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Unpacking Australia's Energy Strategy for the Region

John Blackburn

A classic assumption related to Australian fuel security, quoted in the *Australian* in January 2019, is revealing: ‘The Energy Department said Australia’s low supplies were not a serious concern as there had never been a serious interruption to Australia’s supply’.¹ Using that logic, perhaps you should cancel your house insurance if you have never had a fire. National security decisions should not be left to economists. Not everything can be monetised, nor rationalised, by a cost–benefit analysis.² Our understanding and comprehension of ‘risk’ is influenced by our assumptions—as individuals, as societies and as governments. We often assume our logistic chains are reliable as they appear to be working—until they don’t.

The discipline of logistics is not well understood beyond logistics specialists: it is difficult and multifaceted and, certainly from a military perspective, takes second place behind the platforms. For a government, the challenge of logistics is central to getting our economic and security settings right; however, it is often neglected and frequently left to the market to sort out.

1 Primrose Riordan, ‘Red Light Flashing over Fuel Security’, *Australian*, 6 January 2019.

2 The folly of this approach is addressed in part in Binyamin Applebaum, *The Economists’ Hour: False Prophets, Free Markets and the Fracture of Society* (New York: Little, Brown and Co., 2019).

Australia's Fuel Security

Having identified concerns in Australia's supply chains, I was fortunate to obtain sponsorship from the NRMA to conduct three studies into fuel security to determine the extent of the problem.³ These investigations focused on supply lines, from source to port to the movement of supplies around the country, trying to understand supply chain risks.

It is worth considering the analysis that underpinned the 2011 National Energy Security Assessment (NESA)—the last one conducted in Australia. Only two scenarios were used with respect to fuel security. The first was a repeat of the 1970s Middle East oil embargo and the second was the outage of a Singapore refinery for 30 days. No consideration was given to potential problems in the South China Sea, supply chains being disrupted by conflict or the implications of critical points of failure within the domestic supply chain. Here begins part of Australia's challenge.

How does the rest of the developed world view fuel security? Interestingly, considerably more seriously than does Australia. A 2013–14 review of stockholdings and comparison with other developed countries found that the Australian Government was the only fuel-importing country in the developed world that had none of the following: public-owned oil/fuel stocks; mandated commercial stock holdings; or government control of, or participation in, the country's oil/fuel markets.

Figure 6.1 illustrates a number of converging trends in Australia's fuel outlook. Australia's crude oil resources are small by world standards and depleting at a faster rate than they are being replenished by discovery. Australia's transport fuels import dependency grew from around 60 per cent in 2000 to over 90 per cent by 2013. Between 2012 and 2015, there was a 42 per cent loss in Australia's refining capacity when three refineries were closed leaving a total of only four refineries in country. When asked what the minimum number of refineries should be in Australia to ensure sufficient fuel security and resilience, the Department of Resources, Energy and Tourism responded that a 'zero' refining capacity in Australia would be acceptable, as it would be cheaper to import refined

3 The three NRMA liquid fuel security reports can be accessed online, see 'Australia's Liquid Fuel Security Part 1', 'Australia's Liquid Fuel Security Part 2' and 'Benchmarking Australia's Transport Energy Policies', Presentations/Interviews/Reports, JBCS, accessed 23 August 2020, www.jbcs.co/#/reports/.

fuels from Asian refineries. Further, Australia has not met its stockholding obligations of 90 days of 'net imports' under the International Energy Agency (IEA) members agreement since 2011.

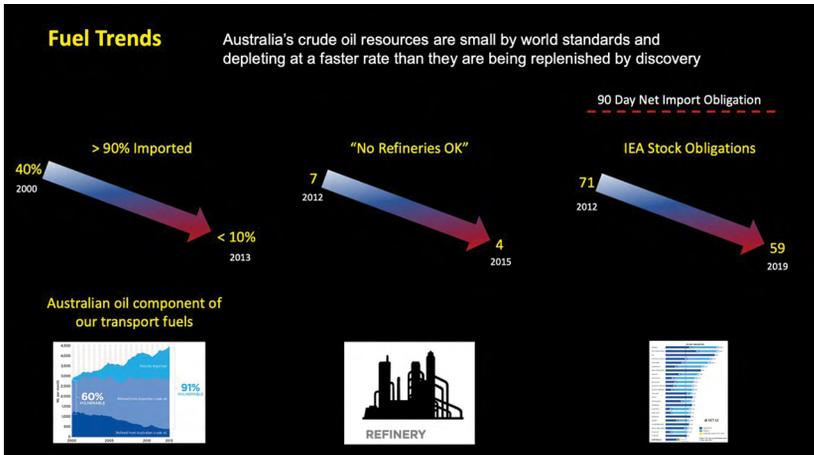


Figure 6.1: Australian fuel market trends.

