



AWU Submission #2

# Inquiry into Australia's Oil Refinery Industry

January 2013



# Inquiry into Australia's Oil Refinery Industry

## Executive Summary

The Australian Workers' Union (AWU) welcomes the inquiry by the Standing Committee on Economics into Australia's refinery industry. The sector is of critical national interest underpinning future national growth prospects. The AWU is concerned that heroic assumptions have been made about the sustainability of the sector driven by assessments of future risks based on market theory rather than grounded in fact.

The AWU is greatly concerned about the future of Australia's oil refining capacity, given the strategic importance of oil to economic and national security.

Based on the evidence given in the inquiry by various parties, it is clear that others share similar views to the AWU, with a vast cross section of the consumer and business community disturbed by Australia's gradual drift towards energy insecurity.

This ancillary submission further strengthens the AWU arguments raised in the first submission as well as evidence given at the inquiry. The submission will raise the following issues.

1. Supply chain integrity.
2. Energy security and independence.

## SUPPLY CHAIN INTEGRITY

Australia has the current capacity to service 75% of its refined petroleum needs.

This provides the vast majority of Australia's liquid fuel needs, but also importantly ensures Australia's upstream and downstream supply chain capability integrity.

Closures of refining capacity place significant pressure on downstream manufacturers who rely upon feedstock for production.

In the event of global supply shocks, including natural disaster or war, Australia must retain the capability to produce liquid fuels to service the domestic economy.

A loss of supply chain capability is difficult to reinstitute at short notice due to sunk costs associated with capital expenditure, as well as loss of skills and operation capability.

### Australian standards

Australia has long adopted rigorous standards for refined fuel products.

Until Australia became a net importer of refined fuel products, it was only necessary to monitor the performance of domestic fuel producers, which are all capable of producing complex and varied grades of fuel.

Since significant levels of imported fuel have been required to service Australia's liquid fuel needs there has been an increasing incidence of imported fuel being of insufficient quality to meet Australian standards. This requires either further refining in Australian refineries (if the capacity exists in the terminal) or the rejection of the product and return to its point of production. This represents a significant incremental cost to production, which is passed on to Australian fuel consumers, particularly industry and motorists.

There have been suggestions that Australia is incapable of refining domestically produced crude oil products, particularly those that are extracted from the Bass Strait. This is patently untrue.

Domestic refining profitability is driven by the so-called 'refiner margin' which is partly driven by the reduced costs of using crude sourced from overseas.

In the event of an external shock, Australia could readily refine its own sources of crude oil at minimum additional cost. Furthermore, even if such a capability gap were accepted as true (which it is not conceded), the retrofitting costs in capital would be marginal as compared to the extreme risks posed to Australia's economic and national security presented by any liquid fuels shock.

### **Geographic price discrimination**

It has been argued that economic and national security concerns that have been raised in defence of Australia's refining industry are specious having regard to Australia's already high levels of crude oil importation.

Australia's supplies of crude oil are extremely diverse, coming from a variety of continents and hemispheres.

In the event of domestic capacity closure and importation of refined petroleum, it is likely that the majority of this fuel would be sourced from Singapore, leaving Australia exposed to external shocks to Singapore's supply of crude oil. Further to this, Australian motorists would be exposed to potential price gouging by an effective monopolist supplier.

Darwin – Australia's only major city that is totally serviced by imported fuel – is a microeconomic example of what may happen more broadly in Australia if domestic refining capacity is allowed to collapse. The price paid in Darwin is regularly much higher than in other parts of the country and is highly curious given its reliance on supply of refined petroleum from Singapore. Darwin's supply has been disrupted in recent years due to fires occurring in Singaporean refineries, causing price spikes and disruptions.

### **Recent shale oil discoveries**

Most importantly the argument that Australia's refinery capacity is effectively obsolete due to a lack of domestic crude may become totally nullified due to the significant shale oil discoveries announced in January 2013.

Discoveries in the Arckaringa Basin have estimated at a massive 103-233 billion barrels of oil. Such an oil reserve, once active, could immediately reverse Australia from a net importer to a net exporter of oil.

A loss of Australia's refining capacity in the face of such a discovery would seem particularly negligent, having regard to the potential for Australia to aspire to complete independence in the most unstable and competitive global energy commodity.

Such a finding, as well as high prospects and prices for energy commodities generally, could potentially trigger exploration and discoveries in Australia which is known to be rich in energy commodities.

