

Bogus scenario built on assumptions is no basis for action

[Judith Sloan](#), The Australian, 12:00AM June 15, 2017

As I was preparing to write about the modelling that underpins the Finkel report on the electricity system, I noticed an article from The Times. It was about wind power in Europe.

The message was that investment in wind farm capacity had increased by more than 8 per cent last year, yet wind-power output had fallen 0.7 per cent. That's what happens when you invest in intermittent power. It was noted in the same article that renewables, including solar, account for only 4 per cent of electricity generation worldwide. Australia is around 20 per cent and Finkel wants 42 per cent by 2030.

The modelling that underpins the Finkel conclusions was released this week. It was undertaken by the same group that undertook modelling for the Climate Change Authority that showed there would be no coal-generated electricity in 2030 and only 1 per cent gas.

The Finkel report recommends a clean energy target, set at 0.6 tonnes per megawatt, from 2020 based on the requirement that our emissions from electricity fall by 26-28 per cent by 2030 relative to 2005 — our Paris commitment.

According to the modelling, wind power will go from 12 per cent in 2020 to 18 per cent in 2030 and 35 per cent in 2050. Yes, you read that right: 35 per cent in 2050. Large-scale solar goes from 3 per cent in 2020 to 6 per cent in 2030 and 18 per cent in 2050.

A key trick the modellers use to boost the case for the CET is to create an essentially bogus business-as-usual scenario. This allows Finkel (and Energy Minister Josh Frydenberg) to claim that doing nothing is not a choice. By adding all sorts of risk factors associated with what is assumed to be a policy vacuum, the business-as-usual (BAU) weighted average cost of capital of coal soars above renewables. But this is just an assumption, not a fact.

The reality is that a new clean-coal plant (high-efficiency, low-emissions) can easily compete with renewables if those renewables have to pay for the cost of the back-up needed to convert them into reliable energy. You need to double or even triple the capital costs of turbines, for instance, to get a like-for-like comparison.

Note also that when the modellers compare the BAU with the CET and the rejected emissions intensity scheme, there is no new investment in coal between now and 2050 under any of the scenarios, with only slight differences in the rate of closure of existing coal-fired plants.

Incidentally, for those who think lifting the CET benchmark to, say, 0.8 or 0.9 tonnes per megawatt would solve some of the problems evident with Finkel's preferred approach, the modelling clearly shows that coal fares very badly under all scenarios because it is the emissions reductions, rather than the benchmark, that drive the final outcome.

So how about this? If renewable energy providers think they need the guaranteed cash flows from the reverse auctions that the ACT and some state governments are pursuing, why doesn't the federal government think about running reverse auctions for new clean-coal plants — one in NSW and one in north Queensland, say? That could level the playing field.

Many quibbles could be made about the modelling, more generally. In particular, the price assumptions look way too low, but it is clear that prices spike when coal-fired plants exit the system.

The assumption on demand looks particularly suss. In the underlying model, demand goes from about 200,000 gigawatt hours now to only 230,000 GWh in 2050. Think about it: the population is forecast to go from 24 million to just below 40 million in 2050 — an increase of 50 per cent — but the demand for electricity increases only 15 per cent. Something very strange is going on.

Sure, we might become much more efficient in power use, and higher prices will encourage this. But my guess is there is a hidden assumption that virtually all the large users of power — mainly the smelters, which account for 10 to 15 per cent of consumption — will close down over the period and won't be replaced. That's the deindustrialisation scenario the government must resist.