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THE GAPING HOLE: THE ABSENCE OF AN ENERGY VISION IN AUSTRALIA, ITS CONSEQUENCES AND AN ALTERNATIVE WAY FORWARD

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The Energy Policy Institute of Australia (EPIA) is Australia's only independent and apolitical energy policy body. EPIA focusses on high-level policy, governance and regulatory issues affecting the national interest, the economy as a whole, the environment and the community.

The Institute advocates that Australia must maintain a secure investment climate and be internationally competitive, whilst moving towards and contributing as much as it can to global efforts to build a low-carbon society.

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Key Points

- *The absence of a truly technology-neutral energy vision has left a gaping hole in the electricity sector in Australia. The Australian electricity market is failing to attract substantial investment from corporate and institutional investors, the money is lying idle and climate risk is not being addressed.*
- *There have been calls to impose a domestic emissions price. However, no-one can explain how payments that disappear into general revenue will reduce climate risk.*
- *There are lots of alternatives. One would be to establish an innovation fund, exclusive to the electricity sector and largely directed by industry. Levies could be based either on turnover or on emissions, with the proceeds being recycled into technology-neutral, emissions-mitigation initiatives, instead of disappearing into general revenue.*
- *The Federal government is starting work on an “emissions reduction technology roadmap”. It remains to be seen whether this will be genuinely technology-neutral. An innovation fund would help align this work with the global “net zero by 2050” emissions target.*

The Absence of a National Energy Vision

Australia's 2019-2020 bushfires have triggered an unprecedented level of public interest about their direct and indirect causes.

A Royal Commission may investigate what correlation there may be between energy use, climate change and bushfires. A main focus of any Royal Commission could be on the electricity sector because it accounts for around a third of Australia's emissions.

Emissions reduction is now bipartisan policy in Australia but not emissions pricing, because no-one can satisfactorily explain how payments that would disappear into general revenue will reduce climate risk.

Finding sources of money for investment in the electricity sector is not a problem but, in the absence of a national energy vision, the capital is lying idle:

“A national energy vision is needed to guide the nation toward a reliable and affordable energy system whilst maintaining the nation's energy export trade and pursuing greenhouse gas emissions reduction – taking community and stakeholder concerns into account.”¹

The key word here is “national” – we should not pursue an energy policy vision that means different things to our Commonwealth, state and territory policymakers and is subject to arbitrary change. Although the Commonwealth has responsibility for the international aspects of Australia's climate policy, including the Paris Agreement obligations, State governments have their own emission reduction targets and there are no policy pathways for achieving any of the targets.

Since the global financial crisis of 2008, many more ways of upsetting an investor's apple cart have become apparent.² Nowhere has this been more obvious than in the electricity sector, which has become a ‘no-go zone’ for investors unless supported by government subsidies or power purchase agreements.³


The problem is not confined to Australia. In 2016, the International Monetary Fund (IMF) identified the deepening global pool of surplus savings available for investment in energy infrastructure and reported that institutional investors had far more funds available for deployment than corporate investors.⁴ The IMF postulated that the “right” infrastructure

¹ EPIA submission to the Commonwealth Government, *“An Australian Energy Vision and Framework for Energy Policy Priorities”*, August 2016

² Robert Pritchard, *“The Legal Landscape of International Energy Investment After the 2008 Global Financial Crisis,”* in Weiler and Baetens (eds), *“New Directions in International Economic Law,”* Martinus Nijhoff Publishers, Leiden, 2011.

³ Robert Pritchard, *“Investing in Electricity Infrastructure in a Low-Carbon Era,”* Public Policy Paper Number 3/2016, Energy Policy Institute of Australia, December 2016 (“the EPIA Paper”).

⁴ In 2016, institutional investors of all types held around US\$100 trillion in assets under management (compared with the total market capitalization in 2012 of US listed companies of US\$18.7 trillion): Rabah Arezki et al, *“From Global Savings Glut to Financing Infrastructure: The Advent of Investment Platforms,”* IMF Working Paper WP/16/18, International Monetary Fund, February 2016.



investments could provide reliable, long-term returns to institutional investors. However, it has not worked out that way because of government inaction on climate risk.

At COP21 in Paris in December 2015, the goal of limiting the global temperature increase to well below 2°C was affirmed, with the Parties agreeing to make efforts to limit the increase to 1.5°C.⁵ The overall aim was to achieve “*global peaking of greenhouse gas emissions as soon as possible.*”⁶ Exactly how soon remains to be revealed but political momentum appears to be increasing for a global target of “net zero by 2050”, even if it is only an aspirational target.

Australia, like every other country, must decide on its own contribution to any global target. It needs to weigh up the costs against the global climate benefits that may eventuate, or against any country-specific gains that its contribution might produce.

Three countries – China, India and the United States – provide 80% of the low-cost mitigation opportunities across the G20 countries.⁷ It is possible that Australia will in due course become part of an international emissions-reduction scheme that the three big emitters might eventually adopt.

Technology Neutrality

The Energy Policy Institute of Australia has always advocated technology neutrality as the crucial element of sound energy policy. However, Australian policymakers have only given lip service to technology neutrality and have endeavoured instead to ‘pick winners’, such as variable renewable energy (VRE) and, most recently, hydrogen. Nuclear technology has remained a casualty of 1970s protest politics, largely explained by obsolete concerns about radiation safety that could have been addressed by regulation rather than outright prohibition.