Source: The figures and trends used to compile this graphic were extracted from John Blackburn's NRMA liquid fuel security reports. See, 'Australia's Liquid Fuel Security Part 1', 'Australia's Liquid Fuel Security Part 2' and 'Benchmarking Australia's Transport Energy Policies', Presentations/Interviews/Reports, JBCS, accessed 23 August 2020, www.jbcs.co/#/reports.

In June 2016, in response to pressure from other IEA member countries, the Australian Government committed to purchasing 'tickets' (i.e. options to buy oil stocks for release to the market) between 2018–20, and promised full compliance with IEA stockholding obligations by 2026—some 15 years *after* Australia first failed to meet its membership obligations. The government did subsequently enter into a ticketing contract with the Netherlands for approximately three days of net import stocks to be held for release to the market should collective IEA action be required in the event of an oil supply disruption. So, the first purchase of 'government stocks' was for an option to purchase oil tickets in a foreign country. This had little impact on Australia's domestic fuel security.

Despite this latest action, Australia, with only 59 days holdings as at July 2019, remains the only country out of 28 member countries that fails to meet its 90-day net oil import stockholding levels. The world's ninth-largest energy producer is the lowest and only non-compliant stockholder in the IEA.

In 2015 the Australian Government's *Energy White Paper* (EWP) made the following statements:

Australia is endowed with vast energy resources. We have had decades of readily available and low-cost energy to meet domestic and export demand ...

Our guiding principle is that markets should be left to operate freely, without unnecessary government intervention ...

The Australian Government continues to monitor and identify emerging risks to energy supplies ... through the periodic National Energy Security Assessment. [Yet, this has clearly not happened.]⁴

Interestingly, the 2015 EWP did not refer to electricity supply security, perhaps because the 2011 NESAs had noted that 'improved reliability for electricity supply is expected as current new infrastructure investments replace ageing network infrastructure'.⁵ Unfortunately, that improved reliability proved wanting when, in 2016, Australians were confronted with a statewide electricity system blackout in South Australia.

In 2015, a Senate Inquiry into Australia's Transport Energy Resilience and Sustainability explored supply chains and global and domestic risks to transport energy security and resilience.⁶ The importance of realistic scenario modelling was pursued by the committee, despite testimony from an industry lobby group that national security scenarios were 'not appropriate' for use in assessing fuel supply chain risks; the implication being that only market factors, forces and fluctuations, could undermine our fuel security in Australia. Perhaps this was an ambit claim by an industry group to minimise the risk of government regulation or control for national security purposes?

The first recommendation of the 2015 Senate Inquiry was:

The committee recommends that the Australian Government undertake a comprehensive whole-of-government risk assessment of Australia's fuel supply, availability and vulnerability. The assessment

4 Department of Industry and Science, *Energy White Paper 2015*, April 2015, i, 5, apo.org.au/sites/default/files/resource-files/2015-04/apo-nid54017.pdf.

5 Department of Resources, Energy and Tourism, *National Energy Security Assessment December 2011*, 2011, 55, www.energy.gov.au/sites/default/files/national-energy-security-assessment-2011_0.pdf.

6 Senate Standing Committee on Rural and Regional Affairs and Transport, *Australia's Transport Energy Resilience and Sustainability Report*, June 2015, www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/Transport_energy_resilience/Report.

should consider the vulnerabilities in Australia's fuel supply to possible disruptions resulting from military actions, acts of terrorism, natural disasters, industrial accidents and financial and other structural dislocation. Any other external or domestic circumstance that could interfere with Australia's fuel supply should also be considered.⁷

The government rejected that recommendation on the grounds that the issues were adequately addressed in the NESA process. As mentioned above, as yet there has been no update to the 2011 NESA.

