

Western Australia's green dream is underpinned by gas

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As eastern Australia stares down a nightmare winter of surging energy bills, blackouts and fuel shortages, in the west a Labor government has brought forward ambitious plans [to phase out all but one coal-fired power station by the end of this decade](#).

The McGowan government plan is supported by a \$4 billion investment in renewables and storage and further \$660 million in supports for WA's only coal mining community, which will be a test case for the economic and social adjustment of similar communities around the nation.



Muja power station in Collie. *Synergynone*

It is a daring policy – even “ballsy”, according to one veteran WA energy watcher – that accelerates the transition to a less carbon-intensive electricity system in the state that has been the national laggard on reducing emissions.

The timing is a delicious vindication for WA's go-it-alone energy policy, which for the past two decades resisted the national push for wholesale privatisations and is underpinned by a domestic gas reservation policy.

The government has given itself eight years to crack the storage nut – with batteries and pumped storage – to supply electricity when the sun doesn't shine and the wind doesn't blow.

Reality check: it is only possible because of WA's abundant and (relatively) affordable natural gas, which will increase in importance in WA's energy mix in the coming decade, helping renewables (especially rooftop solar) to displace Collie's coal.

Gas will do more to keep the lights on while investments in storage and the network to support renewable ambitions come on stream.

And because the State of Western Australia is the owner of the dominant coal generator, Synergy, rather than a private or publicly listed corporation with primary responsibility to shareholders.

The Premier went to the historic coal mining town on Tuesday to make the announcement.

The two coal generating units of Synergy's 41-year-old Muja C power station will be closed in stages, at the end of this year, and by the end of 2024.

Twenty three-year-old Collie Power Station will close by 2027, and 36-year-old Muja D will close by 2029.

That will leave just the much younger and privately owned Bluewaters power station – which by that stage will be 22 years old – open as the calendar turns to the 2030s.

It also likely spells the end of Chinese-owned Premier Coal, whose dominant customer is the Synergy power stations.

“The Collie coal miners and the power generation industry have provided the electricity and the opportunity for households and industry to thrive in WA for more than a century,” McGowan said yesterday.

“And during that period of time the work has often been very difficult and very hard, and we're grateful to the work people have done and provided to our state.

“But unfortunately technology is changing.”

The [biggest change in WA's south west interconnected system has been rooftop solar panels](#), which have been bolted on by homeowners keen to minimise power bills at an extraordinary rate of more than 300 megawatts a year – or the equivalent of about one coal-fired power station.

It has been supplemented by large-scale wind and solar farm investments, but its intermittency – in the absence of viable storage at scale – is what has killed coal.

Coal generation is not suited to cycling – switching and off – whereas gas, especially newer “peaking” plants, eat up that task.

The flood of solar into the system, especially on mild, sunny Perth days with minimal air-conditioning demand, mean the WA system often experiences negative wholesale electricity prices during the day time.

Coal is squeezed by the negative prices during the day, and then cannot affordably “peak up” to match growing net demand as the sun sets, and the problem grows more expensive (for Synergy) with every new rooftop solar panel installed.

This is the source of the government’s claim that doing nothing would cost the state billions, meaning the investments in storage will “pay for themselves”.

Finding sufficient storage in eight years to bridge the gap is no small bet.

The answer, according to the government, will be batteries and pumped hydro.



What is pumped hydro and how does it work?

It's been around for decades but pumped hydro power is gaining attention as a potential back up for renewable energy, which is increasing its share of the electricity grid. It's also technology the federal government is interested in.

Energy Minister Bill Johnston is optimistic about pumped hydro, a technology that was once dismissed in WA because of its flat topography, to do most of the heavy lifting.

Some doubt that Collie's soil structures are suitable but the government hopes the region is prospective for the technology, perhaps using old mine voids.

Johnston believes it is possible to procure the 400 to 800 megawatts of pumped hydro that would be necessary within eight years, with two years to find a proponent, two years of environmental approvals and three years of construction.

Note that this week the Snowy pumped hydro project, which got its final investment decision in 2019, has been delayed at least two years to 2028.

Batteries in the order of 3000 megawatt-hours are also on the agenda; a huge upscaling given Synergy's existing "big battery" project at Kwinana, announced in October 2022 and expected to be operational by the end of this year, is for 100MWh with an extra 100MWh for stage two.

The government says it will not invest in any new state-owned gas generation after 2030 but does not rule out doing so before that; the economic factors squeezing coal for Synergy apply equally to privately owned Bluewaters, even if there is less overall reliance on coal in the system.

Critically and politically, the government had promised to shield households from any upside risks to power bills, vowing to hold price increases to inflation (which you can do in a partially privatised system where the treasurer still sets the annual household tariff).

Ultimately, though, the transition will be paid for by some or other parts of the system, whether it is households, utility balance sheets, or taxpayers through subsidies.

Make no mistake, the priority has to be keeping the lights on and the green dream is underpinned by gas, which will bridge the gap for the next decade and do even more heavy lifting beyond that if any other parts of the plan are delayed or do not pan out.

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