AWU Submission

Inquiry into Australia's Transport Energy Resilience and Sustainability

November 2014

Inquiry into Australia's Transport Energy Resilience and Sustainability

Executive Summary

The Australian Workers' Union (AWU) remains vitally concerned about prospects for energy security in Australia. In times of national insecurity, addressing potential threats to secure access to reliable, affordable energy is a national strategic priority.

Remarkably, for an energy rich nation, successive governments have presided over the reduction in local refining capacity which has contributed to the lowest total fuel reserves among the OECD.

The current state of fuel insecurity and energy affordability is unsustainable. A recent AWU's report: Oil Refining in Victoria: Keeping it Strong!" was released just prior to the sale of Shell's Geelong Refinery. The AWU report warned of a critical point being passed when existing available refining capacity is unable to cater for the needs of the economy. In the absence of supplementation by imports, economic activity and living standards would be seriously threatened.

Today, with the closure of BP's refinery in Queensland, we are again confronting a situation where the nation looks forward to having only 4 refineries to sustain growth and living standards. A commensurate increase in reliance on imported product means that the security of supply arguments is legitimately being raised once again.

But the global security context has changed for the worse in the intervening 12 to 18 months as we are witnessing with rise of regional and religious disputes in oil producing regions. Combined with a cyclical fall in the value of the Australian dollar, imported fuel products are becoming relatively more expensive than would otherwise be the case if Australian refining had a fairer share of the local market. Affordability is being threatened further by the rise in domestic gas prices reducing the ability of fuel switching.

The AWU has developed a ten point plan which we urge the Federal Government to consider which includes the potential to hypothecate a portion of the additional

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revenue being raised by the re-indexation of fuel excise to be devoted to supporting industry policy in the refining sector in addition to roads funding.

Such a contribution to the refining sector, aimed at assisting refiners contribute inter alia with upgrading plant and equipment and the increase in domestic oil reserves are two goals which the additional revenue raised could be used to finance.

The challenges facing the domestic oil refining sector are well known to both the government and to the major stakeholders in the debate. The real issue for the committee in the opinion of the AWU is where we go to from here?

Trends indicate a worsening rather than improving global fuel security environment. Growing domestic economic pressures on the other hand including from cost of living means that reliance on imported product is adding to consumer and business bills just as excise indexation is being re-introduced and the lower Australian dollar offsets some of the benefit from lower international oil prices at the petrol pump. Domestic gas prices offer no relief.

The AWU has a vested interest in ensuring a viable future for this strategic industry which still employs thousands of our members either directly or as a part of the oil and gas supply chain. The AWU will work constructively with the inquiry aimed at developing policies which in our view could play a very positive role in achieving a more sustainable fuel security outlook for the nation in 2015 and beyond.

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Introduction

The AWU is responding to an invitation by the Federal Parliament's Rural and Regional Affairs and Transport References Committee to make a submission to its inquiry into Australia's transport energy resilience and sustainability.

The terms of reference for the inquiry are:

a. Options for introducing mandatory oil stockholdings;

b. The role of Government in ensuring Australian energy for Australians, including maintaining refinery capability; and

c. Australia's role and responsibility regarding energy security as a member of various multilateral fora.

The AWU makes this submission addressing the terms of reference with a view to supporting the vital work of the committee. This paper builds on a submission on the Draft Energy White Paper 2011[1], submission to the House of Representatives Standing Committee on Economics Inquiry into Australia's Oil Refinery Industry in late 2012[2] and an update report by the AWU in mid 2013 in response to the imminent prospect of closure of Shell's Geelong Refinery[3].

After describing the current state of play in the market (including the economic impact of the closure of the Bulwar refinery), the submission reviews the latest concerns regarding fuel insecurity; price impacts for fuel in Australia with a growing dependence on imported refined product; opportunities to exploit additional reserves and to transform gas to liquids (including developments in the US); the efficacy of gas

[1] March 2012, http://www.ret.gov.au/energy/Documents/ewp/draft-ewp-2011/submissions/169.Australian-Workers-Union.pdf

[2] November 2012, http://www.awu.net.au/sites/awu.net.au/files/awu-file/121119%20AWU%20submission%20-%20Inquiry%20into%20Australian%20Oil%20Refinery%20Industry.pdf

[3] Petroleum refining in Victoria – Keeping it strong!, Australian Workers' Union (AWU), Victorian Branch, June 2013

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and fuel reservation; and policy recommendations which could facilitate achieving a more viable refining sector in Australia.

State of play

This time last year, the AWU was concerned at the imminent closure of the Shell Geelong Refinery. The AWU undertook a major campaign aimed at addressing the costs and risks associated with such a closer to both the local and national economy. Many of the issues raised in that report[4] are still pertinent to the considerations before the committee now.

Despite the welcome sale of the Geelong Refinery to Vitol[5] and their planned investment in that site[6], the fact remains however that Australia today is little better off in aggregate national fuel security terms as a consequence of BP's announcement in the intervening period that it has decided to close the Bulwar Island refinery in Queensland by mid 2015 and to convert it into an import terminal facility.[7]

It is ironic but of little consolation to those workers who have lost their jobs - including over 350 workers at Bulwar Island in Brisbane - that the Australian dollar is today around its longer term equilibrium level when the high value of the dollar is reported to have forced the earlier decisions to close Clyde, Port Stanvac and Kurnell, with BP deciding ultimately to also close Bulwar Island.[8]

It is also of concern that the devaluation of the dollar will make refined product imports relatively more expensive despite the fall in the international crude oil price.

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[4] Petroleum refining in Victoria – Keeping it strong!, Australian Workers' Union (AWU), Victorian Branch, June 2013

[5] http://www.theage.com.au/victoria/500-geelong-jobs-saved-in-shell-refinery-selloff-deal-20140221-337qz.html

[6] Vitol, which took over the Shell Refinery at Geelong recently, has announced it will invest $150 million into upgrading the site as it gets to work on improving the operation.

[7] The remaining refineries are BP's Kwinana unit in WA, Shell's Geelong refinery which has just been sold to Vitol of Switzerland, Caltex's Lytton refinery in and Exxon-Mobil's Altona refinery in Melbourne.