The 2015 Senate Inquiry also recommended that:

The Australian Government develop and publish a comprehensive Transport Energy Plan directed to achieving a secure, affordable and sustainable transport energy supply. The plan should be developed following a public consultation process. Where appropriate, the plan should set targets for the secure supply of Australia's transport energy.⁸

No action was taken by the government on this recommendation.

In 2018, as part of the *Energy Policies of IEA Countries* series, the *Australia 2018* review was released.⁹ The review made the following observations: while Australia is well endowed with natural resources, energy security risks across several sectors have increase; the signs of stress in the Australian energy system have grown and energy policy governance in Australia is very complex and fragmented; Australia is increasingly exposed to new challenges for maintaining security of energy supply. Therefore, an updated NESA remains critical. Significantly, Australia is the only IEA country that is a net oil importer and relies solely on the commercial stockholding of industry to meet its obligation. All IEA countries have two obligations; Australia meets neither obligation. This is problematic given that the country's oil stocks are at an all-time low, and the country has no strategic oil stocks and has not placed any stockholding obligations on industry.

7 Senate Standing Committee on Rural and Regional Affairs and Transport, *Australia's Transport*.

8 Senate Standing Committee on Rural and Regional Affairs and Transport, *Australia's Transport*.

9 International Energy Agency, *Energy Policies of IEA Countries, Australia 2018 Review*, 2018.

The IEA review concluded that Australia's oil security policy is based on ensuring the operation of an efficient and flexible oil market. Accordingly, the country's liquid fuels market is largely unregulated during business-as-usual. 'However, it is less clear how the country would respond in the event of a serious oil supply disruption leading to market failure.'¹⁰ These observations and conclusions do not reflect a coherent approach to energy security nor energy policy in this country.

In March 2018, the Parliamentary Joint Committee on Intelligence and Security published an Advisory Report on the Security of Critical Infrastructure Bill 2017.¹¹ The first recommendation of that report was:

That the Department of Home Affairs, in consultation with the Department of Defence and the Department of the Environment and Energy, review and develop measures to ensure that Australia has a continuous supply of fuel to meet its national security priorities. As part of developed measures, the Department should consider whether critical fuel assets should be subject to the Security of Critical Infrastructure Bill 2017.¹²

The response to that recommendation was due in December 2018, but the Department of Energy failed to deliver.

On 4 April 2019, 12 months after the Joint Committee's report, the Department of Energy published their interim *Liquid Fuel Security Review* report.¹³ The interim report was a positive step in the right direction; however, it revealed how little analysis had been conducted by successive governments with respect to how our supply chains work and the risks we face in a rapidly changing global environment. The authors deduced the following:

Fuel shortages are not something that most Australians have experienced ...

Australia manages fuel differently from other countries ...

10 International Energy Agency, *Energy Policies of IEA Countries, Australia 2018 Review*, 53.

11 Parliamentary Joint Committee on Security and Intelligence, *Advisory Report on the Security of Critical Infrastructure Bill 2017*, March 2018, parlinfo.aph.gov.au/parlInfo/download/committees/reportjnt/024155/toc_pdf/AdvisoryreportontheSecurityofCriticalInfrastructureBill2017.pdf;fileType=application%2Fpdf.

12 Parliamentary Joint Committee on Security and Intelligence, *Advisory Report*.

13 Department of the Environment and Energy, *Liquid Fuel Security Review Interim Report*, April 2019, www.energy.gov.au/publications/liquid-fuel-security-review-interim-report.

Australia is heavily reliant on imports of liquid fuels, and this is unlikely to change ...

Australia is an energy superpower, but not when it comes to oil ...

Australia needs to keep pace with global trends, otherwise we risk being left behind with ageing infrastructure and potentially more limited supply of oil ...

Burdensome administrative requirements of the Liquid Fuels Emergency Act are likely to delay an effective Government response in an emergency. [This is a serious issue—in other words, we do not have an effective legal framework through which government can respond rapidly to a fuel supply emergency.] ...

There is no overarching understanding of the whole liquid fuel market in Australia and how different parts interact with each other. [The Department is now developing a model of the fuel market and its supply chains.] ...

