

With record new solar and wind installed, Australia's clean energy is booming – for now

Renewable energy equivalent to four large coal plants will be installed this year but lack of investment could put a brake on further growth

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The numbers make a clear case that renewable energy is booming in Australia. Data released last week by the government's Clean Energy Regulator suggests 6.3 gigawatts of new solar and wind energy – roughly equivalent in capacity to four large coal plants – will be installed across the country this year. It would equal the record set last year, and is about five times greater than what was installed in 2016.

The Victorian, Queensland and NSW governments are setting up renewable energy zones in regional areas, aiming to give developers confidence they can get connected to the grid, something that has not recently been guaranteed.

Labor governments in Victoria and Queensland also have schemes to buy power from a set amount of large-scale clean energy farms at a fixed price, giving developers a revenue guarantee that helps them secure finance in a troubled investment market.

The Andrews government last week said it would look to sign up another 600 megawatts through its renewable energy target auction program. It follows the 927 megawatts it backed in 2017. Together, the two rounds will support clean energy roughly equivalent in capacity to the giant Hazelwood coal plant that shut nearly four years ago.

Victoria's energy and climate change minister, Lily D'Ambrosio, said the auction should be seen as part of the global push for what are often called "green recovery" programs.

"It will help drive our economic recovery from coronavirus," she said. "It's not only good for our economy, it will deliver more reliable, affordable energy to households across Victoria."

Though still in their relative infancy, large-scale lithium batteries that will provide part of the flexible supply needed to underpin variable solar and wind are winning support at a largely unheralded rate.

The owner of the country's first giant battery farm at Hornsdale, in South Australia, last week announced it had completed a 50% expansion. There are battery projects promised or in development in Queensland, Victoria and NSW. A growing band of major companies, some of them facing escalating pressure from shareholders to act on the climate crisis, are also increasingly backing clean energy.

In the past 10 days, mining and emitting giant BHP announced an agreement to get half the electricity it needs to run coal mines in Queensland from wind and solar; supermarket chain Aldi promised it would be running on 100% renewable energy by next year; and tech giant Apple said it would invest in renewable energy in Australia as part of a worldwide push to be carbon neutral by 2030.

The Morrison government, which has primarily been promoting the need for a taxpayer funded expansion of gas, a fossil fuel, to drive the economic recovery, said the Clean Energy Regulator data showed renewable

energy was thriving.

In a statement, the energy and emissions reduction minister, Angus Taylor, said more renewables was good news for the economy, the environment and people hanging out for lower energy prices.

“Australia is a world leader in renewable energy,” he said. “This dispels the myths that some continue to spread around a stall in investment.”

But does it? A case can also be made that investment in renewable energy has not only stalled but slumped in a way likely to be felt in the years ahead.

The data released by the regulator relates to delivery – how much renewable energy is being connected to the grid and rooftops. Because it can take a couple of years to get from an investment decision to a big energy project being in the ground, it means connections are a lagging indicator of what is happening in the market.

A more up-to-date picture comes from new investment decisions. Dylan McConnell, a researcher at the University of Melbourne’s climate and energy college, last week posted data from Bloomberg New Energy Finance that shows investment has plunged by about US\$500m (AU\$687m) in each of the past three quarters.

This is broadly consistent with research by Reserve Bank economists, who noted the economic impact. They found large-scale renewable energy made up nearly 5% of non-mining investment across the country in 2018 before falling away markedly.

McConnell says the data for installations and investment are both legitimate measures, but it is worth paying attention to the latter. “In a year or two we would expect new connections to be quite different because of it,” he said.

Analysts say investment has fallen for two reasons – the rising challenge of getting the growing number of new large-scale farms connected to the grid and the effective end of incentives from the national renewable energy target.

The target requires energy retailers to sell at least 33,000 gigawatt-hours of electricity, roughly 23% of all generation across the grid, from renewable sources by 2020. This level of generation was reached by mid-2019. As a result, the target has stopped being an incentive for new projects. It has not been replaced.

Without it, and without a policy to tell investors when the country’s fleet of ageing coal-fired power plants will close, there is no national policy to keep private investment at the record levels of recent years.

The federal government is content with this. While claiming credit for the record growth in solar and wind, its policies are designed to slow the increase in the years ahead. It says transmission links are needed and has promised to underwrite flexible energy sources that can be called on at any time. These sources include pumped hydro and, though the Australian Energy Market Operator (Aemo) has suggested it may not be the cheapest option for consumers, new gas-fired power.

Analysts say it has been slow to develop these programs – it is nearly 18 months since the underwriting scheme was promised – and that what it is planning is an unnecessary intervention that will scare off new investment from other companies.

A key question is whether the states – particularly the three big eastern states, which trail South Australia and Tasmania on renewable generation by some distance – can fill the relative void in new renewable energy investment that opened over the past year.

Victoria and Queensland both have schemes that underwrite a minimum energy price to ensure solar and wind farms are built. New South Wales has promised new renewable energy zones in the central west and New England, and promised \$119m for the planning, coordination, transmission and storage needed to support them.

Tristan Edis, a director and analyst with Green Energy Markets, says the avalanche of projects already in development, assuming all are built, combined with the state programs, should lead to about 50% of supply coming from renewable sources by 2030. This is in line with government projections and up from about 25% today. To put this into perspective, ClimateWorks, a respected not-for-profit, estimated Australia would need 79% clean energy by 2030 to be on track to play its part to meet the goals of the Paris agreement.

The extraordinary uptake of rooftop solar is likely to continue, building on what is expected to be about 45% growth in the number of panels going up this year. It is forcing regulators to look at ways to harness the massive surge in solar energy when the sun is high in the middle of the day, in part through support for household batteries that can save it to use at other times.

But the growth in large-scale generation has started to fall off. The Clean Energy Regulator forecasts accreditation of new projects will be down about 17% in 2020 compared with last year. Edis says there is a significant number of solar and wind projects already in development that will enter the market over the next two years, but it is then expected to drop.

Green Energy Market calculated Victoria should jump from 30% renewable energy by the end of this year to 65% by 2030, but Queensland and New South Wales would grow more slowly, up from 20% by the end of the year to 38% and 35% respectively.

Edis says governments are right to focus on upgrading the grid, improving connections between states and regions, and developing energy storage programs. But he says these steps could be taken while continuing to drive a rapid uptake of renewables in the lagging northern states.

“We have a genuine problem here with a lack of coordination,” he says. “The states are doing the best they can, but ideally if this was nationally coordinated we wouldn’t be building as many solar farms in north-west Victoria, you would be building them in northern NSW and central Queensland.”

While everyone, from the government down, agrees the transition underway in the electricity system is historic and complicated, McConnell says the current approach suffers from being piecemeal and ad-hoc. “You need renewable energy incentives, growing demand, or a coal closure program,” he says. “If we don’t have those, you’re not going to get the investment we need to address our climate commitments.”

Adam Morton, “With record new solar and wind installed, Australia's clean energy is booming – for now,”
The Guardian, 5 September 2020,

<https://www.theguardian.com/australia-news/2020/sep/06/with-record-new-solar-and-wind-installed-australias-clean-energy-is-booming-for-now>