

## Australia's energy policy is all coming badly unstuck

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To cap all Labor's woes, the Starmer and Biden governments have announced a major u-turn to nuclear as their strategy to reducing emissions. Both the UK and US have recognised the impossibility of achieving Net Zero with the intermittent wind and solar strategy that has been their focus. They have asked Australia to join them in this approach but Climate Change and Energy Minister Chris Bowen [has rejected the invitation](#), claiming that Australia will stay on track,

thereby becoming the sole remaining aspirant 'renewable energy superpower'.

Mr Bowen claimed that Australia should not follow such a route because we have better solar assets than the UK. Perhaps so, but ours are no better than those of the US and no richness of such assets could ever give the reliable low-cost electricity supply necessary for prosperity.

In July of this year, Labor said that to transform the existing coal-based electricity system to one which relies only on renewables – wind and solar – would cost \$122 billion. The numbers were derived from AEMO, the market regulator, published in its Integrated System Plan (ISP). These estimates looked at the standalone costs of different power plants, using assumptions about how long each type of plant would last, how much they would cost to operate and what the capital cost would be.

CSIRO laid the foundation stone for the ISP's costs with numbers claiming that wind is considerably cheaper than coal, gas, and nuclear. Nobody other than deluded dreamers now really believe this – indeed the AEMO models were based, at least partly, on the notion that the Australian 'Net Zero energy superpower' would be driven by a tax on carbon dioxide. That tax was put at \$70 per tonne in 2024 (twice that of the carbon tax imposed by Prime Minister Julia Gillard and terminated in 2014 by Prime Minister Tony Abbott) rising to \$420 per tonne in 2050.

The assumed carbon tax would price coal out of contention by causing its 2024 price to double and its 2050 price to increase by seven-fold. This is an implicit acceptance that when it comes to presenting hard data-based forecasts, the dream of cheap renewable power is an illusion.

But the illusion is now becoming recognised for what it is.

Last weekend, the reputable consultancy, [Frontier Economics](#), issued a report that recalibrated the data assembled by AEMO. Frontier expressed AEMO's estimates in real 2024 dollars and added in the known transmission costs (\$62 billion) to arrive at an aggregate total cost of \$642 billion. The Frontier report, aside from adding in extra transmission costs omitted by AEMO, expressed the costs in real 2024 dollars rather than in what AEMO called net present value terms (NPV).

And the AEMO report, to simplify comparisons, omits many important expenses. The most important are the costs of storage to 'firm-up' the intermittent wind and solar generation; the second is the short replacement time for these renewable assets; and the third is the additional costs of local distribution.

With regard to firming, in replicating the AEMO estimates, Frontier modelled on the basis of assuming no cost of 'Community Energy Resources' – batteries and rooftop storage. Without batteries the intermittent nature of wind and solar means frequent blackouts and as well as brownouts. The costs of remedying this is no small matter. Because of wind and solar droughts often lasting weeks, at least 10 days of storage is required and a number of independent engineering studies have shown the costs of this to be at least, in my opinion \$2.5 trillion and likely \$4 trillion for batteries.

Secondly both AEMO and Frontier infer that once we replace coal we are out of the woods. In fact, wind, solar and batteries have lifetimes of 12-15 years compared to 80 years for a nuclear or coal-fired generator. That means the replacement cycle is five times as frequent.

Thirdly, the distribution system was not designed to be a two-way flow necessitated by 'community based energy', and will need replacement much earlier than under the generator-to-load system (one-way flow) for which it was designed. Distribution comprises some 40 per cent of total costs at present.

All this adds up to replacing the existing electricity system on which all work and leisure depends with one that is based on wind and solar which will mean a tenfold increase in costs and prices. Another way of looking at this is as a share of GDP. Amortising the \$5 trillion system towards which we are being transitioned, over a ten-year cycle means a cost of at least \$500 billion a year, or a quarter of GDP.

Frontier are to issue a companion report assessing the cost of replacing coal with nuclear. Labor has previously put this cost in Net Present Value terms at \$387 billion. Suggesting the cost was less than a third of this, [the Senior Vice President of the Westinghouse Electric Company quipped](#), 'I only have three engineering degrees and that math doesn't make sense to me.'

It would be much cheaper for Australia to have its system based on coal (which still supplies about half our electricity compared with 85 per cent prior to subsidies to wind and solar). Coal like nuclear would not require the storage, and poles and wires that renewables require. It would likely cost less than a third the costs of nuclear and a return to that technology would deliver Australia the cheapest energy supply in the world with all this entails for living standards.

What is clear is that Australia is now the only nation remaining on the renewable energy cart and we are being driven to an increasingly costly future as a result.