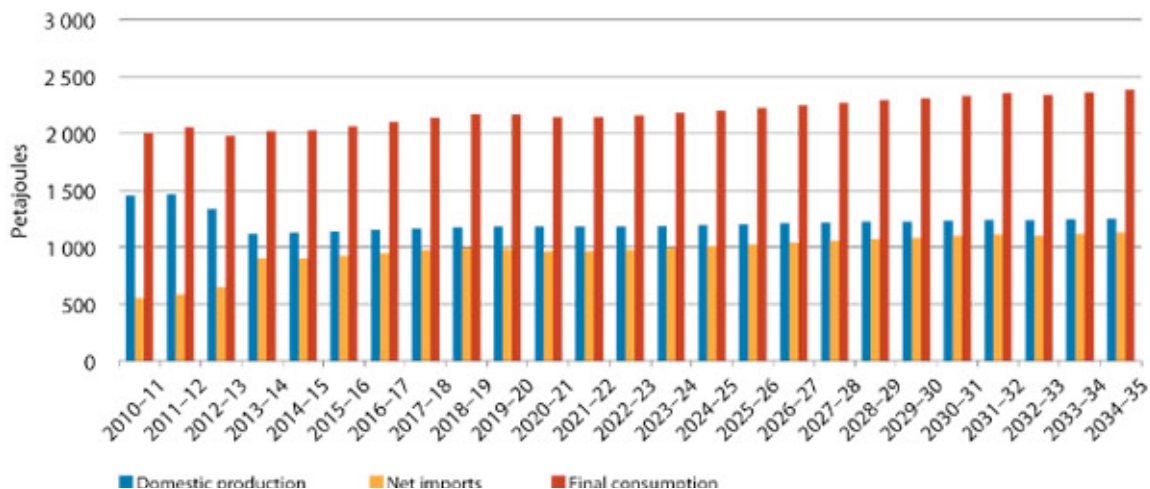
### IMPACT ON ENERGY SECURITY OF FURTHER CLOSURES

The AWU reiterates its concerns regarding the apparent cavalier approach to Australia's energy security that has **already been downgraded** in the recent NESA of 2011.

The AWU notes the strong remarks given in submission and in verbal evidence by the NRMA regarding the implications of any further refining capacity closures and seeks to underline those remarks in the minds of Committee members.

This continuing decline in absolute and relative terms of Australia's energy security is a most concerning trend. What should cause most alarm for Australians is the potential for a further deterioration in security which could likely occur in the near future having regard to the ongoing concerns surrounding Australia's remaining fuel refining sites.

The recent Energy White Paper has indicated a stable rate of domestic fuel refining capacity (after the full closure of the Kurnell facility in 2014) until 2034-35.



Having regard to the stresses on the industry that is readily apparent and the acknowledgment from the oil companies themselves that their ongoing production and operation cannot necessarily be guaranteed these projections based on 20 year horizons appear highly quixotic at best and perhaps even ill-informed. **The assumptions underpinning these projections deserve further scrutiny.**

Further analysis should take into account what flow on impacts to Australia's overall energy and national security profiling would occur – which has already been downgraded – and what other assumptions and policy positions in the paper may need to be recalibrated if this domestic production assumption is proved invalid.

The RET defines in the Australian context, energy security as the **adequate, reliable** and **competitive** supply of energy where:

- **adequacy** is the provision of sufficient energy to support economic and social activity
- **reliability** is the provision of energy with minimal disruptions to supply
- **competitiveness** is the provision of energy at an affordable price which does not adversely impact on the competitiveness of the economy and which supports continued investment in the energy sector.

### *Liquid fuels*

Australia's liquid fuels energy security is assessed as **high trending to moderate** in the long term, as RET believes we have continued access to highly adequate and reliable supplies of liquid fuels at price levels that are manageable within the broader economy. This is a highly subjective assessment as energy costs can also be influenced by Government policy (e.g., gas reservation in the US). With falling domestic refining capacity, and on-going demand for fuel both in Australia and offshore, assumptions concerning the trend of Australia's energy security trending to moderate may be overly optimistic.

The moderate assessment rating in the long term recognises a likely trend of high crude oil prices driven by increasing global demand and an increased reliance on more expensive sources of supply; the significant global investment challenge required to meet rising demand; and the continued risks of geopolitical uncertainty in key oil-producing countries. However, these reasons could just as easily have justified a higher risk rating.

## Australia's emergency reserves

Since the oil shocks of the 1970s, the IEA has mandated that nations have 90 days worth of emergency reserves to deal with shortages.

Unlike many other IEA countries, Australia does not hold government-owned strategic stock to manage supply during a short-term shortage, preferring to rely on the flexibilities markets offer to manage liquid fuel supply constraints without government intervention and to allow price increases to dampen or reduce demand.