The great virtue of VRE is that it is emissions-free. However, there are technical and economic limits as to how far it can replace Australia’s fleet of fossil fuel generators. VRE is weather-dependent and not always available when needed. When it is unavailable, it requires ‘firming’ by storage technologies such as batteries or by alternative generation sources, including load-following nuclear energy.


The National Energy Market is a compulsory, energy-only, electricity market that has an operational bias toward VRE. This bias has had five consequences:

- i. it has facilitated the introduction of low-cost VRE
- ii. it has caused the premature closure of coal- and gas-fired power stations

⁵UNFCCC, Paris Agreement Art. 2.

⁶ UNFCCC, Paris Agreement Art. 4.

⁷ Ian Parry, “*Putting a Price on Pollution,*” Finance and Development, IMF, December 2019. See also “*Fiscal Monitor: How to Mitigate Climate Change,*” IMF, Washington DC, October 2019.

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- iii. it has reduced power system reliability
 - iv. it has imposed higher power system costs and
 - v. it has undermined investment in both old and new generation.

At the end of 2019, Australian superannuation funds held total assets of around \$2.9 trillion.⁸ A recent study by Industry Super Australia (ISA) has added weight to the case for technology neutrality in energy policy.⁹ The principal message from ISA's 2019 study was:

*"The lack of a genuine long-term technology neutral energy policy is a major factor undermining fund investment. Industry superannuation funds stand ready to allocate capital towards the electricity sector but need to see governments put in place a comprehensive energy policy framework that deals with reliability, competitiveness and emissions reduction aspects. This is vital to provide the necessary certainty to investors"*¹⁰

A Price on Emissions

There has been a range of proposals to impose a domestic emissions price but what is never explained is how payments into general revenue will prevent or reduce global climate change.

In 2016, the Australian Energy Market Commission (AEMC) recommended an emissions intensity target as *"the most cost-effective, scalable, and robust emissions reduction mechanism ... of the ... pathways available to policymakers ... allowing emissions reduction and energy policy objectives to be simultaneously achieved at the lowest cost to consumers."*¹¹ This was favoured by the AEMC over other mechanisms, such as the technology subsidy under the Renewable Energy Target Scheme or regulatory measures that would force the closure of fossil fuel generators to meet the emissions reduction target.


In 2017 the Turnbull government proposed a new policy, the National Energy Guarantee, to *"lower electricity prices, make the system more reliable, encourage the right investment and reduce emissions"*. Ultimately the emissions reduction component was scrapped, leaving an open question as to what will be expected of the electricity sector to reduce emissions in the future.

⁸ Association of Superannuation Funds of Australia, Superannuation Statistics, December 2019.

⁹ ISA is a research and advocacy body for industry superannuation funds that manage the accumulating retirement savings of over five million members. These funds already hold over \$40 billion in energy sector investments worldwide.

¹⁰ Industry Super Australia, *"Modernising Electricity Sectors: A Guide to Long-Run Investment Decisions"*, Discussion Paper, June 2019 ("the ISA Discussion Paper") page 5.

¹¹ Australian Energy Market Commission, *"Integration of Energy and Emissions Reduction Policy,"* Final Report, 9 December 2016.



In 2019, the Morrison government expressed confidence that Australia would meet its 2030 target under the Paris Agreement. However, this has done nothing to allay the fears of investors that future Federal or State governments may impose more onerous emissions-reduction requirements in pursuing the global ‘net zero by 2050’ target.

In 2019, ISA proposed that a price on emissions would bring about policy stability. The effectiveness of any such scheme would however depend on its design features.

A number of questions need to be considered:

- Would the scheme be confined to electricity generation or should it apply to the entire economy?
- What would be the duration of the scheme? Would 30 years be necessary to align it with the ‘net zero by 2050’ global target?
- Would there be a phasing-in period to minimise any adverse effect on Australian industry?
- Could the entire proceeds of the scheme be reinvested in innovation, in either emissions-mitigation or climate-change adaptation projects?
- Could international offsets be utilized, to enable future Australian innovation abroad to be recognised and rewarded in Australia?

Conclusion: Addressing Climate Change Through Innovation

An electricity market with a “net zero by 2050” target could possibly attract an increased level of investment by both corporate and institutional investors. The present market is failing to do this, the money is lying idle and climate change is not being addressed.

Governments should not be picking winners, nor writing prescriptive “emissions reduction technology roadmaps”. This is not their forte.

One way forward for Australia is to establish a low-emissions, genuinely technology-neutral, innovation fund that devoted its entire resources to promotion of innovation and would be directed more by industry itself than by governments. An innovation fund could be exclusive to the electricity sector.

A fund of this type would concern itself with the broad spectrum of innovative energy technologies that would go towards the prevention or cure of climate change and address the public malady that has come to dominate community debate. Some technologies will reduce the rate of emissions; others will assist in making the economy more resilient.

Other sectoral funds for transport, manufacturing and agriculture could be developed on the electricity sector’s experience.

About the Author

Robert Pritchard is a lawyer and consultant on energy policy and strategy. He serves as executive director of the Energy Policy Institute of Australia and is a director of several companies involved in energy technologies and energy industry start-ups, including a nuclear technology company.

Robert served for 9 years on the Finance Committee of the World Energy Council and chaired the 2001 WEC Study on Electricity Market Design and Creation in Asia-Pacific.

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