Australian Institute of Petroleum

AIP Submission:
Interim Report – Liquid Fuel Security Review

Submission to:

The Department of the Environment & Energy

May 2019

AIP Submission:
Interim Report – Liquid Fuel Security Review

Table of Contents

A. EXECUTIVE SUMMARY

- Australian liquid fuels supply is highly secure, competitively priced and reliable because of:
    - established and effective integration into the rapidly growing Asian fuels market
    - a significant diversity of supply sources for crude oil and petroleum products
    - a flexible, resilient and reliable supply chain, including secure shipping routes and a significant volume of stock on the water owned by Australian companies
    - a domestic refining capability providing multiple supply options and the ability to convert domestic and imported crude oil into useable products
    - significant industry investment in import, storage and distribution infrastructure focusing on strengthening and adapting the fuel supply chain to meet growth and changes in fuel demand
    - a strong record of efficient and reliable supply and supply chain management by industry, and
    - robust risk and emergency management by industry and government.

- The Interim Report confirms all these market features and outcomes, but the Report's description and understanding of the operation of some aspects of Australia's fuels market is flawed (particularly in relation to the jet fuel market, industry stockholding management, and in the relevancy of comparisons of the fuels industry to the electricity sector arrangements – see Chapters G and H more detail).

- Australia's liquid fuel market is different to other domestic energy sectors in that the products are readily and efficiently transported and stored and it is part of globally and regionally integrated supply chains/markets which are mature, flexible and well-functioning and which deliver internationally competitive prices and reliable supply to local consumers and business.

- Fundamentally, in the fuels market there is a very strong and direct alignment between the commercial drivers of industry participants and the ultimate market and government objective – reliable supply. That is, if major fuel suppliers don't deliver reliable and secure supply, they are penalised by their customers (via direct contractual penalties or via loss of their business) so there is no incentive for the market or industry to not meet the objectives of government.

- Thus, as the industry has developed and operates an efficient, reliable and competitive liquid fuels market there is much less of a role for government. This is in stark contrast to the very different by nature and heavily regulated electricity sector which has had a poor reliability and affordability performance by comparison.

- Australia's future fuel security and transport energy needs will be best met through <u>market measures</u>:
    - open crude oil and fuels markets
    - competitive, market determined prices
    - clear investment and market signals
    - clear, bipartisan and long term energy and transport sector policies
    - flexible and resilient supply chains and efficient supply management by industry
    - diversity of crude oil and liquid fuel sources
    - competitive and viable domestic refineries
    - policy and competitive neutrality between transport fuels
    - improved vehicle technologies, and
    - reliable, clean and high-quality fuels acceptable to consumers.

- As these conditions generally exist now for liquid transport fuels in Australia - as largely confirmed in the Interim Report and in a range of other comprehensive Government, Parliamentary and independent reviews over many years - the imperative for governments is to maintain or further strengthen these market features, including to facilitate the significant ongoing infrastructure investment by industry required to meet Australia's growing fuel demand.

- **In this context, AIP considers that there are seven important roles for government in maintaining liquid fuel supply security:**
    - **maintain a clear and stable market-based policy framework and investment environment, and a level playing field for market operators and transport fuels**
    - **ensure that future regulatory decisions do not impose burdens on industry or undermine the competitiveness of domestic liquid fuel refining and supply**
    - **carefully review and streamline the existing complex and overlapping array of environmental and other regulatory measures to ensure that current measures are soundly based, cost effective and harmonised, including across jurisdictions**
    - **maintain multilateral efforts to ensure that world markets remain open and competitive**
    - **ensure that global energy governance is effective, comprehensive, and relevant to Australia**
    - **ensure that efficient, effective and market reflective response mechanisms are in place to mitigate the impact of supply disruptions and global oil supply emergencies**
    - **maintain appropriate oversight of this competitive market and collect robust market data in an efficient and cost-effective way for industry, consumer and government purposes.**

- In addition to these Government roles, and while current industry response strategies are highly effective, these can be further enhanced by a more widespread adoption of active supply management and business continuity planning by major fuel users supporting the economy.

- The Interim Report touches only on some of these key Government roles - including energy governance (largely as it relates to the IEA), the national emergency response arrangements and legislation, and observations and suggestions in relation to the oversight of the domestic fuels market.