[8] Caroline Finch, a director of industry research, IBISWorld, as reported by Brian Robins, Sydney Morning Herald, *BP refinery closure leaves Australia more reliant on fuel imports*, 2 April 2014 (refer to link below)

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Refined producer margins offshore will increase but without local consumers and businesses benefiting fully from the crude oil price drop at the petrol pump.

Economic impacts of the closure of Bulwar Island facility

Local impacts following the closure of Bulwar Island with the loss of 350 workers is equivalent to around 60 per cent of the projected impact of the closure of the Geelong Refinery (which was looking at losing 600 jobs) which was the subject of the AWU's 2013 report.[9]

Based on previous analyses, the AWU estimates therefore that around $60 million per annum could be expected to be lost in total economic benefits (private and social) following the termination of 350 jobs following the closure of Bulwar Island. These costs are attributable to both the direct and indirect impacts of the lost jobs.

Although these private and community related economic impacts are not the immediate focus of the committee's inquiry, the loss of the related specialist skills is of significance.

Once the skills of the refining workforce are gone, like the plants themselves, it is most unlikely we will see them return without significant investment in recruitment and training, Therefore, in the AWU's view, the total economic benefits associated with our existing investment in the refining workforce needs to be taken into account when measuring the costs and benefits of further loss of refining capacity in Australia.

Security of supply

Following BP's announcement, the media was quick to raise security of supply concerns associated with a commensurate increase in import reliance.[10] And the conclusion by the NRMA which is shared by the AWU is that…

[9] Petroleum refining in Victoria – Keeping it strong!, Australian Workers' Union (AWU), Victorian Branch, June 2013

Article I. [10] **Refer for example to the following articles released immediately following BP's announcement:**

Article II.

- ***BP refinery closure leaves Australia more reliant on fuel imports,*** Sydney Morning Herald, 2 April 2014

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"There is no public Government policy on maintaining a minimum level of oil refining capacity in Australia. Since 2000, our dependence on imported liquid fuel and oil for transport has grown from around 60% to over 90% of our transport fuel demand. There is no plan to stop our dependency growing to 100% or to halt the further decline of our fuel security."[11]

The AWU has recently reviewed security of supply issues.[12] These are outlined below:

What fuel security means

Previous submissions have explored the methodology employed by the Department of Industry's National Energy Security Assessment (NESA) and the refiners' peak body, the Australian Institute of Petroleum (AIP) to measure Australia's degree of fuel security given trends towards increasing reliance on imported products.

These analyses have concluded that for the foreseeable future Australia's fuel security was adequate, reliable and competitive, and therefore of no cause for concern. The Commonwealth Parliament's Standing Committee on Economics in a recent inquiry agreed that fuel security could be served by the variety of supply routes which would serve to circumvent any potential regional supply disruptions. [13]

The AWU has observed however that benign outcomes for Australia's fuel security rest on a range of simplifying assumptions included in the scenario analyses

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Read more: http://www.smh.com.au/business/mining-and-resources/bp-refinery-closure-leaves-australia-more-reliant-on-fuel-imports-20140402-35y4p.html#ixzz3HyoNz1KD

- ***BP's refinery closure makes Australia vulnerable*,** The Courier Mail, 2 April 2014 http://www.couriermail.com.au/business/bps-refinery-closure-makes-australia-vulnerable/story-fnihsps3-1226872854947?nk=4ff5c19e4f76a6df86b5a8404072b37a

[11] Australia's Liquid Fuel Security, Part 2, A report for NRMA Motoring & Services, Prepared by John Blackburn AO, February 2014, p5, http://www.mynrma.com.au/images/About-PDF/Fuel-Security-Report-Pt2.pdf

[12] Petroleum refining in Victoria – Keeping it strong!, Australian Workers' Union (AWU), Victorian Branch, June 2013

[13] Report on Australia's Oil Refinery Industry, House of Representatives Standing Committee on Economics, January 2013

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commissioned by the NESA. In other words, change the assumptions and the results might look completely different.

For example, in circumstances where all sea lanes were severed for an indefinite period, how would Australia's relative fuel security look then?

Such an occurrence may currently have a low probability but in an uncertain world, why should Australia assume it will never occur? It conveniently avoids the more difficult questions of how Australia would respond under these circumstances and what the policy implications might look like.

The bottom line is when it comes to fuel security; there are no guarantees that in the absence of local capability that Australia would in the event of disruption to the supply chain be able to access adequate alternate sources of supply.

Reliance solely on the international market in the absence of local refining capability in times of national emergency is an inadequate response mechanism to supply disruptions. As we have seen in the context of the global financial crisis, the normal rules of commence and exchange can be overwhelmed by beggar-thy-neighbour actions and policies by foreign banks, companies and countries. Australia's national interest could find itself well down the list of priorities for trading partners more concerned with their own immediate survival.

In these broader circumstances, Australia needs to retain domestic refining capacity in order to fuel the local economy, sustain living standards and in order to provide scope to contribute to its own defence.

At least one of the major refiners recognized the value in retaining local refining capability. During the Parliamentary inquiry, Mobil Oil noted that:

'some level of domestic refining capacity is highly desirable to provide additional flexibility to cope with the short term product supply interruptions and imbalances that can occur'.[14]

[14] Report on Australia's Oil Refinery Industry, House of Representatives Standing Committee on Economics, January 2013, p37

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At the same time, that does not imply a blank cheque in order to retain refining capability in Australia but rather to see that refining operations are a strategic industry which should be valued as an essential input vital to the preservation of the Australian economy in the absence of alternative sources of supply.

Indeed, the Parliamentary Committee inquiry did assume that in the end Australia would retain some degree of local refining capacity:

Despite the changes over the last decade and recent closures, evidence to the committee suggests that going forward there is a role for the Australian oil refinery industry, with groups acknowledging that some domestic refining capacity is a worthwhile complement to imports as part of having reliable, mature and diverse supply chains for liquid fuels.[15]

But this is inconsistent with the following statement by that committee:

Our ability to access reliable supply chains for both refined fuel and crude provides us with more energy security than having our own crude oil reserves and some refining capacity.[16]

The AWU is therefore concerned that there is no commitment to retention of local refining operations nor any view on what constitutes "some domestic refining capacity".

