



# CROW Newsletter

June, 2019

## IEEFA: Queensland makes a poor economic decision

Thermal coal and renewables are both used to generate electricity. Thermal coal peaked back in 2014 and is on the way out, while renewables are the fastest growing industry in the world. Opening up the world's biggest new thermal coal basin when thermal coal has already entered terminal decline – and is forecast by the International Energy Agency to be completely phased out globally by 2050 (assuming the world delivers on the Paris Agreement) – is not a good investment.

By approving Adani's Carmichael thermal coal mine, the Queensland government is showing extremely poor business acumen for the sake of a handful of jobs and few royalties. Adani's thermal coal mine would likely provide Queenslanders with only a limited number of ongoing jobs. Queensland's burgeoning renewable energy industry already provides much, much more regional employment.

Given a three-year construction timeline and the proposed seven-year royalty holiday gifted by the Queensland government, the often-touted benefit of additional royalties from the Carmichael thermal coal mine proposal ignores that zero royalties are likely to be paid in the coming decade. In fact, Queensland Treasury forecasts point to penalties for speeding and red-light camera being likely to contribute more to the Queensland budget than thermal coal this decade.

Another Queensland product – coking coal used for steel manufacturing – brings seven times more to Queensland's annual budget than thermal coal, estimated at \$3,626m versus just \$538m from export thermal coal in 2018. Put another way, a tonne of coking coal in Queensland pays five times the export royalties and is worth four times as much as low energy, high ash Carmichael thermal coal.

Renewables are the fastest growing industry in the world

**Thermal coal, one of the biggest causes of global warming, is on the way out. It is technologically obsolete, a bit like Telstra's fixed line phone network a decade ago.**

## **Personal indulgence (I just love Spain)**

After a close fight, Barcelona's radical mayor, Ada Colau, is expected to take office for a second term on Saturday, vindicating her often-criticised policies, which have included making sure all the city's municipal buildings and services run on renewable energy.

On the other side of the country in Andalucía, José María González was re-elected as mayor of Cádiz last month having swept to power in 2015 on the same tide that brought Colau to office, with energy as a central issue in his campaign.

Cádiz and [Barcelona](#) have set themselves up as distributors, cutting out the middle man, and have begun installing solar panels on public buildings with the aim of becoming self-sufficient.

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"Energy policy should be in the hands of the people," González said. "In Cádiz we set up two permanent citizens' energy forums and the people have been the driving force behind the improvements we have carried out. The people of Cádiz are the motor of energy transition."

## **Wise words from the Climate Council**

THERE'S NO way to sugar-coat it — the 2019 federal election didn't deliver the outcome we'd hoped for climate action. But we're here to remind you that it's not all doom and gloom, and it's going to be ok — so long as we turn this momentary feeling of defeat into a productive

force for action. We need to harness the powerful wave of momentum we have built over the past few months and come back stronger than ever.

If we take a moment to look around us, there are many reasons to feel inspired and hopeful for our future and the climate. [Here are our top six reasons for hope, to get you started:](#)

1. Climate change was a top election issue and it cannot be ignore.
2. The youth are rising
3. Momentum is building around the world
4. State and territory governments are stepping up
5. Local communities are banding together
6. Households are doing their bit.

**Today's quick look at the carbon countdown clock – scare yourself [here](#)**

17 years, 203 days, 6 hrs, 49 mins,  
19 secs

Until we will exceed the IPCC's 2C carbon budget, if our emissions stay as they are now

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## [The AEMO is pointing the way forward](#)

**The Australian Energy Market Operator has confirmed that it will model a significant “step change” in Australia’s clean energy transition as part of its long term blueprint, and has also produced analysis showing multi-billion cost savings from a co-ordinate planning, and pointed to the potential early exit of coal-fired generators.**

AEMO is leading – through its Integrated System Plan and with the support of Energy Security Board and other key institutions – a detailed, 20 year blueprint that will guide how the grid operator can navigate the “unstoppable” shift to renewables.

AEMO’s modelling includes neutral scenarios and even slow scenarios, but the key new element will be a “step change” scenario that represents strong action on climate and the acceleration of technology, and other scenarios based around a very high uptake of distributed energy resources (rooftop solar and battery storage).

This is significant. Australia’s public and policy debate is hamstrung by the views of conservatives who simply don’t believe that a clean energy transition to a renewables-based grid can occur without the lights going out and the economy grinding to a halt.