- In relation to strengthening **global energy governance**, AIP strongly supports ongoing Australian Government negotiations with the IEA to modernise outdated IEA membership rules and its limited global membership because of these. As noted by the Minister, the current IEA rules (which have not changed since the 1970s) are not market reflective and disproportionately penalise Australia and the Asian Region, and also do not recognise the full extent of stockholdings held through the Australian fuels supply chain and available in emergencies.

- In relation to **emergency response**, AIP considers that Australia has a robust 'Emergency Response' framework and emergency management plans for liquid fuels which are consistent with Australian market characteristics, utilises established and tested industry commercial practices, and adopts those best practice IEA approaches that will be effective in our specific market circumstances.

- Major changes to Australia's emergency response framework are therefore not required, but the framework should be periodically tested and reviewed to ensure it continues to align with current market realities and commercial practices and deliver operational certainty and effectiveness in the event of an emergency for both industry and government.

- AIP therefore welcomes, and will actively participate in, the upcoming review of the *Liquid Fuels Emergency Act 1984* (LFE Act) foreshadowed in the Interim Report.

- Importantly, the Australian market approach and emergency response arrangements to date has resulted in no material cost to industry, supply reliability, the economy, industry or consumers.

- **Therefore, any future government proposals or roles in the fuels market, including those identified in the Interim Report such as greater 'market oversight', need to be highly sensitive to not imposing additional unjustified costs on a fully functioning and competitive fuels market which is delivering low fuel prices to Australian motorists and businesses by international standards.**

- In relation to **fuels market oversight and industry reporting**, any consideration of additional industry reporting requirements needs to consider the raft of information and data already provided to government agencies (a large part of which is not published), the extent to which this data and information can be shared between government agencies, and the capacity of existing data collections, systems and communication frameworks to meet any market monitoring objectives. AIP and its member companies are supportive of any initiatives to simplify and consolidate reporting requirements to assist this objective.

- The right balance must be struck between providing a sound basis for quality and relevant decision-making whilst minimising the regulatory and administrative burden imposed on industry and government, and also strictly protecting commercial sensitivities and boundaries (given the fuels market is a competitive market) and operating in strict accordance with competition law.

- Given their inherent cost burdens, the benefits of additional reporting requirements also needs to be demonstrated via rigorous cost-benefit analysis to ensure such measures provide real benefits to government, industry and consumers, and encourage timely investment and supply management decisions by industry.

    - Any additional requirements should also ensure that they are applied in a manner that creates a level playing field for all market participants.

    - Any additional requirements also need to be based on an accurate understanding of market operation – unlike those assessments and issues raised in Chapters H & G of this submission.

- In this context, AIP recommends consultation with industry on the ongoing review workstreams for the Final Report and the release of all the supplementary analysis and consultant reports underpinning the Interim Report for detailed industry and public review and feedback, in order to provide community and stakeholder confidence in the Final Report's findings and directions.

- Overall, AIP and its member companies consider that current government market oversight and reporting by industry is comprehensive and appropriate, including to respond to emergency situations, and the Mandatory Reporting Regime provides a sound basis for current, and any future, requirements.

- However, AIP does identify scope for improvements in existing frameworks, and to improve industry-government communications (rather than data collections) to provide early warning signals of any emerging supply issues. – see Chapter G.

- **Overall, AIP considers that the key drivers to delivering supply security, whilst best supporting the industry's future investment task and the development of robust, efficient and commercial markets for all transport fuels (current and emerging) are:**
    - **policy stability and a market based policy framework**
    - **a level playing field for competing transport fuels and market participants**
    - **the minimum level of efficient and well-targeted government regulation.**

- AIP and its member companies look forward to consultation with our industry on this review process, particularly the ongoing workstreams identified in the Interim Report, including the supply chain mapping model, the review of the LFE Act, and risk assessment work and analysis.

B. BACKGROUND

(1) About AIP

The Australian Institute of Petroleum (AIP) was established in 1976 as a non-profit making industry association. AIP's mission is to promote and assist in the development of a sustainable, internationally competitive petroleum products industry, operating efficiently, economically and safely, and in harmony with the environment and community standards. AIP provides a wide range of factual information and industry data to assist policy makers, analysts and the community in understanding the key market and industry factors influencing Australia's downstream petroleum sector. AIP is represented on key advisory bodies including the ATO Petroleum Stakeholder Group (PSG), the Fuel Standards Consultative Committee (FSCC), the National Oil Supplies Emergency Committee (NOSEC) and National Plan Strategic Industry Advisory Forum (NPSIAF) and AIP sponsors or manages important industry environmental and health programs. The Australian Marine Oil Spill Centre (AMOSC) is a wholly owned AIP subsidiary.

