



# CROW Newsletter

April, 2019

## Stop Adani Wagga Facebook

A lot of people are already contributing to or following the Stop Adani Wagga Facebook page, but it would be good to get the numbers up into the hundreds.

If you have not already joined this page, please go to Facebook, search in the top corner for Stop Adani Wagga and apply to join (it usually takes less than a couple of hours to get confirmation).

When you are in you can post any interesting information into the page, Like postings and Share them. The more shares, the more people get to see the information.

And that is what is needed in the Climate Change Election.

## A not very comforting fact

**The last time carbon dioxide levels in the atmosphere were as high as they are today, sea levels were 60 feet (18 metres) higher** and it was so warm that trees grew in Antarctica. Current CO2 levels of 410 parts per million (ppm) were last seen on Earth three million years ago, a time when there were no ice sheets covering either Greenland or West Antarctica, and much of the East Antarctic ice sheet was gone. Temperatures were up to 7 degrees Fahrenheit (3°C) warmer globally, at least double that at the poles.

## Switching to Renewable Energy would cost (oops) SAVE the world \$160 trillion

Imagine a world where 85% of all electricity comes from renewable sources, there are over one billion electric vehicles on the road, and we are on track to preserve a livable climate for our children and future generations.

The International Renewable Energy Agency (IRENA) reported this week that such a future is not merely possible by 2050, but thanks to plummeting prices in key clean energy technologies, the cost of saving the climate has dropped dramatically.

In fact, according to IRENA's [new report](#), the most cost-effective strategy to achieve a "climate-safe future" — keeping global warming below 2 degrees Celsius (3.6 degrees Fahrenheit) — is an accelerated energy transition to renewables and energy efficiency coupled with electrification of key sectors like transportation.

**IRENA reports, "every dollar spent on energy transition would pay off up to seven times."**

## Apparently New Zealand is on another planet

Analysts are expecting New Zealand **to reach 100 per cent of new vehicles by 2030**, as part of a plan to ensure that 90 per cent of the entire fleet, if not 100 per cent, is electric by 2050.

"Our base case assumption is that EVs will achieve 100% penetration of new light fleet imports by 2030 and 100% of used imports by 2035," Deutsche Bank analysts said in a recent report. "This leads to an expectation for 15% of the light fleet to be electric by 2030, climbing to 53% by 2040 and 90% by 2050."

This is in line with New Zealand's Productivity Commission, which last year reacted to the country's soaring emissions by saying New Zealand "must stop burning fossil fuels", and switch quickly to electricity for transport and heating.

## Hepburn leading the way to zero net energy

A 10-year plan to turn the Hepburn Shire in central Victoria into a model zero-net emissions community was launched in Daylesford on April 4.

The Z-Net Community Transition Plan is a detailed master plan for the shire reaching 100% renewable electricity supply, zero-net energy and zero-net emissions by 2029.

An initiative of the Coalition for Community Energy with pilot funding from Sustainability Victoria, the project was led by Renew and Little Sketches with help from many other collaborating groups and individuals including Starfish Initiatives.

The project team worked closely with Hepburn Shire Council, Hepburn Wind and local sustainability groups SHARE, Hepburn Relocalisation Network, Trentham Sustainability Group, Transition Creswick and Clunes Sustainability Group.

The project will involve three phases of implementation across a number of focus areas:

- Stationary energy
- Agriculture
- Transportation
- Waste and waste water
- Land use

[Click here](#) to read the Community Transition Plan and for more information on Hepburn Z-Net.

## If we're quick, Australia could be Hydrogen powered world beaters

Australia has enormous opportunities in renewable hydrogen but must act now to ensure the clean energy potential of green hydrogen is preserved, according to a coalition of community groups including Renew.

In a submission on a national hydrogen strategy to the COAG Hydrogen Working Group, Renew, with Beyond Zero Emissions, the Queensland Conservation Council, Greenpeace and the Community Power Agency, recognises the future of renewable hydrogen and raises concerns about polluting, black hydrogen in future markets.

**Renewable hydrogen made from water and electricity created using the wind and sun is of great benefit to Australia, with billions of dollars of investment possible.**

Renewable hydrogen could be used as a chemical and energy agent in the manufacture of steel and other metals, fertilisers and other products. It will have future transport applications in long-haul electric vehicles (for example, freight) equipped with fuel cells that convert hydrogen fuel, stored on board, into the electricity needed to propel the vehicle.

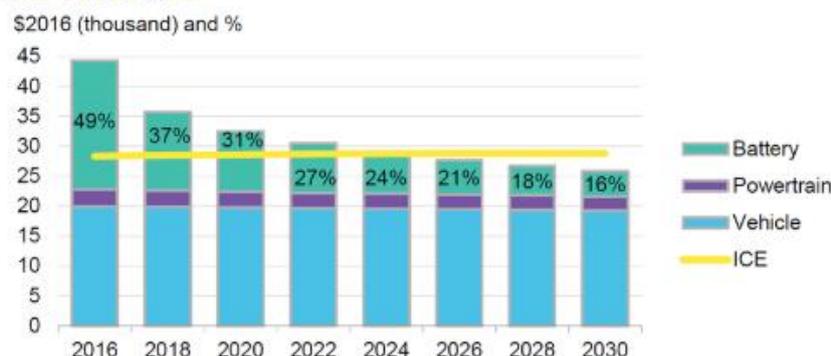
It could also be used as a form of stored energy and as an "energy carrier" integrated with Australia's electricity supply network.

