

Nuclear denied? Why the energy white paper should start a debate

Published by Crikey, Thursday 8 November 2012

The federal government will seek to chart the country's energy future in its white paper out today – and there are reports that nuclear power will be left out of the mix. Fairfax's Lenore Taylor writes that the Coalition will accept the verdict that nuclear is out, leaving Australia with no political nuclear champion.

This approach, affected by Japan's Fukushima nuclear disaster, is problematic when there could be an important national conversation about the need for nuclear power in Australia – if we are serious about addressing climate change.

Federal Resources Minister Martin Ferguson, who will launch the white paper in a speech in Melbourne at 1pm, has recently commented that the cost of nuclear energy might reduce in the future (*Crikey's* Bernard Keane did not agree). Ferguson's view merits attention.

The nuclear debate has two elements: the global role of nuclear energy and Australia's position as a supplier of the raw material; and the role of nuclear power in our energy future.

Recent decisions to mine uranium in Queensland and supply uranium to India seem to have as much to do with a new state government's commitment to resource development – and the Commonwealth's commitment to bilateral relationships – as with the global future of nuclear energy.

Yet that future is very much in the spotlight. In a special report on nuclear power last year, *The Economist* argued the incident at Japan's Fukushima Daiichi plant would dampen the long-term growth of nuclear energy in several countries, notably Japan and Germany. Yet it expected global growth to continue, driven largely by developments in China, Russia and South Korea. There is little to suggest the picture has changed since that report. A number of countries remain either sceptical or fully against nuclear energy. Others see it as an integral part of their energy mix into the future.

The political issues are at least equalled by the economic challenges, particularly in Western countries. The cost of current projects is forbidding, and the financing of future nuclear power plants even more difficult. The latter issue drove Citigroup to conclude in 2009 that the economics of nuclear say "not in the West", unless governments take control or assume responsibility, at least by giving plant developers a guaranteed purchaser for their supply.

In this environment, the UK government is going against the grain by chasing private investment for the replacement of its ageing plants, coupled with significant extra capacity by 2025.

As the costs of nuclear energy remain high, the cost of at least one of its low-emissions competitors, namely solar PV, has dropped rapidly over the last decade. Finally, the dominance of financial crises over environment crises, at least for the time being, has tempered the extent to which many countries have looked to nuclear energy as part of a solution to climate change.

Many countries are faced with a narrow set of primary energy supply choices, whether they be fossil fuels or others. Many also worry about security of supply in a volatile world. Australia, by contrast, is blessed with a multitude of choices and little concern for security of supply. We have coal and gas reserves that have allowed us to use fossil fuels at low cost for domestic energy supply, whilst exporting these and uranium to an increasingly energy-hungry world.

Yet this happy state is increasingly threatened. The Grattan Institute's 2012 report, *No easy choices: which way to Australia's energy future*, examined how Australia could substantially and relatively quickly transform the nature of its electricity supply to meet the challenge of climate change. While there is bipartisan support for the need to address climate change, our low-cost energy supply, built over many decades, has left us at the top of the league table in terms of greenhouse gas emissions per head.

Tony Wood, Energy Program Director

T. 03 9035 3867 E. tony.wood@grattan.edu.au

Our report concluded that all seven of the major low-emission technologies that could materially contribute to the necessary transformation of Australia's energy supply faced major challenges to produce power quickly and cheaply. Furthermore, the technology mix as projected by published economic modelling for the government seems to challenge plausibility in regard to the scale of the challenge. Specifically, the projections include a major contribution from geothermal energy, and from carbon capture and storage of emissions produced from coal and gas. Neither technology makes anything like a significant contribution today. Neither has been proven on a commercial scale in Australia.

Modelling of future energy scenarios is important, and can inform robust policy decisions. But it would be naive at best, dangerous at worst, to base policy primarily on modelled projections. The environmental, social and economic consequences are just too important. Until Australia knows what mix of technologies will best supply sufficient low-emissions power at low cost, energy policy choices today should keep open the widest set of options.

This brings us back to nuclear power. Perhaps the current policy environment – which makes nuclear illegal in Australia and which envisages an electricity mix composed of renewable energy and CCS – will deliver the most affordable, secure and sustainable outcome. Perhaps not.

Similarly, all renewable sources – solar, wind, geothermal and bioenergy – face significant barriers of financing and scaling-up, among others. There are no easy or obvious solutions. The decisions of the past, the constraints of the future, and our enduring hunger for energy have taken them all away.

Nuclear energy faces many hurdles. As yet there is no long-term waste storage solution. Safety and security concerns are acute since Fukushima, and the industry's skilled workforce is ageing. Finally, the demand signals that should come from climate change policy remain weak, mainly because of popular opposition, weak political commitment or more immediate financial problems.

Yet nuclear energy can provide a major source of energy at competitive costs and with near-zero greenhouse gas emissions. Countries such as China and Korea have the capability to aggressively drive down the cost, particularly as they standardise their reactors. Countries want reliable and secure low-emissions power that is cheap over the long term. Nuclear could tick all these boxes.

Over time, a fully renewable energy future may be achievable. Yet without employing either fossil fuel power with CCS, or nuclear power, it is hard to see how we can make the transition whilst maintaining secure, reliable energy at affordable prices. We need to have an adult conversation about our future energy needs in a time of climate change. Excluding nuclear power from that conversation may be a decision we come to regret.

Tony Wood is the energy program director at [Grattan Institute](https://grattan.edu.au).