

Soaring electricity and natural gas prices, as well as total blackouts and warnings of more to follow are evidence of one of the greatest failures of public policy in Australia for many years. Furthermore, it is a failure shared by successive governments at both the Federal and State levels.

This was also a political risk, largely missed by business. Australia was seen as rich in its natural endowment of energy resources. Australia was about to pass Qatar as the world's largest exporter of natural gas. Australia continued as the world's leader in the export of coal.

The fact that Australia's prosperity had been buttressed for many years, by plentiful and inexpensive energy, clearly engendered a false sense of security.

Australia's Energy White Paper 2015 was largely about how to continue the successful exploitation and export of energy, rather than address the risk of market failure at a domestic level. Australia's Energy White paper should also have been a strategic plan to preserve energy security and affordability at the domestic level while transitioning to a lower emissions future. However, the emissions debate had become so politically toxic that this important chapter was not written.

Finally, governments asked a review panel headed by Dr Alan Finkel AO, Chief Scientist of Australia, to recommend enhancements to the energy market to address these issues. The Finkel Report has now been publicly released.

Finkel succinctly laid out the challenge. "The National Energy Market (NEM) was being transformed from a 20th-century grid dominated by large-scale fossil fuel-fired synchronous generators into a 21st-century grid. New and emerging generation, storage and demand management technologies are being connected into a system that was not designed for them. Older generators are reaching the end of their life, becoming less reliable and closing". " For the short to medium term, the NEM is likely to require higher levels of flexible, gas fired generation. However, the economics of gas-fired generators are being challenged by rising gas prices and tightening gas supply."

The policy failure was that the framework of the market, as set by governments in the form of the National Energy Market and the administration of the National Energy Market Regulator, had not kept pace with these changes in a way that ensured reliability and affordability. Furthermore the rapidly rising domestic gas prices, also as a result of political failure in not providing reliable and affordable domestic gas supplies, undermined the assumption that natural gas would provide the dispatchable energy generation necessary to ensure the integrity (reliability) of the energy grid as more dispersed generation of variable renewable electricity (VRE) came on line.

A Low Emissions Future

Finkel quickly realized that whilst governments had been accepting carbon emission reduction targets since the Kyoto Climate Change conference of 2007, and had been taking carbon reduction actions, such as the Renewable Energy Target (RET) and the Emissions Reduction Fund (ERF), these initiatives were not integrated into a plan, to ensure secure, reliable and affordable electricity supply.

Furthermore, whilst Finkel realized the Federal government was to develop new policy and measures under its 2017 Review of Climate Change Policies, to meet Australia's Paris target of 26-28% reduction of greenhouse gasses by 2030 off a 2005 baseline, there did not seem to be a process whereby this would be done whilst ensuring Australia's domestic energy requirements of security, reliability and affordability. There was no plan for what he saw as the necessary "orderly transition". He was of course correct. That is why we have a crisis. Finkel saw his recommendations as a package providing such a strategic energy plan.

Finkel believed that to work in our federal context, the strategic energy plan needed to be accepted by the Energy Council of the Commonwealth, State and Territory governments. Interestingly, the Energy Council quickly adopted all of his plans, with one exception. Not surprising, was that the exception related to the need to price carbon.

It is not possible to achieve Australia's Paris climate change commitment without addressing the electricity sector. Electricity generation accounts for about 35% of Australia's national emissions. At the least, future investment must produce lower emissions energy. Thus Finkel saw as central to the strategic energy plan, a credible, stable emissions reduction policy for the electricity sector. This he saw as essential to engender the investment in thermal capacity necessary to reduce reliability risks and improve price stability. Whilst this seems sensible advice, the politics of both thermal coal and unconventional gas, make it a difficult step.

Even more difficult than setting medium and long-term emission reduction targets for the electricity sector, is to agree to what Finkel calls "a credible and enduring emissions reduction mechanism". He recommended a Clean Energy Target (CET) which would provide an incentive for all new generators that produce electricity below a specified emissions threshold.