## **For the facts on Electric Vehicles (EVs), as against the spin, click [HERE](#) and [HERE](#)**

For instance (I know it is America, but after all we do import all our cars.)

### **Soon electric vehicles will be cheaper than Internal combustion engines (ICE)**

#### **BEV and ICE pre-tax prices in the U.S. and the share of battery costs in the vehicle price, medium sized cars**



Source: BloombergNEF

## Australia is powering on towards renewables – up 5% from 2017 to 2018

### Topline facts:

- Renewable energy supplied 19% of Australia's electricity in 2018
- Fossil fuels supplied 81% of Australia's electricity
- All states and territories increased their proportion of renewable energy
- Tasmania has the highest proportion of renewable energy at 95%
- South Australia has the highest proportion of wind and solar at 51%

Australia's steady march towards renewable energy continued in 2018, with all states and territories generating more renewable energy than the previous year and **South Australia officially cracking 50% renewable energy**.

In March, the Federal Government's [Department of the Environment and Energy](#) released its initial data for Australia's electricity generation in 2018. This data shows that Australia generated 18.9% of its electricity from renewable energy technologies in 2018, mainly from wind, solar and hydro. This was up from 15.2% in 2017.

### [Another disturbing fact](#)

"Moreover, recent data is showing that coal plants are being less and less utilised as cheaper options come online, [with coal plants in China](#) being utilised less than 50% of the time. As a result, researchers estimate that if all the coal plants in the pipeline today were built, this could result in up to [\\$981 billion in stranded assets](#)."

We already see how hard Adani is prepared to fight to prevent his Galilee mine becoming a stranded asset. Expect more and worse in the years to come.

## We can have coal or coral – not both.

**Australia's top Great Barrier Reef officials warn the natural wonder will virtually collapse if the planet becomes 1.5 degrees hotter – a threshold that scientists say requires shutting down coal within three decades.**

This federal election campaign is a potential tipping point for Australia's direction on climate action, as the major parties pledge distinctly different ambitions for cutting greenhouse gas emissions.

However neither party has rejected the proposed Adani mine outright or promised to phase out coal, an export on which Australia is heavily reliant.

Climate change has already wrought devastating effects on the World Heritage-listed Great Barrier Reef, including two consecutive years of mass coral bleaching in 2016 and 2017.

## Who'd a thunkit – an electric airline

When the world's largest floatplane-only airline, [Harbour Air](#), says it is switching to become an electrically powered airline, you know something is going on with the [state of aviation battery technology](#). It starts to make sense to some, at least enough to look into it. And when aviation makes financial sense of electric mobility, it also means the tipping point is near or already reached.

Harbour Air will be the first seafaring airline to convert its complete fleet of de Havilland Beaver, Otter, Twin Otter aircraft and lone Cessna Caravan to electricity. These 41 vintage aircraft will be converted to reach a longer lifecycle with highly improved efficiency and lowered maintenance costs, a win-win for all.

Currently, the airline flies 500,000 passengers annually, with daily scheduled service flights between Seattle, Vancouver, and various other cities on the coast of British Columbia, as well as Vancouver Island.

According to the [Vancouver Sun](#), founder and CEO Greg McDougall said: "If you think about it, it's the evolution of transportation toward electric propulsion. The internal combustion engine is all but obsolete, really, for future development. It's all about electric."

## The market for Australian coal is collapsing – especially in Japan

**The governments of Australia and New South Wales will need to come to terms with declining revenue contributions from thermal coal.**

Medium term forecasts released last week by the Australian Office of the Chief Economist project declining revenues from the thermal coal industry. The latest coal-fired power plant pipeline data released by the Global Energy Monitor (GEM) also adds support to IEEFA's prediction that **Australian thermal coal exports are entering long-term decline.**

The new January 2019 GEM data shows the continuing collapse in the pipeline of new coal-fired plants in Japan, the largest nation in receipt of NSW thermal coal (45% in 2018).

Accounting for the news that the 2 GW Chiba project has been [cancelled](#), which was announced after the latest GEM data was prepared, Japan's pipeline of new coal-fired power plants has collapsed 64% in four years.

Furthermore, Japan's Environment Ministry recently [announced](#) it would not sanction any more new coal-fired power plants or upgrades to existing ones.

## What is the future climate in our region like – from the BOM

### MURRAY BASIN

The Murray Basin cluster comprises NRM regions across New South Wales, Victoria and South Australia. The cluster extends from the flatlands of inland New South Wales to the Great Dividing Range along the southern and eastern boundaries and includes Australia's highest mountain; Mt Kosciusko, at 2228m.

The cluster is relatively dry and temperate, with a warm and dry grassland climate in the north-west ranging to temperate with hot summers further east.

### KEY MESSAGES

- Average temperatures will continue to increase in all seasons (*very high confidence*).
- More hot days and warm spells are projected with *very high confidence*. Fewer frosts are projected with *high confidence*.
- By late in the century, less rainfall is projected during the cool season, with *high confidence*. There is *medium confidence* that rainfall will remain unchanged in the warm season.
- Even though mean annual rainfall is projected to decline, heavy rainfall intensity is projected to increase, with *high confidence*.
- A harsher fire-weather climate in the future (*high confidence*).

You can get further details at:

<<https://www.climatechangeinaustralia.gov.au/en/climate-projections/future-climate/regional-climate-change-explorer/clusters/?current=MBC&popup=true&tooltip=true>>