Essentially, Australia mandates that the private suppliers hold this 90-day limit – the Minister can then take control of the reserves if required. This policy was a valid response when Australia was a net exporter of oil products (pre 2001). However since that time Australia has struggled to meet its obligations. Since 2010, the level of oil stocks in Australia have equated to less than 90 days of net imports. **Recently, Australia's emergency reserves have fallen to 88 days.**

In the event of a fuel shortage with national implications or the need for Australia to meet its commitments to the IEA under existing treaty obligations, the Governor-General of Australia may, upon prior consultation with the Commonwealth Resources and Energy Minister, declare a national liquid fuel emergency under the *Liquid Fuel Emergency Act 1984*. This provides the Commonwealth Resources and Energy Minister with wide-ranging powers to control the drawdown, transfer and sale of industry stocks of crude oil and liquid fuels, to control the range of products produced by Australian refineries and to direct bulk and retail sales of fuel across Australia.

**The White Paper and Security Framework have both dismissed this failure to comply as a threat to Australia's energy security.** The IEA is an important network for Australia's energy security. It is important that Australia complies with this network to ensure there is a credible global framework to deal with oil shortfalls. Australia's failure to comply with the mandate ensures that the system is undermined to a degree.

It also calls into question Australia's ability to point to the IEA as a safeguard to its growing dependence on foreign liquid fuels – given it is failing to follow the IEA's guidelines.

## Shock Scenario

The 2011 National Energy Security Assessment (NESA) examined Australia's energy security resilience by modelling a set of physical infrastructure and supply chain 'shocks' for each of the three sectors – liquid fuels, natural gas and electricity.

The scenarios are hypothetical and were designed to test the response arrangements and resilience of Australia's energy system. They are not assessments of actual infrastructure reliability or probability of failure, but rather apply a theoretical disruption in the system for the purposes of informing the NESAs. This was acknowledged during evidence given in the inquiry.

### **Reliance on Markets**

Australia has become increasingly reliant on markets, which during periods of stability operate efficiently to deliver products at best price.

As global trade becomes increasingly complex, it is increasingly at the mercy of external shocks. Australia, as an island nation, is particularly at risk to any disruptions that may occur to international shipping lines.

Sudden supply shocks to basic domestic food products such as bananas; driven by adverse weather events, often lead to significant product price inflation. These price spikes are particularly significant in supply side goods such as oil and refined petroleum that are central to economic growth and are demand inelastic.

An increasing reliance on markets to deliver core national goods can lead to potentially dangerous and risky outcomes for Australia's domestic security. It is reasonable to assume that any significant shock to our oil supply would be global and as a result would have consequence for markets and nations other than Australia.

In such circumstances of extreme external shocks to global oil supply it is not unreasonable to assume that – faced with the choice of export or domestic supply sufficiency – many nations will simply make a self-interested decision to impose export controls on fuel products, causing immense danger to Australia's economic and national security prospects.

### **Global threats to international fuel and oil supplies**

These scenarios are worthy of being underlined and reiterated due to the very real prospect that they may occur.

Geopolitical instability – oil is heavily sourced from areas such as the Middle East, which are home to some of the most unstable and unpredictable regimes and ongoing conflicts.

- **Iraq** – It is uncertain how stable Iraq will be post US troop withdrawal.



- **Iran-Israel** – Israel has increased the urgency of its campaign against Iran's nuclear programme. It is impossible to rule out a pre-emptive military strike from the Israeli's against Iran. Iran has stated that any military incursion will result in Iran closing access to the Strait of Hormuz – a route that is responsible for roughly 40% of seaborne oil trade and 20% of global supply. If Australia is to become dependent on Singaporean petroleum it is important to note that Singapore sources 90% of its crude from the Middle East. Any Israeli incursion therefore would have the potential to disrupt Australia's energy supplies.
- **Arab Spring** – Uncertain how these events will resolve themselves and what affect they will have on neighbouring regimes that are oil suppliers such as Syria and Saudi Arabia.
- **China-Taiwan tensions** – These are ongoing and inherently uncertain. China has also been more forceful in global shipping routes and claims over the China Sea. Any escalation in tensions in this region has the potential to involve the United States and heavily disrupt the supply of energy.
- **Extreme Weather** – Events such as Hurricane Katrina have the potential to cause massive disruption to global supply chains of oil.

There are a vast number of potential risks to Australia's supply chain – which would be entirely sea based – and cannot be listed in their entirety due to the unpredictability of global events.

