

# AUSTRALIA'S FUEL SECURITY: RUNNING ON EMPTY



NOVEMBER 2018

Australia is facing a fuel security crisis. Government statistics show current reserves averaged across Australia are at three weeks or less (Figure 1), and that we have been non-compliant with the International Energy Agency's 90-day fuel stockholding obligation since March 2012.

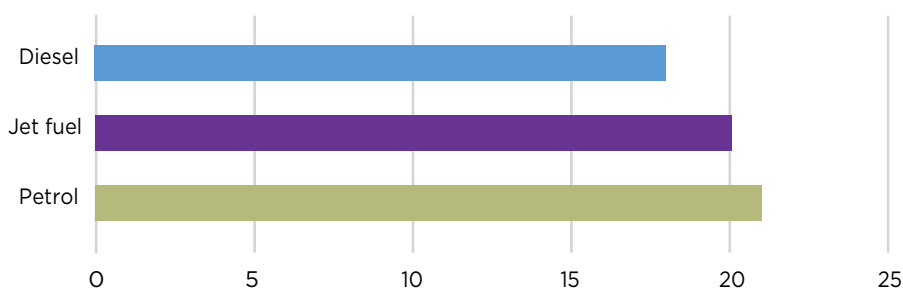
We rely on imports for 90% of our crude and refined petroleum supplies (Figure 2).

Engineers Australia told the fuel security Senate inquiry in 2015 that Australia's total stockholding of oil and liquid fuel comprised two weeks of supply at sea, five to 12 days' supply at refineries, 10 days of refined stock at terminals and three days stock at service stations.

The Turnbull government announced in May 2018 that it would undertake a National Energy Security Assessment due to concerns over declining domestic production, diminishing refining capacity and concerns over potential flash points in the Middle East and South China Sea.

The last National Energy Security Assessment was in 2011, but a number of inquiries and reports since then have touched on the important issue of fuel security. For example, the Senate has

**Figure 1: Days of consumption cover available for of key petroleum fuels, averaged across Australia**



**Source:** Department of Environment and Energy, Australian Petroleum Statistics, Issue 265 August 2018. Table 7 (p.36). The Department explains that "Days of Consumption Cover" is the number of days that Australia's end-of-month petroleum stockholdings would last if recent consumption rates continued. It assumes: no change in consumption levels; no domestic production of crude oil; no refinery production; and no imports or exports of crude or refined products. The calculation takes the national month-end stockholding of each product converted into megalitres and divides it by the average daily consumption of that product. Average daily consumption of refined products is calculated as the sum of the previous 12 months of sales divided by 365.

held inquiries into both fuel security and flag-of-convenience shipping, while the Energy White Paper and Defence White Paper also investigated our increasing reliance on foreign fuel.

Australia is the only developed oil importing country in the world with all three of the following policies:

- no government controlled stocks of crude

oil or clean (refined) petroleum products ("CPP");

- no mandated commercial stock requirements for oil companies; and
- no government involvement in oil markets.

Furthermore, four petroleum refineries have recently been closed on economic grounds and the refining capacity has not been replaced. The impact of this development on the security of petroleum supply chains is significant.



Australian tanker *Hugli Spirit*, removed from the coast in 2015

**NO AUSTRALIAN TANKERS**

There are now no Australian-crewed tankers supplying fuel to Australia, down from 12 tankers in the year 2000 and six in 2011. This has led to a substantial loss of maritime jobs and training opportunities and has undermined the security of our petroleum supply chains, at a time when we rely on the equivalent of approximately 60 full-time ships to keep us supplied. Unlike Australian seafarers, foreign crews have no background checks yet they are carrying petroleum products, ammonium nitrate and LNG around the Australian coast.

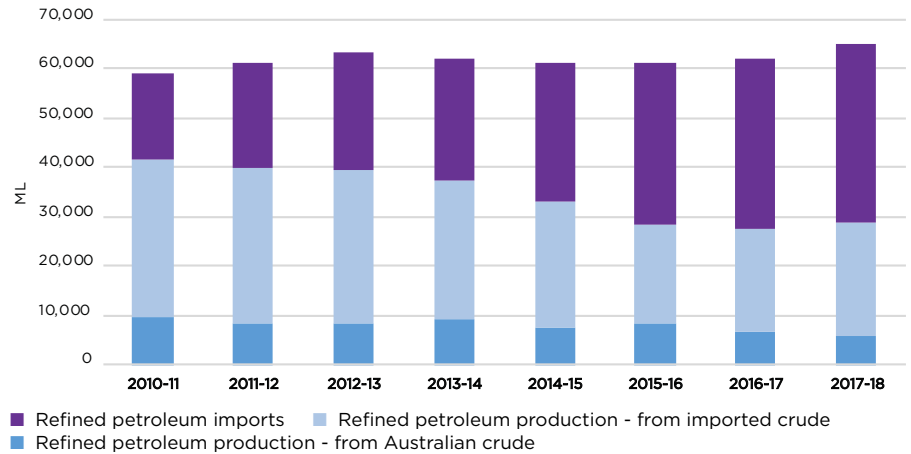
If the government needed to requisition fuel tankers to keep Australia supplied at a time of geopolitical or economic crisis, there are simply no Australian tankers available to them.