Finkel modelled a targeted 28% electricity sector emissions reduction (in line with Australia's overall Paris commitment) as a balance between reasonable reductions and not over incentivising VRE and thus threatening reliability, security and affordability.

While Finkel argued for the CET over an Emissions Intensity Scheme (EIS), based on an emissions intensity target, the differences do not seem to be great. He argued that the CET would benefit as a development from the RET with the benefits of familiarity, except that it would be agnostic as to energy source. One cannot help but think Finkel was giving

the Coalition an opportunity to come on board with a mechanism to price carbon, without having to adopt an EIS, which it has previously rejected. But still, the Coalition has balked.

Natural Gas

Finkel was forced to address the gas market by an increasing interdependency between gas and electricity. He argued that as coal fired generators are retired, more gas fired generation would be required to substitute for coal and complement variable renewable energy (VRE) generation. For most of us involved in Australia's early actions in the 1990s to reduce carbon emissions, this is what we intended. We saw gas as the transitional fuel, offering about half the emissions of coal, as coal fired power stations completed their life cycle, the capital cost of renewables came down with mass and improved efficiency, and electricity grids were redesigned to absorb increasing VRE.

However, since 2014, gas fired power generation output has been in decline, mainly due to price. This puts in jeopardy the planned scenario and has largely resulted from the East Coast export market sucking up what would have been domestic gas supplies and locking these supplies in with long term contracts. Combined with moratoriums imposed by a number of states on unconventional gas mining, supply is constrained and prices have increased well above export parity. The negative consequences for security and reliability of the energy market are severe. The potential consequences of emissions reductions might also be effected, as the life of aged and inefficient coal fired power stations is likely to be extended, and new coal fired power stations might be brought on line.

The Commonwealth government has now addressed these issues with a number of policy responses including seeking power to impose export controls on companies when there is a shortage of gas in the domestic market. Recovering the situation will not be easy although a return to something like export parity prices will occur over time, largely because it is a political necessity. The measures the Commonwealth government has already adopted would have seemed remarkable just a short period ago. Of course, the situation should never have been allowed to reach this point.

What Finkel has contributed from the electricity sector perspective, are a range of policy initiatives designed to more closely integrate the planning of the NEM with the natural gas market and to give the Australian Energy Market Operator greater powers to intervene in the gas market to ensure the reliability of electricity supply. They are all useful suggestions.

Stronger Governance

In this part of the report, Finkel is respectfully saying that there has been a collective failure of effective governance in a sector critical to the Australian economy and the welfare of all Australians. He dresses this up in terms of a recommendation for a new Energy Security Board which would then enable the COAG Energy Council "to focus on

matters of national strategic significance”. However, the proposal is somewhat naïve. The body will add another layer of governance but will have no real powers. It is hard to see if it had been earlier implemented, that the current issues would have been avoided. What is needed is for those with the responsibility to exercise their responsibilities, in particular, Federal and State Ministers, and to act collaboratively given their different but complementary responsibilities. They should also hold administrators to account.

Incidentals

Finkel did include an interesting chapter headed, Beyond the Blueprint, which might be part of the longer term. Of interest were opportunities to increase the efficiency of Australia’s hydro electric schemes, potential of expansion of waste to energy, small scale nuclear which are now being developed in the US and considered in the UK and China, new battery technologies, pumped hydro opportunities particularly in the Snowy Mountains, hydrogen which is being increasingly utilized in Japan, South Korea and Europe, concentrated solar power and thermal storage, compressed air energy systems and advances in electric vehicles.

The report touched on technologies such as synchronous condensers and power conversion electronics which have the potential to support power system security and thus answer some of the challenges of integrating VRE in the grid. This could have received greater consideration. Although it was getting beyond Finkel’s immediate remit, which was to address the current crisis, the subject of development of more sophisticated grids would have been equally worthwhile. Again, a focus on improved energy efficiency and energy saving would have been helpful. Often the best solutions are not complicated.