AIP presents this Submission to the Department on behalf of AIP's core member companies:

- BP Australia Pty Ltd
- Caltex Australia Limited
- Mobil Oil Australia Pty Ltd
- Viva Energy Australia Pty Ltd.

(2) About AIP Member Companies

AIP member companies operate across all or some of the liquid fuels supply chain including crude and petroleum product imports, refinery operations, fuel storage, terminal and distribution networks, marketing and retail. Underpinning this supply chain is considerable industry investment in supply infrastructure, and a requirement for significant ongoing investment in maintaining existing capacity. Over the last decade, AIP member companies have invested over $10 billion to maintain the reliability and efficiency of fuel supply meeting Australian quality standards.

Moreover, AIP member companies deliver the majority of bulk fuel supply to the Australian market.

- In relation to conventional petroleum fuels, AIP member companies operate all major petroleum refineries in Australia and supply around 90 percent of the transport fuel market with bulk petroleum fuels.
- In relation to gaseous fuels, AIP member companies are the major suppliers of bulk LPG to the domestic market, representing around two thirds of the market.
- In relation to biofuels, AIP member companies are the largest suppliers of ethanol and biodiesel blend fuels to the Australian market.

The Australian petroleum industry is also a significant contributor to the domestic economy providing direct and indirect economic benefits from its own activities and underpins the competitiveness of key export industries like mining, agriculture and manufacturing. In addition, as a technologically advanced industry, the refining industry employs and trains many highly skilled technical staff and also attracts international expertise into the Australian workforce.

Given their significant role and investment, AIP member companies have a very strong interest in consultations relating to government assessments and policy proposals impacting on the downstream petroleum industry, including reviews and policy development relating to supply security and reliability.

C. INTRODUCTION

AIP welcomes the opportunity to provide an opening submission to the Interim Report on the Liquid Fuel Security Review, on behalf of its four core member companies.

AIP supports ongoing comprehensive reviews to ensure existing market settings and emergency management frameworks remain robust and reflect Australia's particular market circumstances. The National Energy Security Assessment (NESA) is a long-standing government process to evaluate the supply security of the overall energy sector. Industry has made major contributions to past assessments, and we look forward to participating in the 2019 review to which the Interim Report is a key input.

This submission seeks to provide initial responses to the key consultation questions identified by the Department, namely:

(1) What is our overall assessment of supply security and reliability for liquid fuels
(2) What are the key risks to fuel security for your organisations and how are risks managed?
(3) What is the role for the Commonwealth Government in managing fuel security?
(4) Do you think the Interim Report describes the operation of Australia's liquid fuel market well?

AIP responses to these four questions follow in turn over the following chapters.

As requested, a focus for this Submission is responding to Question 4 and addressing important factual flaws or interpretive errors made in the Interim Report, so the final report can more accurately describe the operation of the market. These are addressed throughout this AIP Submission and also in Chapter G. 'Initial responses' are provided here, because of the complex issues and market dimensions raised in the Interim Report, which require extensive consultation with the petroleum industry, particularly companies and organisations with a direct market role in petroleum refining and supply. Such industry consultation has not occurred to date. In light of this, and to provide community and stakeholder confidence in the Report's findings and directions, we also recommend that the supplementary analysis and consultant reports underpinning the Interim Report be released for public and industry review and feedback.

AIP agrees with the stated focus of the Liquid Fuels Security Review to take *"a close look at our liquid fuel security to ensure that we can deliver affordable and reliable energy for all Australians"*. This was the explicit focus of previous NESAs which industry has supported and actively participated in. AIP and its member companies, and previous NESA assessments and a range of government and parliamentary reviews, have all concluded that Australia enjoys a high level of security for transport fuels and current market settings and emergency response arrangements remain robust and appropriate for the future. As noted in Chapter D, we do not consider that changes to the current market environment domestically and globally, nor future identified market trends, have changed this assessment for supply security in Australia.