The Blackburn Reports for the NRMA

The AWU notes the recent analysis undertaken on behalf of the NRMA. Part 2, prepared by retired Air Vice-Marshal John Blackburn, in February 2014 concluded:

''as a result of our limited and decreasing refining capacity, small stockholdings and long supply chains [imagine the impact of conflict in the South China Sea] our society is at significant risk…'' [17]

[15] Report on Australia's Oil Refinery Industry, House of Representatives Standing Committee on Economics, January 2013, p6
[16] Report on Australia's Oil Refinery Industry, House of Representatives Standing Committee on Economics, January 2013, p67

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As noted in an April 2014 article by Paul Syvret[18]:

"To date we have largely accepted a 'let market forces' do their stuff approach, with little mind to the strategic considerations of a supply shock which would, if severe enough, impact everything from the capabilities of our Defence Forces to our ability to transport food, pharmaceuticals, essential chemicals (water treatment for example); let alone the impact on daily lives.

"A prolonged market failure, given our increasing reliance on imports, would see our society as we know ''cease to function'', as the NRMA report put it so bluntly.

"That is a worst case scenario, but it does highlight our lack of resilience and self-sufficiency. We are increasingly vulnerable".

The AWU would agree with Air Vice-Marshall Blackburn's conclusions that Federal Governments' have been more concerned with ensuring fuel reliability rather than fuel security. And as noted by Blackburn in his report for the NRMA, these are not the same thing.

Market participants are naturally concerned with ensuring their own reliability of supply in order to maximize their own commercial returns. However, the commercial pressures they face to maximize returns in turn assumes a lower probability of possible supply disruption than may actually be the case.

The Commonwealth however, faces somewhat different imperatives. These should be aimed at ensuring that our transport system - and in turn society and economy - has access to secure supplies of fuel at all times. This must account therefore for the possibility of a major supply disruption as part of future liquid fuel security contingency plan.

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[17] Australia's Liquid Fuel Security, Part 2, A report for NRMA Motoring & Services, Prepared by John Blackburn AO, February 2014, http://www.mynrma.com.au/images/About-PDF/Fuel-Security-Report-Pt2.pdf

[18] ***BP's refinery closure makes Australia vulnerable,*** The Courier Mail, 2 April 2014 http://www.couriermail.com.au/business/bps-refinery-closure-makes-australia-vulnerable/story-fnihsps3-1226872854947?nk=4ff5c19e4f76a6df86b5a8404072b37a

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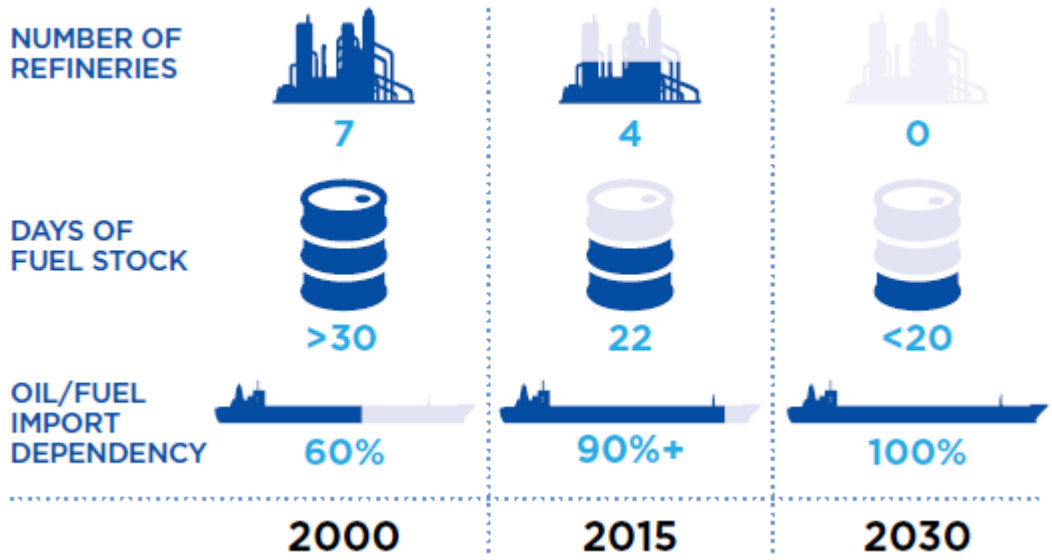
Projected Australian fuel production and stockholding decline



Source: Australia's Liquid Fuel Security, Part 2, A report for NRMA Motoring & Services, Prepared by John Blackburn AO, February 2014, p7, http://www.mynrma.com.au/images/About-PDF/Fuel-Security-Report-Pt2.pdf

With no refineries we will not be able to refine any Australian sourced oil and will be completely dependent on imports. There is currently no government policy to avoid this outcome.

Australia is consistently the only one of the 28 member countries that fails to meet its International Energy Agency (IEA) 90-day net oil import stockholding level. In February 2013, *Australia's Liquid Fuel Security* noted that Australia had only 71 days of net import oil holdings as at April 2012.[19] This equated to an estimated 23 days of real oil and liquid fuel stocks in-country. By May 2013, Australia's reported levels of net import liquid fuel stockholdings had declined a further 11 days to 60 days: a 16% reduction in seven months[20]

Note also in contrast to Australia, New Zealand has 103 days of fuel reserved. .

