



The blackout in South Australia – its third major event since the state-wide blackout in September – and the finger-pointing between the SA government, the energy regulator and the federal government, has highlighted how Australia’s energy system, including its rules and regulations, has failed to keep pace with the influx of clean energy.

Multiple reviews are being conducted by all energy regulators, including the Australian Energy Market Operator (which runs the energy and gas market), the Australian Energy Market Commission (which sets the rules) and the Australian Energy Regulator (which polices the rules), but none seem to be able to deal with what has become a real-time energy crisis.

SA – which has more than 40 per cent of its energy output from wind – is being watched across the world as a region going headlong into renewables with no real backup plan.

“The simple issue is the need to change the rules under which AEMO operates,” Grattan Institute’s energy program director Tony Wood told *AFR Weekend*. “You can’t have a system that is designed for predominantly coal and gas and then move to 40 to 50 per cent renewables and have the same rules. It’s just dumb.”

The intermittency of wind and solar – and the fact they’re “free” when available – is one headache. Combined with the phasing out of older coal-fired power plants it means the National Electricity Market is increasingly volatile.

Thrown into this mix is the politics of energy. Prime Minister Malcolm Turnbull and his Energy Minister Josh Frydenberg have used this week’s blackout as a chance

to target the ALP over its 50 per cent renewable energy target. (This while conveniently ignoring the fact the federal RET has encouraged the rapid uptake of renewables including in SA.)

As Turnbull noted in his speech to the National Press Club last week, energy policy is shaping as a key battleground for 2017.

“We can’t afford to go the way South Australia has, which has the most expensive

and the least reliable electricity in Australia,” he told Federal Parliament on Thursday.

In a moment bordering on parody, Treasurer Scott Morrison brandished a lump of coal in question time and urged the Labor party not to be scared of the fossil fuel which the Coalition has embraced as the power source to guide us through the energy crisis for the next few decades.

This week’s events have confirmed Australia’s energy system – which many experts have argued has been an accident waiting to happen for the past 10 years – is badly broken and in need of urgent attention.

The prospect of further blackouts in SA and in eastern states following this week’s heatwave has also sharpened the sense of urgency around the issue of fixing Australia’s outdated energy grid.

Chief Scientist Alan Finkel – who is conducting a review of energy for the Turnbull government – is about to get a crash course on adapting an outdated energy grid to cope with technologies such as wind, solar and battery storage. He’ll visit Ireland, Denmark and the United States, all of which are grappling with the same issue.

The highly regarded Finkel is preparing a review of energy security for state and federal ministers and has needed nimble footwork in the past few months as he’s

navigated a political minefield. Through public forums, Finkel has given subtle hints at where he will land in his final report.

While the Turnbull government has flagged the possibility of subsidising clean coal technology – such as super-critical power stations which have been pioneered in Japan – Finkel has indicated he’s not a fan, although he says some carbon capture and storage projects could be viable.

Finkel does not talk much about high-voltage interconnectors and appears doubtful of “clean coal” which could become obsolete or rendered unviable by a future carbon price before they’ve repaid investors. That said, existing coal generators and interconnectors contribute to grid stability.

First stop for Finkel is Ireland, where the market rules limit the instantaneous power output from wind and solar to 50 per cent of total demand at any one time, ensuring plenty of base load energy in the grid at all times.

That guarantees base load generators a share of the market at all times which in

Australia would keep such generators in the market rather than lying idle – as Engie’s Pelican Point No. 2 did in Adelaide during this week’s blackout.

Finkel said on Wednesday it would be hard to change the rules for wind farms that have already been built and paid for in South Australia, but limits on instantaneous generation could be one option for other states that have lower wind penetration rates.

Finkel said he wasn’t advocating such a rule ahead of the final report. He is one man – the chairman – on his panel which also includes former Origin chief financial officer Karen Moses and Clean Energy Regulator chair Chloe Munro.



Battery storage is now working on a household level but Finkel believes they won't be at a large, commercial scale in the NEM for another 20 years. At the moment battery storage is about 25 times more costly than pumped hydro storage which is operating in three locations around the country, including the Snowy Hydro.

After the debacle on Wednesday night, where 90,000 households and businesses were without power for almost an hour, the regulator AEMO has also come under the spotlight.

AEMO ordered electricity generators to undertake "load-shedding" – where power is cut from parts of the network – after the market failed to provide extra capacity to deal with extreme temperatures on late Wednesday afternoon.

SA Premier Jay Weatherill and Treasurer Tom Koutsantonis – who have been feeling the political heat over the blackouts – have taken aim at the regulator saying it should have directed Engie Power to begin operating its second unit at Pelican Point to bring more power online, rather than cut generation from the grid.

"That's a failure of management. That's a failure of demand management," Koutsantonis said on Friday.

He also claimed NSW residents were given preferential treatment by AEMO because the regulator gave two days' notice of possible load-shedding on Friday afternoon. He said the current management of AEMO wasn't up to the task since the death of highly regarded chief executive Matt Zema late last year. The new chief executive, Audrey Zibelman, does not start until March.

The SA Labor government is now threatening to "intervene" in the market to stabilise its electricity supply, but was coy about what exactly that could involve.

Industry sources suggested it could involve reconfiguring a state government tender which closed on January 6 for the supply of 75 per cent of all public-sector power needs, to coerce the winner contract to set up a new gas-fired power station.

There's been talk of compensating Engie to fire up the uneconomic Pelican Point No. 2 plant during high-stress episodes.

"There is a bit of mud on everyone's hands now," says Grattan Institute's Wood. "South Australia ended up with more wind than any other region in the world and it's on the end of the line [of the NEM]. That's a lethal combination." ■

Pay the bill

Annual power bill, typical four-person household

NSW
\$1580

QLD
\$1716

SA
\$1901

SOURCE: AUSTRALIAN CONSUMERS ASSOCIATION