**NEW REPORT:  
FUEL SECURITY RISKS**

In the new report, *Australia's Fuel Security: Running on Empty*, experienced ship broker and maritime consultant John Francis investigates how economic instability has the potential to disrupt Australia's petroleum supply and how this risk may be rapidly escalating in significance. This adds to the understanding of geopolitical threats commentators have previously focussed on as the primary fuel security concern. In addition to growing tensions in the South China Sea through which a significant portion of our fuel transits, economists are alarmed by the financial risks created by the debt-driven growth model of the world's major economies.

The International Monetary Fund warns that the world is at risk of another financial meltdown as a

**Figure 2: Refined petroleum imports and domestic production, 2010-2018**



Source: Department of Environment and Energy, *Australian Petroleum Statistics*, Issue 265 August 2018. Table 2 (p.8) and Table 4 (p.26).

**Table 1: Australian Tanker Premium spread across the import fleet**

Number of Australian tankers	Australian Tanker Premium		
	Total cost based on annual premium/ship of A\$6 million	Per ML based on estimate for 2018-19 national imports of 38,087 ML	In cents per litre
5 ships	30,000,000	\$788	<b>0.08</b>
10 ships	60,000,000	\$1,575	<b>0.16</b>
15 ships	90,000,000	\$2,363	<b>0.24</b>
30 ships	180,000,000	\$4,726	<b>0.47</b>
60 ships	360,000,000	\$9,452	<b>0.94</b>

Note: 2018-19 import volumes are projected based on 2017-18 volumes of 36,273 ML plus 5%, which is the amount that imports have increased each year for the past two years. See Table 1.

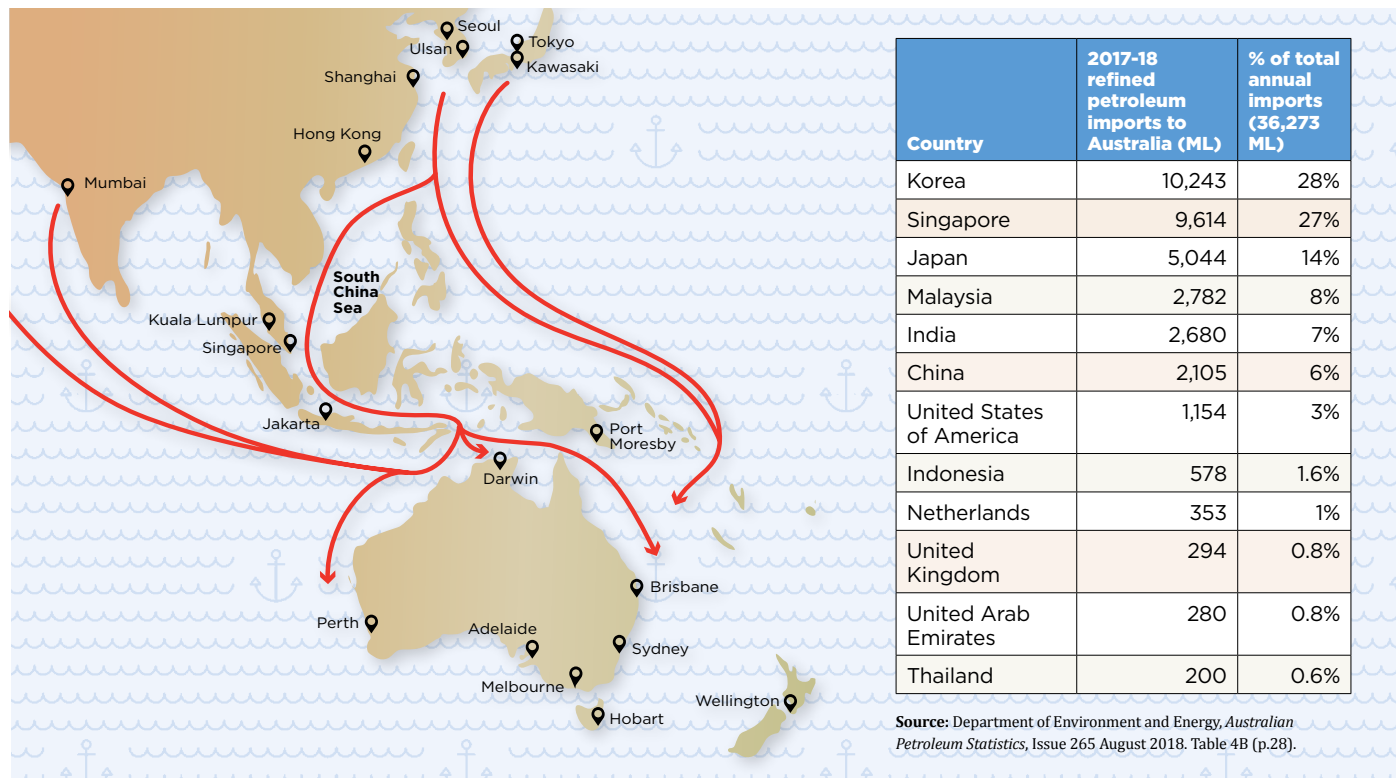
result of global debt levels being well above those at 2008 levels and the failure of governments and regulators to implement the reforms necessary to protect the financial system from reckless behaviour.<sup>1</sup>