Australia is potentially exposed to potential fuel supply disruption in Asia and the Middle East. While it is extremely unlikely, ongoing tensions in the Middle East may affect oil production. [Recent developments in the Middle East would suggest that this assessment was somewhat optimistic.]¹⁴

The report discussed further work that needed to be done and estimated that the final report would be delivered to government in the second half of 2019 (some 12 months late). By that time, the 2015 NESAs would be four years overdue, making the only 'current' NESAs eight years old.

In August 2019, Minister for Energy and Emissions Reduction Angus Taylor announced that the government was negotiating to buy millions of barrels of oil from America's fuel reserve under an emergency strategy to lower the risk of Australia plunging into an economic and national security crisis. In June 2020, the strategic fuel reserve deal was inked. In doing this, Taylor was trying to meet our obligations as a member of the IEA. However, this obligation does not mean holding 90 days of diesel and 90 days of unleaded and 90 days of jet fuel. The 90-day figure is an accounting measure. For example, we hold about 22 days of diesel stocks according to government statistics; however, diesel stocks have been as low as 12 days in the past couple of years.

14 Department of the Environment and Energy, *Liquid Fuel Security*.

Will this ‘deal’ make any real difference to our energy security, given that we import more than 90 per cent of all our transport fuels as either oil or refined product? Unfortunately, it will not. What we are seeing here is marketing instead of real action and a clever accounting move to avoid having to address our real fuel security problem.

In 2021 we have three refineries (soon to be two) while we used to have 100 Australian-flagged ships, we now have only four flagged ships capable of international trade, and these are liquefied natural gas (LNG) carriers.

Paying for US oil stocks, which will stay in the US, is a move to try to meet the IEA measure set in the 1970s. A lot has changed since then. The security of our fuel supplies has become much more complex and a move to count oil in a foreign country as our own will do little for our domestic energy security. We only have four oil refineries and, as at August 2019, while we used to have 100 Australian-flagged ships, we now have only four flagged ships capable of international trade, and these are liquefied natural gas (LNG) carriers. We depend completely on foreign-owned ships to bring oil and fuel to Australia.

Australia’s Absent Energy Security Policy

The world, the economy and governments have all changed considerably since the last NESAs, and yet no update has been conducted to reflect the current environment nor help shape government energy and security policy. Successive governments have committed to developing a new NESAs—initially in 2015, then each year until 2019. Yet, in 2021, we are still yet to see an updated NESAs. Australia lacks a contemporary and relevant assessment of our energy security, including analysis of a full range of future threat scenarios. We need a contemporary and relevant assessment of our energy security, including analysis of a full range of future risk scenarios.

Can the market forces so confidently spruiked by government and industry actually provide for energy security? The simple answer is ‘no, they cannot’. The lowest price has become the default target. We want more ‘stuff’ and we want the cheapest ‘stuff’, but what is the real cost of the lowest price if we fail to consider the resilience and security aspects

of the supply chain? Especially given Australia's poor track record in fuel security, we must ask ourselves this question. The answer is that the real cost is poor resilience, increased vulnerability and inadequate security.

Implications for Australia's Gas Energy Sector

So far, this chapter has addressed our fuel security. Given that the book focuses on Russian energy strategy and implications for Australia, it is worth considering the approach of successive Australian governments to energy policy with respect to the gas energy sector.

The 2011 NESA noted that 'the longer term role for gas ... will be dependent on the interplay between carbon pricing policy, technological developments ... and—importantly—gas prices'.¹⁵ The carbon price policy did not survive the transition to the Abbot government in 2014, and gas price rises over the past few years have been the subject of much public debate and blame shifting. It is clear that the 2011 NESA was based on assumptions that were invalid within three years.

Australia is currently being touted as the largest global exporter of LNG. Has the government assessed the emerging risks to that trading position? What assumptions has our government made? What scenarios are being considered for the NESA of the 2020s? While we await an updated NESA, it is worth noting that the Australian Government is now considering a gas reservation policy in reaction to current domestic gas prices, despite refusing to consider this approach over the past decade.