Overall, AIP and its member companies continue to support Australia's very longstanding market-based approach to the liquid fuels market, with balanced regulation and minimal market intervention, which the Interim Report acknowledges is based on the *"pursuit of an efficient market that delivers fuel to Australians as cheaply as possible"*. Our support for the current framework is underpinned by decades of reliable fuel supply to the Australian market with no market trends or specific credible threats to that performance in the future being demonstrated in the Interim Report to justify a substantive change in approach or policy by the Government.

Importantly, the Australian market approach and emergency response arrangements to date have resulted in no material cost to supply reliability, the economy, industry or consumers. Any future government proposals, including those identified in the Interim Report like greater 'market oversight', need to be highly sensitive to not imposing additional unjustified burdens and costs on a fully functioning and competitive fuels market which is delivering low fuel prices to Australian motorists and businesses by global standards.

D. AIP'S OVERALL ASSESSMENT OF SUPPLY SECURITY & RELIABILITY FOR LIQUID FUELS

Australia does not have a liquid fuels reliability or security problem.

With increasing fuel import requirements since 2003, the domestic industry has taken the opportunity to fully integrate into the deep and growing Asian market to meet growth in Australian fuel demand and has established multiple and reliable sources of supply from the region. Importantly, additional diversity and flexibility in the Australian supply chain is expected over time with the emergence and proximity to Australia of major new petroleum export centres (e.g. India) and with the United States now becoming a major crude and petroleum exporter to the world, including to Australia.

Australia's direct involvement in global trade in crude oil and petroleum products provides security through the diversity of source countries and multiple import terminals around the Australian coastline. The Interim Report itself notes that the sheer size and maturity of the global market provides protection and reliability.

Industry and market confidence is well founded and supported by comprehensive government and independent reviews of liquid fuel supply security over many years. Key reviews include the National Energy Security Assessments (NESAs) and Liquid Fuel Vulnerability Assessments since 2008, Australian Government Energy White Papers in 2004 and 2012, and the 2013 Report of the Parliamentary Inquiry into Australia's Oil Refining Industry. AIP notes that none of these comprehensive reviews and reports were referenced in this Interim Report, nor were any major industry publications and submissions on policy matters related to supply reliability and security.

Previous comprehensive reviews have all confirmed that <u>Australian liquid fuels supply is highly secure, competitively priced and reliable</u> because of:

- a flexible, resilient and reliable supply chain with:
    - a diversity of supply sources for crude oil and petroleum products, including domestic and imported sources
        - In addition to domestic crude supply, crude oils required to meet the product demand mix in Australian refineries are imported from 40 countries (page 21 of Report)
        - Finished petroleum products are imported from 66 countries, and this diversity is growing with increasing imports from India and the US.
        - This means any supply disruption in one market, can be readily substituted with alternative supply from existing sources of reliable supply to Australia, from emerging sources of supply actively looking to supply our market, or from global spot markets.
    - secure shipping routes and a massive volume of stock on the water owned by local companies
    - a domestic refining capability providing multiple supply options and the ability to convert domestic and imported crude oil into useable products
    - actual and planned investment in import, storage and distribution infrastructure which is able to meet growth in fuel demand as well as specific products such as jet and diesel
    - efficient domestic distribution using a variety of transport modes and routes
    - an extensive, safe and reliable network of service stations
- established and effective integration of this supply chain into the global crude oil and petroleum product markets, including the rapidly growing Asian fuels market
- domestic fuel pricing that relates directly to global market prices (import parity pricing)
- expert and efficient management of the supply chain by industry, demonstrated by a strong record of reliable supply and effective management of any issues
- ongoing, substantial investment in new and expanded petroleum storage and handling facilities and in maintaining ongoing refinery reliability
- robust risk and emergency management frameworks at industry and government levels.

The interim Report acknowledges most of these market strengths and dimensions which underpin supply reliability and security for transport fuels domestically. Indeed, the Interim Report also concludes that some of these market features have strengthened in recent years with increased diversity in supply sources and with significant industry investment in increased storage capacity, and the industry shares this assessment. For example, according to the Interim Report:

> *"In 2017–18 Australia sourced crude oil from 40 countries and refined product from 66 countries. This has increased from the year 2000, when we imported crude from 23 countries and refined product from 50 countries".*
>
> *"Early findings show that diesel storage has increased by 44 per cent, jet fuel by 54 per cent and petrol by 28 per cent since 2012 ."*

Australia's access to diverse supply sources and well established international and domestic supply networks suggests that any future disruption risks are unlikely to compromise Australia's access to the physical supply of liquid fuels. This is evidenced by past instances of geopolitical instability, extreme weather events, civil unrest and war that have had a relatively small impact on global crude oil flows and have not had a major impact on the reliability of supplies to Australia. Supply diversity clearly plays a key role in managing and mitigating such risks to Australia.