AEMO’s work will challenge those assumptions. Already, it’s modelling suggests having a co-ordinated plan, and investing in infrastructure, will lead to consumer savings of \$3.8 billion, based on the work of consultancy Aurora.

## [Is NSW stuck in the dark ages?](#)

The Climate Council has issued a damning report into the inaction of the NSW Government to tackle the increasing impacts of climate change.

The [Climate Council's Ageing and Unprepared: Energy in New South Wales](#) report examines the state’s energy infrastructure and continued dependence on coal and gas power, as well as what it calls its ‘tardy transition to renewable energy’.

“NSW has an energy system stuck in the dark ages, and as soon as the heatwaves hit, the old coal clunkers have a tendency to fall over like dominoes,” said Climate Councillor and former president of BP Australasia, Greg Bourne.

“NSW has Australia’s largest and oldest coal fleet. It’s risky business to rely on coal power stations which become increasingly unreliable with age. Last year they broke down more than 20 times,” said Bourne.

The report draws stark contrast to Victoria, Queensland and South Australia, which the Council says are surging ahead of NSW in adopting renewables.

“South Australia is on track to reach 73 percent renewable electricity in less than two years, while across Australia, almost 10,000 new jobs are being created in the renewable energy industry,” Mr Bourne said.

### [This is what Extinction Emergency is all about](#)

Diplomats from 130 nations are gathering in Paris this week to validate a grim UN assessment of the state of the natural world and lay the groundwork for an 11th-hour rescue plan for life on Earth.

A 44-page, draft “Summary for Policy Makers” catalogues the 1001 ways in which our species has plundered the planet and damaged its capacity to renew the resources we depend on, starting with breathable air, drinkable water and productive soil.

The impact of humanity’s expanding footprint and appetites has been devastating.

Up to a million species face extinction, many within decades, according to the report, and three-quarters of Earth’s land surface has been “severely altered”.

A third of ocean fish stocks are in decline, and the rest, barring a few, are harvested at the very edge of sustainability.

A dramatic die-off of pollinating insects, especially bees, threatens essential crops valued at half-a-trillion dollars annually.

Twenty 10-year targets adopted in 2010 under the United Nation’s biodiversity treaty — to expand protected areas, slow species and forest loss, and reduce pollution — will, with one or two exceptions, fail badly.

And when it comes to biodiversity loss, Australia is one of the worst offenders.

### [And for the rev-heads amongst us.](#)

There is good news for car racing fans bored with Formula 1’s predictable finishes and worried about wasted fuel and carbon emissions.



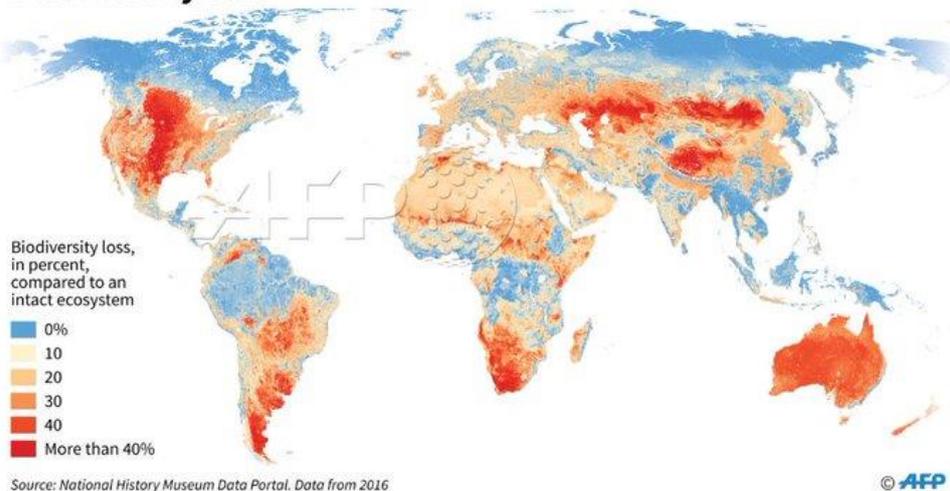
Electric open wheel racing category Formula E is going from strength to strength, with just 17 points separating the top six positions in the drivers championship.

Just as technology developed for Formula 1 has trickled down to road cars, Formula E aims to accelerate the electrification of the automobile industry to reduce carbon emissions.

