new installed power capacity will lead renewables to generate close to 44% of all electricity consumed in India in 2029-30.

## POLITICS AND POLICIES

### NSW inquiry into transition from coal

Plotting NSW's transition away from coal will be the subject of a parliamentary inquiry, including how the state can make the most of renewable energy supplies.

Submissions for the lower house's committee of environment and planning inquiry are open from Wednesday until September 15, with an aim to sidestep the "ideological debate" over the fossil fuels and climate change, said Alex Greenwich, independent MP and committee chair. The terms of reference of the inquiry into the sustainability and energy supply and resources in NSW, include the economic opportunities of renewables, emerging trends in supply and exports, and the role government policies can play to support communities affected by changing markets.

Matt Kean, the Minister for Energy and Environment, said his government was "focused on the reliability, affordability and sustainability of energy for NSW customers".

Adam Searle, Labor's energy spokesman, questioned the need for another inquiry after an upper house probe last year "thoroughly" dealt with the key energy issues in the state.

"We all know renewable energy is the cheapest new-build supply," he said. "The time has passed for another inquiry - the time for action is now."

### "Emissions Reduction Fund a Joke"

The Morrison government's main climate change policy, the emissions reduction fund, has been labelled "a joke" after its latest auction bought cuts equivalent to only 0.01% of Australia's annual greenhouse gas pollution.

While the prime minister, Scott Morrison, announced prior to the election that the policy would [get an additional \\$2bn funding](#), the first post-election auction from the fund dedicated less than \$1m to just three emissions reduction projects.

Combined, the three projects are promised to cut emissions by 59,000 tonnes over a decade – just 0.06% of the 100m-tonne cut Morrison [said the rebadged "climate solutions" fund would deliver](#) as part of a government plan to meet the target set at the Paris climate summit.

It will reinforce [the expert view](#) that Australia will not meet its Paris commitment under current policy settings. Australia's emissions have [risen each year](#) since the Coalition replaced a carbon price scheme with the emissions reduction fund.

## MONEY

### Japan's coal imports are set to decline

**10 July 2019 (IEEFA Australia)** – Australia will struggle to seek alternative markets for its thermal coal as a declining Japanese market increasingly turns towards cheaper renewable energy solutions, a new IEEFA report out today has found.

The report, [Japanese Thermal Coal Consumption Approaching Long Term Decline: Australia's Biggest Export Destination to Transition Away from Coal](#), examines the momentum away from thermal coal in Australia's key export market.

Japanese coal plants under construction will be offset by closures of old plants in the medium term and Japan's coal-fired power capacity will go into irreversible decline.

Under pressure from ever cheaper renewable energy and reducing Japanese electricity demand, utilisation of Japanese coal plants is also forecast to contract, reducing thermal coal imports even further.

The trajectory of NSW thermal coal exports to Japan is down – not up.

Author of the report, IEEFA research analyst Simon Nicholas says while Australia's biggest export market – Japan – represented a significant 45% of all NSW thermal coal exports in 2018, the road ahead is forking.

"NSW thermal coal exports to Japan peaked back in 2015, and the trajectory is down – not up," says Nicholas.

"Even under a business-as-usual scenario, Japan's coal-fired power capacity will go into decline from 2023, affecting Australia's exports.

### Renewable Energy projects are saving our economy - really

Don't tell the coal-huggers, but Australia's investment in renewable energy is keeping our economic growth ticking over.

Industry research company Macromonitor has found the \$9 billion increase in renewable energy construction over the three years to 2019-2020 has been greater than the growth in road, rail or other infrastructure.

There are more total dollars in transport construction, but what provides GDP growth is the increase in investment.

When the count for the past financial year comes in in September, it will show the weakest GDP growth since 1992.

It turns out renewable energy construction has played, and is playing, a major role in stopping the economy going backwards.

As a media release from Macromonitor economist Natalie Keogh put it: "The extraordinary boom in the renewables sector is currently the largest contributor to overall growth in construction in Australia.

"Solar projects, in particular, combined with wind and storage projects, are driving solid growth in overall utilities sector construction, despite falling levels of work on the NBN and weak activity in water, gas and the non-renewable segments of electricity."

While renewable energy construction increased by more than \$9 billion over the three years, the report estimates road construction increased by \$3 billion, rail construction by \$6 billion and commercial building by \$8 billion.