Fundamentally, the global oil market is highly mature, deep and flexible and has consistently shown its ability to respond quickly to such events and other market imbalances. This is underpinned by the importance of the global oil market to all countries' economic performance and activity, and the very strong incentives to maintain trade flows.

Australia's existing petroleum stocks and infrastructure are more than sufficient to manage operational requirements, including fluctuations in demand requirements and a range of supply disruptions. As noted in Chapter E, the industry has highly effective supply management strategies and capabilities, including to respond to supply disruptions, and there is ongoing industry investment in new and expanded supply infrastructure and storage capacity to meet future growth in fuel demand (all acknowledged in the Interim Report). Competitive business strategies have led to new infrastructure construction in key import and demand centres around Australia to better meet changes in the customer base and the fuel products they require and also in response to refinery closures.

These market and commercial approaches have delivered supply reliability at a competitive cost to consumers and major fuel users, with no widespread or prolonged fuels shortage, even during periods of major global supply disruption and wars over the last 40 years. This conclusion is confirmed in a comprehensive independent report to the Department (see ACIL Allen Report, June 2014) which concluded that the Australian and global oil market worked very well during the various and different oil shocks over the last 40 years, intervention in the market is generally unhelpful, and Australia's susceptibility to economic harm from oil shocks has declined over that time.

Since 2012, Australia's IEA compliance position has fallen below 90 days (of previous year's daily net oil imports – or IEA days), largely due to a decline in Australian crude production and increased fuel demand domestically which has increased our daily net imports, as acknowledged by the Interim Report (page 31).

The actual consumption cover of commercial stocks of fuel (e.g. stocks of petrol, diesel, jet fuel) held in commercial supply chains has not changed over the last decade or so and Australian commercial stock levels are similar to those in other non-IEA members in the G20 and in Asia (our relevant market, rather than Europe).

This is confirmed in the Interim Report - *"Australia's consumption days are lower than some other countries* (mainly OECD Europe, page 31)*, but they have remained relatively consistent since 2001 as commercial storage expanded to meet growing fuel demand".*

Also, Australian fuel companies hold a significant amount of their stock at sea at any given time and these critical, and very large, Australian fuel stocks are not being counted by the IEA towards meeting our obligation. The Australian Petroleum Statistics (APS) confirms longstanding AIP advice that about 21 days on average of Australian supply is typically on the water at any time, with a large proportion of this stock within Australian waters and under ownership by Australian companies. This represents around 30 per cent of all stock owned by AIP member companies, also as confirmed by the official APS data. When these on-water stockholdings, together with domestic and overseas stocks owned by Australian companies are totalled, the APS estimates that that Australia averages around 80 IEA days of net import coverage. This estimate also doesn't capture a range of other material stocks held in Australia, including stocks held in the domestic distribution and retail systems and stocks held by the Defence forces.

As a result, AIP agrees with the Interim Report's assessment that the IEA's *"method used to count the 90-day stockholding does not capture the full picture of domestic liquid fuel security"* in Australia.

For a big island nation, ships-on-water provides the most economical and flexible supply, storage and logistical solution for Australia's market and geographical situation. During a supply disruption, these cargoes can be redirected by the company who has purchased the fuel to other Australian ports to meet supply shortfalls in the short term. The IEA's own *"Best Practice Principles for Strategic Oil Stocks"* indicates that marine distribution can provide maximum flexibility in responding to a variety of crises.

In addition, Australia already has its own robust emergency response framework and plan, better suited to our needs and market, and which imposes no costs on government, business or consumers (see Chapter F). Australia's plan to participate in an 'IEA collective action' has traditionally relied on market responses. This includes price changes in the first instance, and industry mechanisms such as 'bulk allocation' (contractual wholesale rationing) and voluntary demand restraint. There are also strong regulatory powers available under the LFE Act including possible rationing and Ministerial redirection of commercial cargoes. More recently, Australia is also now able to contribute to global collective action via oil tickets held overseas on behalf of the Australian Government.