In particular, the Federal Government has modelled a 30-day loss of petrol from Singapore.<sup>1</sup> It is suggested that prices may spike in the near term, but that the market should adjust swiftly. However, it is not clear what would result from an ongoing crisis.

This market based approach takes a historic view of how the world has responded to oil and fuel shortages - however past practice is no guide to an uncertain future.

---

<sup>1</sup> Liquid fuels vulnerability assessment, A review of liquid fuels vulnerability, ACIL Tasman for the Dept of RET, Oct 2011 <http://www.ret.gov.au/energy/Documents/Energy-Security/nesa/LiquidFuelsVulnerabilityAssessmentReport2011.pdf>

It could reasonably be expected that with demand extending far beyond the traditional OECD nations to emerging economies, markets may struggle to rapidly bring on new sources of oil rapidly due to already stretched supply chains. Such an approach also ignores the very real geopolitics that afflicts oil supply.

But what is clear is that modelling one particular scenario while controlling for all other factors is essentially meaningless unless that one scenario plays out more or less in its entirety. Staking Australia's energy supply security on such a bet seems imprudent.

For example, NESAs assessment of the impact of a shutdown of refining capacity in Singapore, assumes that Australia would be able to source supplies adequately and reliably, albeit at a higher price. That may be a heroic assumption to make given the type of circumstances that would lead to a shutdown of Singapore refining capacity in the first place. Modelling with any degree of precision is therefore fraught and needs to be heavily discounted for events which may be unexpected or misjudged and therefore either excluded from, or miss-specified in, the model.

### **Fuel Dependency – the case of Poland**

Poland is heavily reliant on Russia for its energy supplies. Russian imports meet 95 per cent and 45 per cent of Poland's annual demand for oil and gas, respectively.<sup>2</sup>

Poland has been keen to diversity supply. Dependence on Russian oil has been viewed as a serious threat to Poland's energy security because Russia openly admitted in its Energy Strategy to 2020 that oil and gas could be used to ensure Russia's interests abroad. Oil supply disruptions in fact occurred in 2004 and 2006.

Poland has been busy at diversifying supply options, including securing access to the Norwegian Continental Shelf. Supply reserves have also been increased.

Although fuel dependency is not as severe in Australia there are lessons from Poland's experience in valuing diversification of supply and local capabilities in ensuring supply security.

---

<sup>2</sup> Institute for the Analysis of Global Security, Poland's Energy Security: Dealing with Russia, 29 February 2008.

### **Liquid fuels – a major interruption to Singapore's ability to trade petroleum products with Australia**

This scenario was based on the temporary closure of shipping to and from Singapore and shutdown of Singapore's three major refineries.

The interruption was modelled to last for around 30 days, and impacts were assessed under current conditions and then under the tighter global market conditions forecast for 2015-16.

The scenario demonstrated that the global market and international supply chain could provide Australia with adequate and reliable supplies, albeit at higher prices.

An immediate interruption to the Singaporean supply chain is estimated to increase global product prices by around 18 per cent on average in the first month, while prices decline somewhat from this initial spike in the second and third months as alternative supplies bridge the shortfall.

Under the NESAs methodology, the main impact on Australia's energy security would be on competitiveness due to the increase in global prices for petroleum products.

Adequacy and reliability over the scenario period would be maintained through alternative supplies becoming available from other regional refineries, access to stocks in Australia and those already on water, and the ability to acquire petroleum products from the Asia-Pacific region that would normally be sold to other regions.

Liquid fuels vulnerability assessment, A review of liquid fuels vulnerability, ACIL Tasman for the Dept of RET, Oct 2011 <http://www.ret.gov.au/energy/Documents/Energy-Security/nesa/LiquidFuelsVulnerabilityAssessmentReport2011.pdf>

## **Conclusion – a plan for the national good is required.**

The AWU welcomes the inquiry by the Standing Committee on Economics into Australia's Oil Refining Industry. It is the AWU's expectation that this inquiry will provide a balanced assessment of the conclusions reached by the RET in both the Energy White Paper and NESAs concerning the impacts of further cuts in Australia's refining capacity.

Australia currently possesses all of the pieces to the puzzle in order to determine its own energy future in terms of domestic energy resources, capital and skills. Yet policy inertia is allowing this vital capacity to simply erode to the point where it is on the verge of collapse.

This laissez faire approach fails to consider the vital importance of the industry to Australia's economic security as well as the role that government can play in ensuring capability can be retained in Australia. It is crucial that the committee consider the role that government can play in encouraging further investment in Australia's strategic industries particularly having regard to a competitive global environment as nations compete against one another for jobs, industry and strategic advantage.