Senior executives from the Bank for International Settlements warn that the 'unprecedented asset price bubble engineered by G7 central banks is a ticking time-bomb that is ready to burst after seven years of near zero interest rates and speculative excesses in bonds, stocks and real estate.'<sup>2</sup> Many commentators consider that a financial crisis will occur eventually and some anticipate that it will be far bigger than the 2008 crisis.<sup>3</sup>

**CREDIT CRUNCH = SHIPPING CRISIS**

A banking liquidity crisis in any of the G7 economies can be expected to generate a cascading effect with global consequences for the international shipping market.<sup>4</sup> The shipping market relies on credit and every time a very large crude oil tanker refuels the operator purchases at least US\$2 million of bunker fuel (Figure 4). A credit squeeze could lead to a substantial number of arrests of ships by creditors. Tankers chartered to load cargoes bound for Australia, or to the refineries Australia relies upon, could be significantly disrupted in these circumstances.

**Figure 3: Origin of Australian refined petroleum products imports in 2017-18.** Only countries with more than 0.5% of annual imports are listed in the table and with those more than 1% of imports are plotted on the map.



## AUSTRALIA NEEDS A STRATEGIC FLEET

With the nation facing heightened concerns over fuel security, a strategic Australian tanker fleet could provide us with security to get through economic and geopolitical crises. Even covering the entire fuel import sector with 60 ships would cost less than one cent per litre at the bowser. The new report explores this cost in more detail (Table 1).

A “strategic fleet” of fuel supply vessels guaranteed to act in the national interest has been discussed in meetings with politicians from all sides but needs to be enacted as proper policy with bipartisan support.

If the government needed to requisition fuel tankers to keep Australia supplied at a time of geopolitical or economic crisis, there are simply no Australian tankers available to them.

**Figure 4: Cost of refuelling a VLCC tanker**



**REPORT: KEY FINDINGS AND RECOMMENDATIONS:**

**1** Australia's oil import dependence (crude and clean products) stood at about 90% in 2017-18. This growing dependence on overseas sourced petroleum products can be contrasted with Australia's repeated failure to meet its 90 day IEA stockholding obligation, with stocks of key products standing at 18 to 21 days. The risk of any major disruption to Australia's import arrangements and the capacity of importers or government to secure alternative supplies in a timely manner needs to be independently investigated.

**2** The exclusive reliance on foreign flagged tankers for crude and CPP supply chains removes any opportunity for the Commonwealth to be able to requisition national flag tankers if necessary to secure minimum import or coastal distribution requirements following major economic or geopolitical disruptions to oil markets. It has also diminished skills training for those operating and managing critical petroleum import supply chains and infrastructure.

**3** Any risk assessment of bank liquidity and potential disruption to world credit markets needs to

include consideration of the cascade effects on world freight markets. This includes the likelihood of ships being arrested by suppliers of bunkers and other creditors such as ship mortgagees; those holding liens against the vessel such as ship's crew seeking unpaid wages; unpaid ship repair facilities; and insurers etc. Potential arrests from claimants with a right to proceed *in rem* under Admiralty legislation are inevitably at heightened risk where ship owners are unable to secure sufficient lines of credit to pay their creditors as and when their debts fall due. Courts are often left with little choice but to order the sale of arrested vessels where their owners are subsequently unable to provide satisfactory security in relation to the proceedings.

**4** If a comprehensive risk assessment indicates that retention of a minimum number of tankers owned, managed and crewed by Australians is justified on national security grounds, the Commonwealth, in consultation with stakeholders, should investigate options to equitably apportion the differential costing.

**5** The additional cost per litre of cargo carried by an Australian tanker carrying clean petroleum import cargoes ranges from 0.49 cents to 1.25 cents per litre, and depends on the size of the ship and the distance

from the supply country to the port of importation. This additional cost could be spread across the entire import volume to provide a very modest cost per litre. For example, the cost of 5 Australian ships spread across the projected import volume of 38,087 ML in 2018-19 results in a cost of less than one-tenth of a cent per litre. Fifteen Australian ships would cost less than a quarter of a cent per litre. Even if the whole future import volume covered by 60 ships, the cost is less than 1 cent per litre (Table 1).

**Endnotes**

- 1 "World economy at risk of another financial crash, says IMF" The Guardian 4 October 2018
- 2 Hannoun H., Dittus P. *Revolution Required – The Ticking Time Bombs of the G7 Model*, p.87
- 3 Sorkin A.R. "From Trump to Trade, the Financial Crisis Still Resonates 10 Years Later" New York Times 10 September 2018; Bernanke B.S., Geithner T.F., and Paulson H.M. Jr "What We Need to Fight the Next Financial Crisis" New York Times 7 September 2018
- 4 Sachs J.D. "Blackouts and Cascading Failures of the Global Markets" Scientific American 2009



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