In this current market and emergency management context, the decline in Australia's 90 day stockholding compliance position raises no heightened risk for the domestic fuels market or for fuel users, particularly as it is the result of declining crude production rather than a decline in the stocks that industry holds through their supply chains to run their business and ensure the fuel demand of their customers is met. This is underlined by the significant volume and frequency of shipping cargoes now available to Australia and owned by Australian companies compared to 10 years ago.

Australia therefore does not have a supply security problem, it has a 'compliance problem' with an international treaty that has an inflexible and outdated calculation methodology. It is the role of Government to respond to treaty obligations in the national interest, and the Government has announced its intention to return to IEA compliance by 2026.

As part of the Government's response to its compliance position, AIP welcomes and is supporting via its role on the IEA's Industry Advisory Board, the Government's announcement that it has *"initiated negotiations with the International Energy Agency (IEA) to modernise the IEA's outdated rules that disproportionately affect Australia due to its geographic remoteness. If these policy changes are accepted, our stock holding days will reach 85 days under the IEA process."* AIP also notes, as acknowledged in the Interim Report, that IEA Member countries are currently considering whether the 90-day net oil stockholding *"remains an appropriate mechanism in the modern global oil market as part of the IEA's modernisation process"*.

AIP and its member companies strongly support the statement in the Interim Report that *"Australia also believes that its path to compliance needs to reflect the realities of the modern oil market and is working with the IEA on a program of modernisation and reform. This includes broadening the IEA membership to countries outside the OECD that are major oil users and ensuring that the oil stockholding mechanism is flexible, robust, cost-effective and responsive to the needs of the modern oil market."*

These initiatives and IEA negotiations are particularly important, as the IEA obligation has not imposed a 'cost' to date on supply reliability/security, industry or consumers (noting there is Budget expenditure on the overseas oil ticket program to contribute to an IEA collective action).

A clear case must therefore be made by Government on the benefits to Australia of IEA membership and a return to compliance, including so consumers and industry can understand the impact on fuel prices of any 'compliance costs' (if not government funded) to meet a treaty obligation. The community also needs to understand that any Australian emergency stocks held for IEA compliance will be made available to the global market under IEA rules and are not for the exclusive use of Australia, including to manage shorter term disruptions.

AIP notes that any future proposals or decisions by Government to hold or mandate emergency stockholdings for Australia over and above normal commercial requirements will involve a significant additional cost, which is not currently justified on supply security grounds. For example, the cost to Australia of a return to 'full compliance' with the IEA treaty (without IEA rule changes) would be very significant and would require an extensive transition timetable, as it effectively means a doubling of Australia's existing commercial stockholdings, with associated costs of inventory holding, operations, maintenance and management.

As a result, we welcome comments and signals by both the Government and Opposition that any future decision by Government to invest in fuel stocks is based on ensuring reliability of supply at a competitive price for Australians, and not impacting on the competitiveness of the petroleum and refining industry.

Instead, AIP and its members companies do support multilateral efforts to ensure that world markets remain open and that effective response mechanisms are in place to mitigate the impact of short term supply disruptions and global oil supply emergencies – see Chapter F.

Overall, AIP considers that the current market and commercial approach remains appropriate, efficient and cost effective in the context of:

- **Australia's open market and operational realities**
- **the high level of liquid fuels security and efficient company commercial stockholdings, and**
- **the robust emergency response framework (including through NOSEC, the National Liquid Fuels Emergency (LFE) Response Plan and the LFE Act 1984).**

No current or emerging market trends, threats or developments identified in the Interim Report change this assessment, as they are already known and actively monitored and planned for by the fuels industry.

E. KEY RISKS TO FUEL SECURITY FOR YOUR ORGANISATIONS AND HOW ARE THEY MANAGED?

AIP has produced a comprehensive publication – *Maintaining Supply Security and Reliability for Liquid Fuels in Australia* – which provides a factual overview of the liquid fuels market and supply chain in Australia. It also details the key factors influencing the secure and reliable supply of liquid fuels to industry, business and consumers and explains why Australia is in a strong position to maintain a high-quality supply performance into the future. See https://aip.com.au/sites/default/files/download-files/2017-09/Maintaining_Supply_Security_and_Reliability_for_Liquid_Fuels_in_Australia_0.pdf

As requested, this Chapter provides a summary of industry's effective and efficient management of fuel supply and supply chains, including managing risks and supply disruptions, and the important role of major fuel users in planning appropriately for any supply disruption – some of which *"are unprepared for disruption and maintain no reserves"* according to the Interim Report, to strengthen the overall fuels supply chain, particularly domestically and in localised areas.