Conclusions

The Finkel enquiry and subsequent report have served a valuable function in providing an evidence base which policy makers can utilise in efforts to meet their responsibilities of ensuring a secure and price effective electricity sector in the context of required emission reductions. The “nuts and bolts” of the Finkel Report will be implemented and will improve the transparency of the NEM and give greater assurance overtime on security and reliability.

There is no doubt that investors desirably should have greater certainty than at present, in relation to the medium and longer term regulatory environment. Investors encouraged by the RET have been investing in the renewables sector, particularly wind and solar, but the RET will expire in 2020. The RET signals have not been sufficient to drive investment in solar thermal or industrial scale photovoltaic solutions. Nor have they encouraged major investments in batteries or other storage to complement VRE. Good public policy would provide greater investment certainty than currently exists.

An emissions reduction goal for the electricity sector complemented by a CET is unlikely to be supported by the Coalition government, although they would be good policy. The

scars from the “carbon tax” battles are still too raw. Also while fuel agnostic, its hard to see a CET, linked to a credible emissions reduction goal, which would provide scope for such fuel sources as clean coal (coal +carbon capture and storage), which will be demanded by influential sections of the Coalition. Furthermore, the Coalition will be largely unconvinced that such a scheme would bring down electricity prices, which is the major carrot held out by Finkel.

Labor is likely to take the CET to the next election, arguing that it is a rejig of the EIS which it took to the last election, but now with the objective and independent credibility of Finkel. Having taken the EIS to the last election, and not seemingly suffered the policy is unlikely to arouse the same passion as in the past. The passion is now largely within the Coalition rather than the community at large.

The Coalition will confirm its commitment to the Paris Climate Change process, and the emissions reduction target previously agreed upon. The Coalition will develop its 2017 Climate Change policies and measures towards meeting Australia’s Paris emissions reduction target, with a heavy emphasis on the COAG National Energy Productivity Plan, which aims to achieve a 40% improvement in energy productivity by 2030, covering sectors including the built environment, agriculture, transport, industry and mining. This is likely to be complemented with direct investment in Snowy Hydro enhancement, and maybe gas fired to gas fired energy (despite the cost) largely to address the issues of energy security, but with incidental benefits in emission reduction. The Coalition still has a further round of emissions to purchase under its ERS. That will conclude the scheme. The Coalition is unlikely to extend the RET with a new round of targets after 2020. But this might be left open.

Australia has done well in meeting its Kyoto target and is seemingly being on track to meet its 2020 target of a 5% emissions reduction of a year 2000 base. It is hard however to see that it will meet its Paris target without a price on carbon through a CET or an EIS. Every goal becomes harder. The alternatives are the very prescriptive measures that were planned by the Obama administration, when his preferred EIS failed to achieve Congressional support, in sectors such as stationary energy, transport and the built environment. The snail like pace of reform of Australia’s Building Code does not give a reason for confidence. In the Australian context, such measures would probably need to be supplemented with a program to close coal fired power stations in favour of gas, which would now be more difficult with the issues of price and availability of natural gas. Gas fired energy becoming cheaper than coal, has been the major contributor to US emission reductions, but that is not going to happen in Australia. It is also difficult to have confidence in the energy productivity plan, given it is a shared responsibility of governments, an environment in which hard decisions are rare.

Australia’s Minister for Energy and the Environment, The Hon Josh Frydenberg MP, has been presented with a great challenge. It is also a great opportunity. So far he has handled the task well, endorsing the need for energy security and affordability and a

Dragoman

The Failure of Energy Policy in Australia

Robert Hill

reducing emissions profile. How he turns these aspirations into outcomes will be something worth watching!



***Hon. Robert Hill AC**, a Counsellor of Dragoman who was Australia's Environment Minister at the time of the Kyoto Climate change conference, introduced the RET into the Parliament, and in the late 1990s commenced a dialogue with industry on the modalities of a future cap and trade scheme to reduce Australia's carbon emissions.*