[19] Australia's Liquid Fuel Security, February 2013, p9, www.mynrma.com.au/about/fuel-security.htm

[20] www.iea.org/netimports.asp?y=2013&m=05

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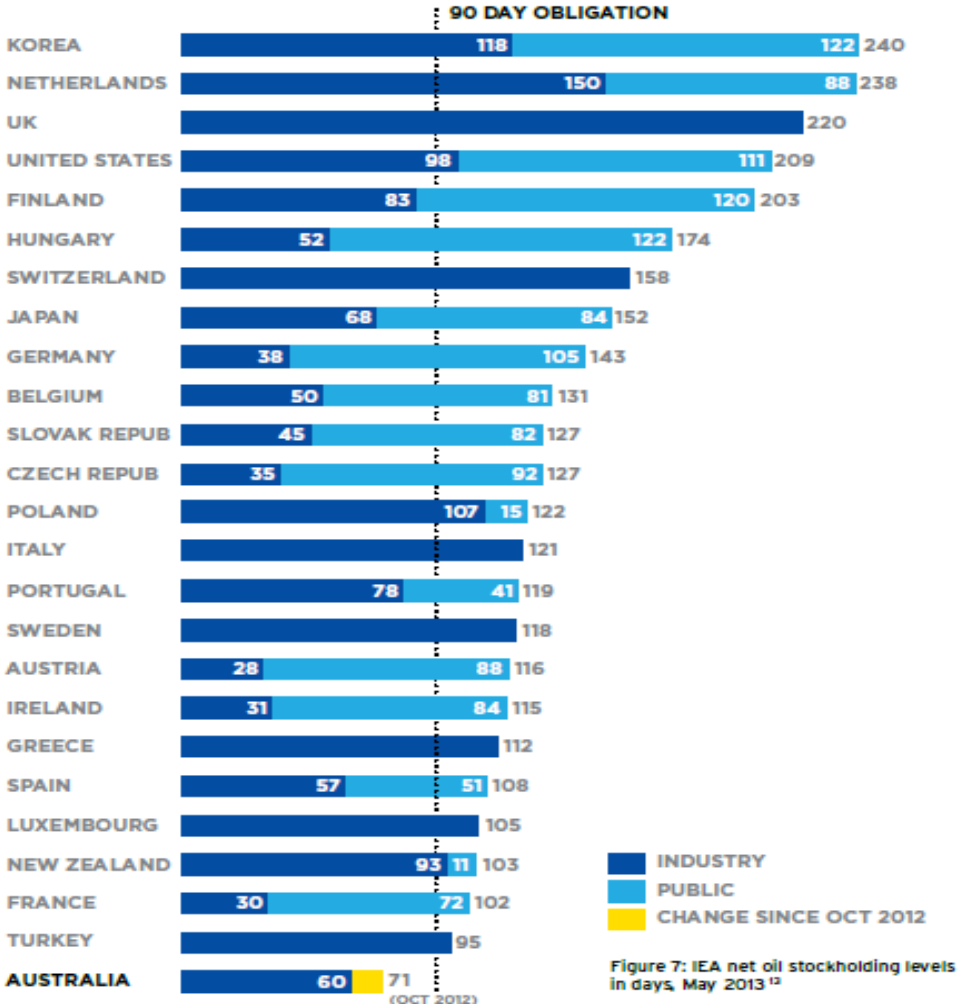

Figure 7: IEA net oil stockholding levels in days, May 2013 [12]

Source: Australia's Liquid Fuel Security, February 2013, p9 amended by May 13 IEA data www.mynrma.com.au/about/fuel-security.htm

The NRMA report describes how developing a cost-effective plan to reverse Australia's growing liquid fuel security problem is not only possible but urgently required if Australia is not to join Luxembourg as the only OECD member without a domestic refining capability by 2030.

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The AWU agrees with this assessment and would broadly support the type of policy recommendations contained in the NRMA report.[21]

But what is clear is that due to past policy failure, more than 90 per cent of this country's oil is now imported. This fact was highlighted in news that our overseas oil supplies could become targets for terrorists who have labeled the import supply chain the "Achilles Heel of western economies". [22]

Gas Reservation can help our fuel security

The AWU along with members of the Reserve Our Gas coalition is campaigning against the projected explosion in Australian gas prices due to the ramping up of LNG exports. Australian gas prices are expected to triple over coming years.[23]

"Every other gas exporting nation has measures in place to stop local consumers and local industry from perversely getting penalised for exporting gas. Israel, Indonesia, Egypt, and many others use a gas reservation policy. The USA and Canada have strict 'national interest' tests applied to every new gas extraction operation. Norway, Russia, Malaysia and others have their gas extracted by a state-owned company to ensure control. Australia is the odd one out by leaving consumers and industry completely exposed to the global price for gas."[24]

Although schemes introduced by governments across the world vary in method and approach, the goal is common: to ensure the national advantage of relatively affordable gas is not wiped out through export links to the global price.[25]

The Western Australian example:

[21] See for example a range of policy measures outlined in the NRMA report, pp15-18, http://www.mynrma.com.au/images/About-PDF/Fuel-Security-Report-Pt2.pdf

Section 2.01 [22] Victorian Weekly Update, Thursday 6 November, 2014, Weekly Update No. 39/2014, From AWU Victorian Secretary Ben Davis, **http://vic.awu.net.au/victorian-weekly-update**

[23] http://www.reserveourgas.com.au/reserve_our_gas_unapologetic_for_pointing_out_australia_s_unique_free_for_all_on_gas_exports

[24] AWU National Secretary, Scott McDine, http://www.reserveourgas.com.au/reserve_our_gas_unapologetic_for_pointing_out_australia_s_unique_free_for_all_on_gas_exports

[25] http://www.reserveourgas.com.au/gas_reservation_how_it_works_elsewhere

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Western Australia is the only state in Australia with a gas reservation policy. Under Western Australia law, 15 per cent of all the gas produced in that state has to stay in the state. Western Australia's Liberal Premier Colin Barnett has indicated he wants the WA example to be spread nationally. Western Australia's gas reservation scheme has been able to guarantee domestic supply at attractive prices, whilst still allowing investment in the LNG industry and a healthy level of exports.[26]

Currently, the NSW Opposition is committed to implementing a gas reservation policy in NSW.[27]

Gas to fuel conversion

As noted by the NRMA report gas reservation can also assist in making gas to fuel conversion more rather than less economic because it assists in holding domestic gas (input) prices down.

Without market intervention such as domestic gas supply reservation, gas-sourced liquid fuels may not be a financially viable alternative fuels source for Australia. The Jamison report estimated that 10% of our liquid fuel needs could have been met by gas-to-liquid sourced liquid fuels by 2030 had past Governments taken action in 2011.[28]

Coal seam gas

Gas exporters and politicians have argued recently that Australia could fight against rising gas prices by ramping up the production of coal seam gas. However, no matter how much coal seam gas is identified and exploited in Australia, it could not significantly influence the global price. The problem of rising gas prices due to linkages with export markets would remain.