In addition, and with respect to further investment in this sector, the economic impacts of the July 2019 change in the Petroleum Resources Rent Tax (PRRT) for future projects are yet to be seen.¹⁶ These changes are long overdue given the paltry amounts of PRRT collected over the past 20 years.

15 Department of Resources, Energy and Tourism, *National Energy Security Assessment December 2011*, 34.

16 See, Australian Government, *Treasury Laws Amendment (2019 Petroleum Resources Rent Reforms No. 1) Act 2019*, accessed 23 August 2020, www.legislation.gov.au/Details/C2019A00043.

As well as these Australian policy changes, the impact of Russian gas exports into the Asia-Pacific could be significant for Australian LNG exporters. In a June 2019 report, the chief economist of the Department of Industry noted that LNG spot prices were forecast to remain low, as additions to global capacity outstripped increases in global demand.¹⁷

With 96 per cent of Australian LNG currently being exported to the Asian market, Russian gas exports to that same market, which are expected to be at prices significantly lower than Australian LNG, could have a major impact on the Australian LNG industry.¹⁸ Russia’s proven gas reserves are significantly greater than Australia’s, as highlighted in Figure 6.2.

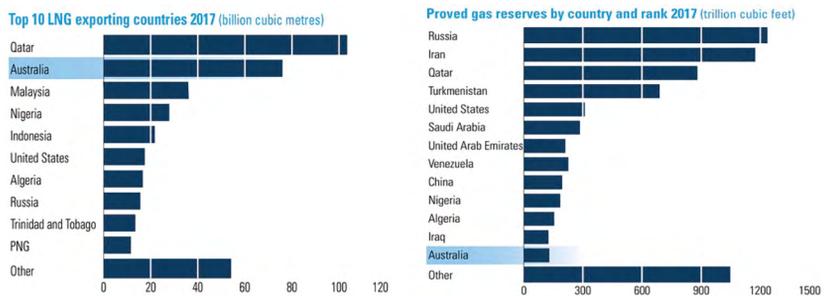


Figure 6.2: LNG exporting countries and proved gas reserves.

Source: Australian Petroleum Production and Exploration Association Limited, *Key Statistics 2019*, 2, 11, accessed 23 August 2020, www.appea.com.au/wp-content/uploads/2019/06/APPEA_Key-Statistics_2019.pdf.

The combination of proposed gas reservation policies, a change in the PRRT, the spectre of lower-priced Russian gas exports to the Asian market and the significantly larger proven Russian gas reserves could auger badly for future investment in the Australian LNG market. We await the delayed NESAs to find out.

One positive indicator for the Australian gas market is the national hydrogen strategy that is expected to be released in early 2020. The production of ‘green’ hydrogen from renewable electricity and water has significant potential as a large-scale export industry, energy storage

17 Department of Industry, Innovation and Science, Office of the Chief Economist, *Resources and Energy Quarterly*, June 2019, 54, www.industry.gov.au/data-and-publications/resources-and-energy-quarterly-june-2019.

18 Australian Petroleum Production and Exploration Association Limited, *Key Statistics 2019*, accessed 23 August 2020, www.appea.com.au/wp-content/uploads/2019/06/APPEA_Key-Statistics_2019.pdf.

medium, source of renewable NH₃ and adjunct to our methane gas supply zero emissions transport energy source that could significantly improve our energy security by reducing the reliance on imported fossil fuels. It remains to be seen whether the strategy encompasses the full range of potential benefits of a domestic and export hydrogen industry, and provides appropriate market incentives to build a resilient industry base that benefits the Australian economy more than the first 20 years of the PRRT.

The reality is that energy security, like national security, can only be addressed with consistent nonpartisan political support. This is sadly absent in Australia, where energy policy has been the subject of political battles at the expense of our nation's security. There is no energy security strategy and there is no coherent energy policy. Energy security is about much more than a 'reliable' and cheaper electricity supply.

There are significant issues with our energy systems today that should concern us all. Energy security is a vital component of national security and an increased level of government control and leadership with respect to energy security is warranted.

In 2021, Australia does not have a national security strategy. We need one that integrates all aspects of national power and includes an energy security plan. Without such strategies, policies and plans, we navigate a rapidly changing world, facing backwards and reacting to events after they have occurred.

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