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And, when it comes to Bio-diversity loss, Australia has the reddest of red faces (more than 40%)

### **Biodiversity loss**



### **Culcairn is a hot spot in the conflict between farming and solar power**

A David and Goliath battle over land is emerging in the Southern Riverina of New South Wales, with four foreign-owned energy companies racing to get their large-scale solar projects off the ground.

Key points:

- French-owned Neoen plans to build a 400-megawatt solar farm in Culcairn
- The solar farm would take up 1,300 hectares of agricultural land with 1 million solar panels
- The area (near Culcairn) is considered highly productive agricultural land due to its consistently high rainfall

It has left farmers questioning whether these types of infrastructure projects should be built on productive agricultural land.

TransGrid's high-voltage powerlines run through Sharon Feuerherdt's crop land and she knocked back a multi-million dollar offer from French-owned Neoen to put solar panels on her land.

Instead, she intends to fight the construction of what would potentially be Australia's largest solar farm.

### **ACT to 100% renewables by 2020**

Canberra will be effectively powered by renewable energy from October 1 — the first Australian jurisdiction to do so, according to the ACT's Climate Change Minister.

Key points:

- The ACT sources most of its renewable energy from reverse auctions
- Canberrans pay \$5 a week on top of their average power bill to fund the scheme
- The ACT Government had pledged to reach the target by 2020

October marks the date when the third stage of South Australia's Hornsdale wind farm comes online, from which the ACT has purchased the last trickle of renewable energy it needs to claim 100 per cent renewable power.

It fulfils a decade-long promise by the ACT Government to reach the milestone by 2020.

## **We have three years left in Australia's Carbon Budget – without Adani**

From Penny Sackett, Australia's Chief Scientist

Barring some speculative technology deployed in the next decade on massive, unprecedented scales that pulls down more carbon from the atmosphere than we are putting up, the emissions budget that humans must not exceed is 1000 billion tonnes of carbon – give or take. That's the total carbon budget – from the beginning of the industrial revolution – to keep global warming strictly below 2 degrees with at least a 2/3 chance.

After doing the sums, only 95 billion of the original 1000 billion tonnes is left to spend on carbon dioxide emissions. With 10 billion tonnes of carbon emitted every year, without immediate action, humanity will burn through the remaining budget in just 10 years. At that point, the chances of holding warming to 2 degrees will drop below 2/3, and we might as well flip a coin to know whether the climate will exceed boundaries maintained for more than a million years.

To put that in an Australian context, we can divide that remaining 95 billion-tonne budget evenly across the world's population. With 0.33% of the world's population, Australia's "fair share" of the remaining budget is 310 million (million, not billion) tonnes of carbon to "spend" on carbon dioxide emissions, which come primarily from burning fossil fuels.

Sound like a goodly amount? Well, using recent numbers from the National Greenhouse Gas Inventory, Australia would use up that "fair share" in just three years.

Three years. Now there's something that fits into an electoral cycle. And that's not even counting the carbon dioxide that results from exported Australian coal burnt overseas.

## **Shuttered car plant in Adelaide to become Toyota's green hydrogen hub**

Toyota's shuttered Altona plant is set for a new lease on life, with a plan launched to develop a green hydrogen transport hub on the site in Melbourne's west.

Under the new plan, the multinational car manufacturer has pledged to develop the \$7.4 million Toyota Australia Hydrogen Centre to demonstrate an end-to-end process for the production, storage and use of renewable hydrogen.

ARENA CEO Darren Miller outside Toyota's Altona Centre of Excellence

ARENA has announced that it will provide \$3.1 million towards the pilot project.

The Hydrogen Centre will include solar PV and battery storage to contribute towards the energy requirements for the production of renewable hydrogen via electrolysis.

The project aims to demonstrate the end-to-end process from production using an electrolyser, through to compression and storage of hydrogen for use in hydrogen fuel cell vehicles.

The Hydrogen Centre is the first step towards Toyota's broader transformation of the decommissioned car manufacturing plant into an EcoPark and centre of excellence.

With a target of reaching zero emissions from its sites and vehicles by 2050, Toyota will install solar panels and battery storage to produce more than 60 kilograms of renewable hydrogen through electrolysis every day.

At the announcement, Toyota Australia's Vice President of Sales and Marketing Sean Hanley said the company developed the idea when they made the difficult decision to cease production at Altona.