Australia is currently producing much more gas from conventional, non-CSG sources than it could possibly use domestically.

[26] As above
[27] http://www.dailytelegraph.com.au/news/nsw/john-robertsons-new-policy-steps-on-the-gas/story-fni0cx12-1227107716039?nk=4ff5c19e4f76a6df86b5a8404072b37a

[28] www.mynrma.com.au/images/About-PDF/Jamison-Group-Fuelling-Future-Passenger-Vehicle-Use-in-Australia- February2010.pdf, p51.

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A gas reservation policy would ensure a portion of that gas stayed in Australia for domestic use, meaning there would be no reliance on coal seam gas.

New coal seam gas projects would still be possible, and potentially attractive, but Australia would always have enough gas from conventional sources.

Source: http://www.reserveourgas.com.au/where_does_coal_seam_gas_fit_in

The AWU notes the progress made in other jurisdictions in new uses for liquid gas including in rail freight in addition to heavy road and passenger vehicles in the US. See below.

However, rather than promote these opportunities, local policy makers prefer to simply take advantage of the over-supply of refining capacity offshore induced by subsidies offered by foreign governments to their domestic refiners rather than act to try and have these unfair subsidies reduced or abolished. This is second best advice being given to Australia's legislators.

Local refiners' interests are not maximised if foreign subsidies and cheap imports shift local production (and jobs and future investment) offshore. A lack of reciprocity in the support for local refining in Australia puts local refiners at an immediate competitive disadvantage. Ultimately, this situation will put local consumers and users at a disadvantage. Reliance on offshore supply increases the scope for high average price levels resulting from a lower valued dollar, additional costs to transport the fuel and / or disruptions in supply.

If Australia reaches a tipping point where local refining is insufficient to ensure that import parity prices are being reflected in local fuel prices, inclusive of transport costs, local consumers could be forced to rely on imported fuel sold at import parity but with transport costs added.

Darwin has the highest average petrol prices in Australia. Darwin is also the closest capital city to Singapore. Proximity to regional refineries therefore is no guarantee of competitive local prices.[29]

[29] See for example, daily price data for the capital cities compiled at http://motormouth.com.au/

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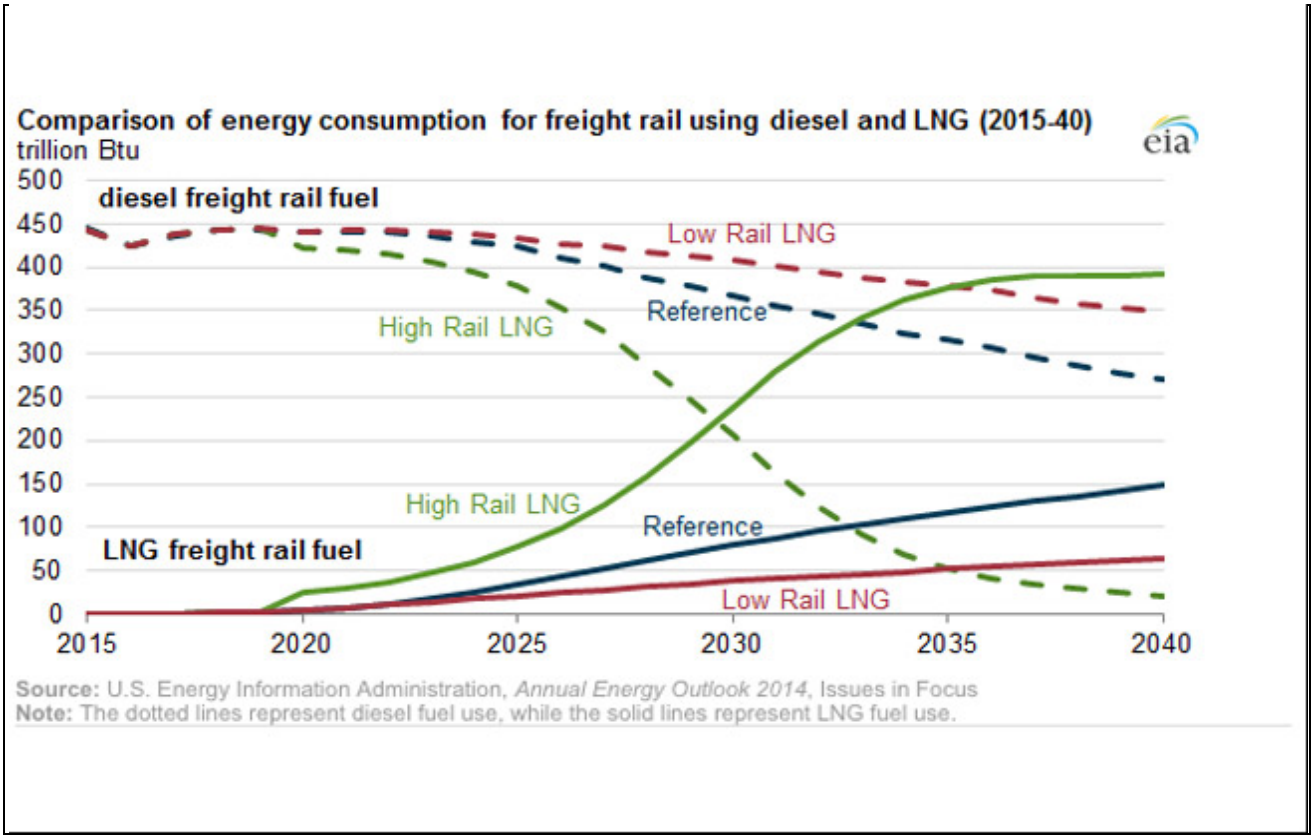
The Parliamentary Inquiry should also consider the benefits of reducing the size of Australia's oil trade deficit on the trade balance and current account. This is significant given the scale of the current (and future) oil and petroleum products trade deficit and its increasing contribution to the overall trade deficit.

The power of fuel switching – the case of the US rail freight sector

In the United States, a rapid expansion in domestic LNG production is leading to forecasts of a steady - to rapid - switching away from diesel to LNG to fuel freight rail. Diesel locomotives may be replaced by those that run on LNG. Projections by the US Energy Information Administration (EIA) note that natural gas prices have dropped to historic lows amid a domestic production boom in the Midwest United States. This is fueling expectations that LNG will make up at least 35 percent - and perhaps as much as 95 percent – of freight locomotives' energy consumption by 2040.[30]



[30] http://www.usnews.com/news/blogs/data-mine/2014/04/15/natural-gas-rolls-into-world-of-freight-rail

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Note: The High Rail LNG graph shows the potential growth in consumption of liquefied natural gas if the conversion to LNG happens quickly, similar to what occurred during the switch from steam to diesel engines in the 1940s and 1950s. The Low Rail LNG graph, by comparison, illustrates the possible growth if it more closely follows the comparatively slower conversion from direct current to alternating current motors. The Reference Line is based on the annual average turnover of locomotives during the past decade.

However, in the absence of lower prices for LNG in the US, switching between fuel types such as described above would not occur. Australia, like the US has enormous stores of natural gas for conversion to LNG. It is therefore hard to understand (on any objective assessment) that we would easily forfeit a similar price advantage that the US is currently enjoying between LNG and diesel in order to power our freight and passenger transportation and also as a feed stock for our manufacturing industries. Nevertheless, we do so….

As noted by AWU National Secretary, Scott Mc Dine:

"Australia is the only nation on earth allowing multinational gas companies to extract our gas - without restriction - and sell it back to us at the high global price,"[31]

Of course, in the US, the export of LNG is regulated by the *Natural Gas Act of 1938*, where exports must be found to be in the 'public interest' by the Department of Energy (DOE). The existence of the public interest test is deliberately loose and allows the US to maintain control over its export volumes and ensure that any increase in LNG demand does not outstrip available supply and create shortages in domestic markets. **Canada** has similar 'public interest' laws around the export of its gas.[32]

Unconventional oil

[31] Reserve Our Gas unapologetic for pointing out Australia's unique free-for-all on gas exports http://www.reserveourgas.com.au/reserve_our_gas_unapologetic_for_pointing_out_australia_s_unique_free_for_all_on_gas_exports

[32] http://www.reserveourgas.com.au/gas_reservation_how_it_works_elsewhere

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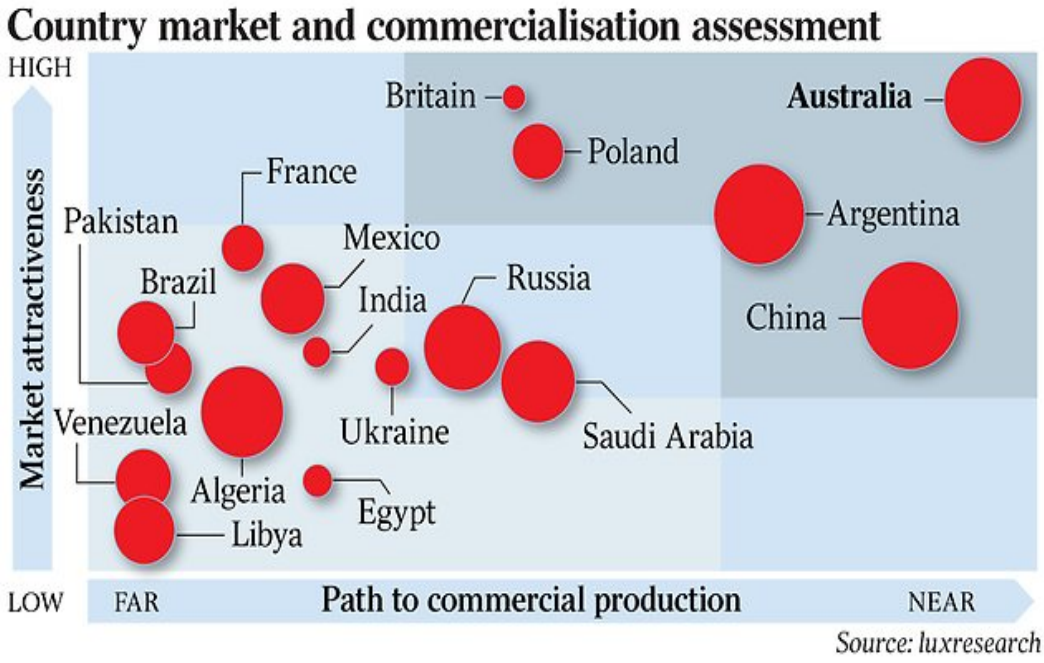
Australia is being touted as the place most able to replicate the shale gas and oil success of the US, overtaking China, where exploration is struggling to gain traction, and other nations that pose too much regulatory risk.[33]

Boston consultant Lux Research has issued a study declaring Australia "the next big energy market" for shale ahead of China, which was once seen as having similar potential to the US.

The study states that Australia beats other nations with potential shale and other unconventional resources because of know-how and government stability. The use of horizontal oil and gas drilling and hydraulic fracturing (or fracking, where pressure is used to crack the shale to release gas) has provided access to previously unattainable oil and gas, turning a gas shortage in the US into a glut and taking the globe's biggest oil user towards self-sufficiency.



Article III. [33] Australia tipped to overtake China in shale boom, THE AUSTRALIAN, JANUARY 20, 2014, http://www.theaustralian.com.au/business/mining-energy/australia-tipped-to-overtake-china-in-shale-boom/story-e6frg9df-1226805382078
Article IV.

ARTICLE V.

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Like the US, Australia has the potential to develop its unconventional oil and gas reserves (SA has major provable deposits in the Cooper Basin) to the point where local demand is more than met. However, this is unlikely to occur in a policy vacuum which looks to cheap, subsidised imports as an alternative to the renaissance of a domestic fuel sector in Australia exploiting unconventional oil reserves. Success will require a roadmap, and a combination of knowledge, time and stakeholder engagement.[34]

Roundtable for Oil and Gas Projects in South Australia (previously the Roundtable for Unconventional Gas Projects in South Australia)

To this end, the SA Government has produced a Roadmap[35] for unconventional gas and a consultative framework which is aiming to support industry efforts to commercialise major reserves of shale gas in the Cooper Basin.[36] Shale gas is unlike coal seam gas in that it is rich in ethane, LPG and condensate. Major players in SA include Beach Energy, Santos, Senex Energy and Drillsearch. A copy of the latest report card to the Roundtable in October 2014 is attached to the link below.[37]

[34] Refer to the CSIRO's Unconventional gas fast facts file:///C:/Documents%20and%20Settings/user/My%20Documents/Downloads/Unconventional%20gas%20fast%20facts.pdf

[35] http://www.pir.sa.gov.au/__data/assets/pdf_file/0008/179621/Roadmap_Unconventional_Gas_Projects_SA_12-12-12_web.pdf

[36] Unconventional Oil and Gas Opportunities in South Australia (2012) http://www.petroleum.dmitre.sa.gov.au/__data/assets/pdf_file/0005/169223/Australia_House_Mar_5_2012_AJH.pdf

[37] Progress towards implementing recommendations posed in the Roadmap for Unconventional Gas – as reported to the Roundtable for Oil and Gas Projects (Oct 2014) http://www.pir.sa.gov.au/__data/assets/pdf_file/0010/226963/Report_Card_-_Progress_Towards_Implementing_Roadmap_Recommendations_21_October_2014.pdf

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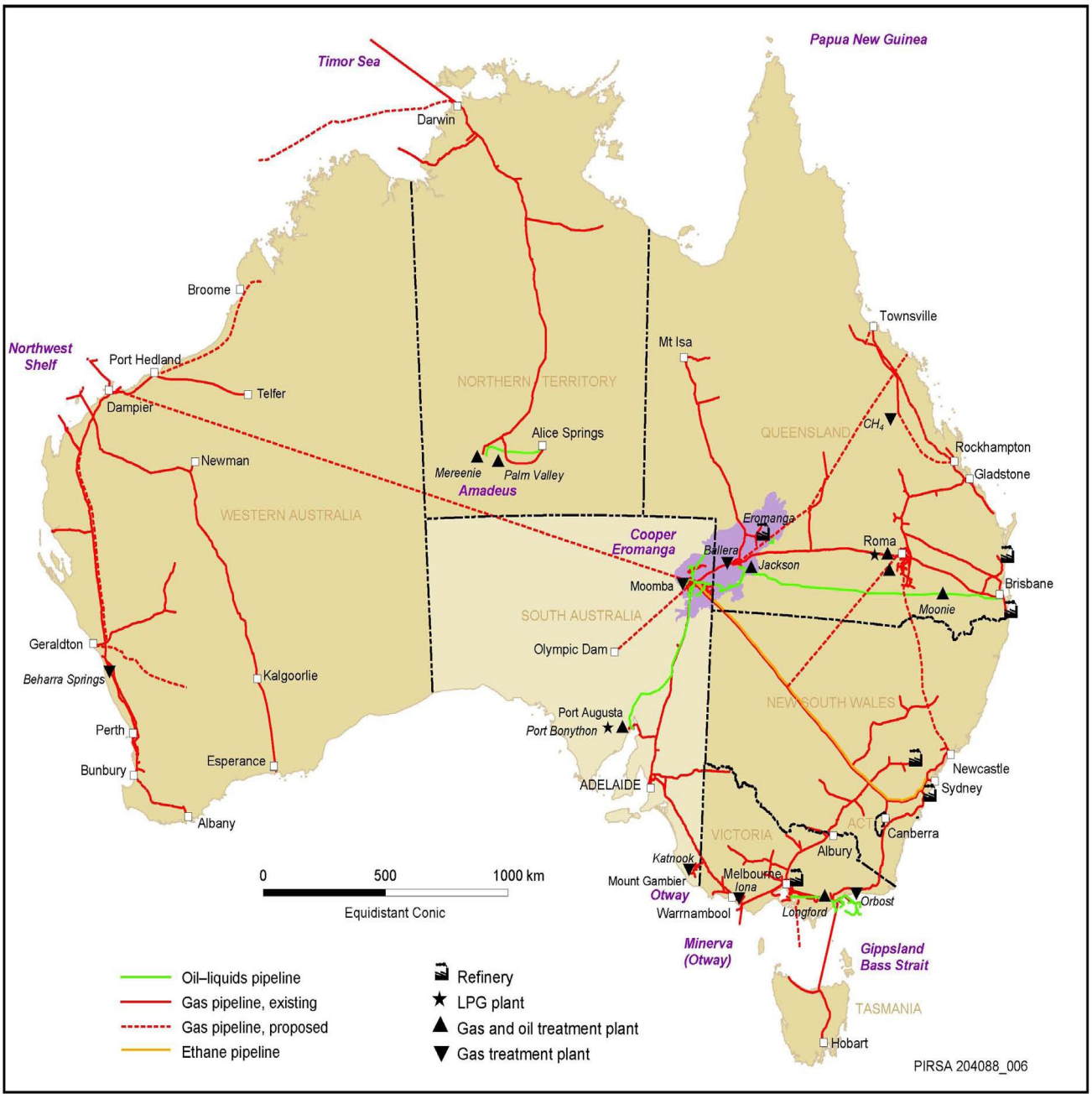

Source: http://www.pir.sa.gov.au/__data/assets/pdf_file/0006/168225/shale_gas_plays.pdf

Both conventional and unconventional oil and gas reserves are also located in the Otway Basin.

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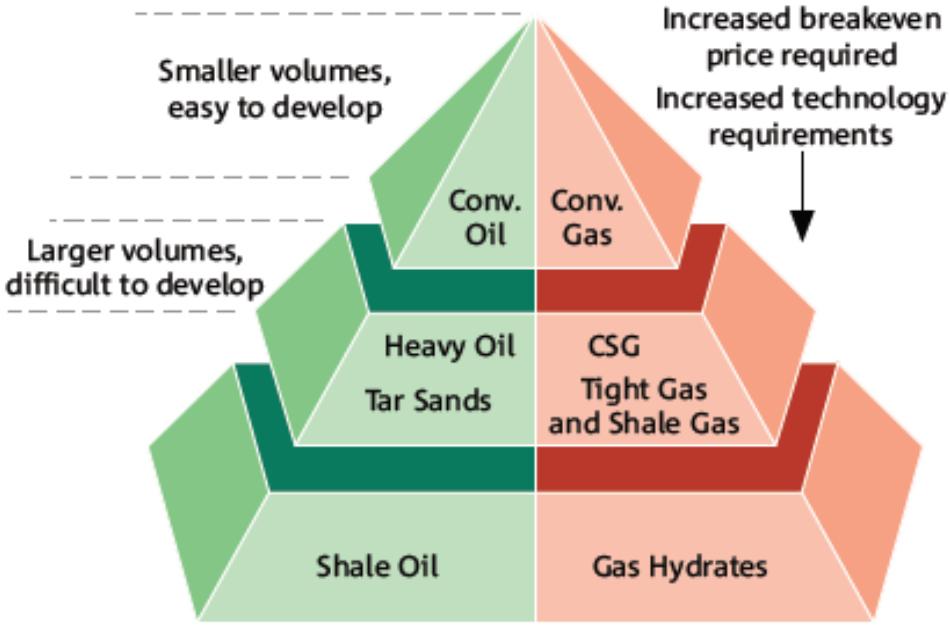
The pyramid below indicates the scale of the potential for unconventional energy sources in Australia.



Source: Geoscience Australia, adapted from McCabe 1998 and Branan 2008

Resources Pyramid

Note: Refer to CSIRO Unconventional gas fast facts

Different approaches to local refining adjustment

Japan and Australia are increasingly importing more oil products as a result of a series of refinery closures in their respective countries.

On the surface, the consequences of the drop in refining capacity in the two countries look similar in the short term. But fundamentally, the two nations are taking different routes for energy security.

Japan, on the one hand, is essentially rebalancing its surplus refining capacity against domestic oil demand amid a series of regulatory requirements. The Australian government, by contrast, appears to be relaxed about the energy security

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implications of the country becoming dependent on imports for more than 50% of its transport fuel demand.[38]

Defending refining in Australia - AWU's 10-point plan:

The AWU offers the Committee a revised 10 point plan to assist the local refining sector:

1. Apply part of the additional revenue collected from the recent re-introduction of indexation of the fuel excise levy to gradually increase Australia's fuel reserves;

2. Apply a portion of the revenue collected from the fuel excise levy to fund accelerated depreciation of existing refineries to invest and upgrade into new technologies and / or convert current refining operations to cater for the changing fuel mix and to refine new sources of domestic crude and gas;

3. Explore opportunities to substitute gas for (diesel) fuel where appropriate, for example in rail and heavy road freight and passenger haulage;

4. Promote further crude oil exploration in particular for unconventional oil resources and offer incentives for the involvement of local industry as "foundation investors" aimed at preserving a portion of crude for local consumption as a fuel reservation policy (which could be hypothecated to an expansion of fuel reserves);

5. Fast-track development of South Australian (and other) unconventional oil reserves via approvals and commit to necessary supporting infrastructure including pipeline connections, rail track and railheads to get crude to refineries;

[38] The Barrel, http://blogs.platts.com/2014/09/04/australia-japan-oil-refineries/

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6. Apply tax incentives aimed at encouraging local refiners where necessary, to "spin off" (rather than shut) refineries in the future and to float publically on the stock exchange at attractive prices for local and international investors and including the local manufacturing sector;

7. Provide incentives for closer upstream integration (between refiners and major users such as petrochemicals with oil producers) via tax incentives and depreciation allowances;

8. Review opportunities for greater liquid refining of gaseous fuels and establish a gas reservation policy to assist the uptake of gas to liquid conversions. Gas reservation will also militate against a sole focus on processing and shipping gas for export rather than opportunities for domestic use (such as by manufacturing industries) at a time when local gas prices are rising dramatically. This will encourage greater gas to liquid conversion by keeping local gas prices lower;

9. Develop a strategic plan focused on fuel security including the remaining refineries in Australia and which looks over the horizon to future possible risks to fuel security. This could also identify market and regulatory pressures which may be addressed in partnership between companies', workforces and governments'.

10. Work constructively in international fora aimed at meeting our obligations regarding minimum fuel reserve levels among other goals. Justify greater support for our own refining sector in the absence of reductions in subsidization of refining offshore.

Conclusion

The AWU will continue to champion the benefits of a robust local oil refining sector. The decline of local refining capabilities to less than 10 per cent of local demand is a national disgrace which would never be tolerated by any other energy-rich nation with the quality of energy resources which Australia by fate is lucky enough to possess.

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The benefits of local refining are becoming increasingly evident in the wake of international security concerns which are targeting fuel shipments as legitimate targets because of the essential nature of these inputs to the living standards of advanced economies.

In these circumstances past assumptions of a seamless response to any interruptions in local fuel supply characterized by plentiful available supplies of imported product may be optimistic at best. At worst, allowing a degradation of local refining capability has fostered a reckless policy of dependency which comprises Australia's future prosperity and living standards which are dependent on reliable and secure energy supplies.

Once the assumptions associated with supply interruptions are swept away - for an economy dependent upon reliable and secure energy supplies - it becomes self-evident that Australia would be exposed to any prolonged period of supply interruption (or even the threat there of).

In these circumstances, it is imperative that both domestic oil and gas inventories are increased in line with our international commitments and supply opportunities in order to provide both a more realistic supply buffer and to encourage the update of gas to fuel conversion.

The AWU has presented a 10 point plan to help turnaround the cycle of fuel dependency which Australian governments' have presided over for the last decade and more.

Australia is blessed with a range of unconventional liquid fuel resources which provide the key to moving towards fuel self-sufficiency. Bu as the experience in the US demonstrates this requires a greater policy focus on harnessing opportunities locally rather than persisting with the old ways of simply underwriting offshore value added by extracting and shipping energy which is converted offshore and imported back into Australia as refined products.

The AWU stands ready to assist the committee in this vital work. We thank the committee for the opportunity to make this submission and look forward to the committee's future findings and recommendations.

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