(1) Industry management of liquid fuels supply and disruptions

The Australian Fuels Supply Chain

Australia is well serviced by a resilient and diverse supply chain that delivers a high level of reliability by global standards, despite the significant challenges in distributing fuel across such a large country with a geographically dispersed population.

The Australian supply chain includes crude oil and petroleum product shipments into and around Australia, refinery throughput, bulk fuel storage tanks, extensive terminal, storage and distribution networks, around 7000 retail outlets, and the fuel storage facilities of major fuel users.

The fuel supply chain works to match Australian fuel demand and quality specifications, including in different Australian jurisdictions, with international and domestic refinery capabilities. There are strong business pressures on refiners and fuel suppliers to maintain a resilient and efficient supply chain, since this is essential for reliable supply and meeting customer expectations.

The Australian fuel supply chain and associated infrastructure has been independently assessed as being secure and functioning efficiently and effectively to meet Australia's current and future fuel supply needs. This performance is underpinned by considerable industry investment in new and expanded supply infrastructure, and a requirement for significant ongoing investment to maintain the existing capacity.

The risks associated with these investments are minimised through long term supply contracts with suppliers, major fuel users and customers, as noted in the Interim Report.

There are significant commercial incentives for efficient infrastructure and supply chain management including:

- maximum utilisation of infrastructure (including via hosting and joint venture arrangements)
- an ongoing program of infrastructure maintenance
- holding fuel stocks which reflect a robust commercial assessment of demand, operational conditions and risks in each location
- regular review of supply chain operations and infrastructure adequacy.

Regular reviews by the industry have led to the construction of new or expanded supply infrastructure and fuel storage in key import and demand centres around Australia, to better meet changes in the customer base and the fuel products they require.

BOX 1: Industry Investment in Supply Infrastructure over the last 5 years

- AIP member companies have also invested heavily in strengthening the capacity, resilience and flexibility of their supply chains.
- Total investment in local refineries has been over $2 billion over the last 5 years.
    - This includes the completion of major refinery maintenance cycles ('turnarounds') more recently and investments in increased production capacity, utilities augmentation, recycling projects and debottlenecking programs.
- There have also been major supply infrastructure investments - new pipelines, pumping capacity and connects, and supply chain investments to improve port, import, gantry and distribution capacity.
- AIP members have also continued to invest heavily in expanded storage capacity across Australia, with more investment planned. AIP member companies have also committed to long-term storage contracts with commercial providers, allowing additional storage capacity to be brought to the market.
- Since 2012, close to half a billion litres of new storage capacity has been installed or is currently being constructed by AIP member companies – an investment of around $400 million in new tanks.
    - This investment has been focused in locations experiencing strong demand growth for transport fuels, particularly for jet fuel, and also diesel and premium petrol grades.
    - Crude oil storage is being expanded by 30-40% at the two Victorian refineries to increase their production efficiencies and capabilities, and also strengthen fuel supply security.
- According to official Government statistics, the industry's investment program has kept pace with the growth in fuel demand and, as a result, commercial fuel stocks have been maintained at the longstanding levels needed to ensure reliable and safe supply to the Australian market.

Within this supply chain, diversification of supply sources is one of the most important elements of liquid fuel supply security. Diversity of supply avoids over-reliance on any single supply source and helps mitigate risks from potential supply disruptions.

Australia has a high level of supply diversity built into its fuel supply chain including multiple supply networks into Australia, a number of domestic refineries, multiple and flexible import and distribution networks in each State/Territory, and a range of alternative fuel suppliers and importers throughout the supply chain. This means that fuel can be delivered in a number of ways to where it is needed, during normal operations and also during supply disruptions or other emergency situations.

Australia's liquid fuel supply security risks are spread between imported crudes and products from a variety of different sources (40+ sources for imported crude oil and 66+ sources for imported products) and domestic crudes and products from a variety of different sources.

Australia's capacity to process crude oil in domestic refineries, including Australian crude, provides additional supply diversification and flexibility, underpinning our supply security.

Also, over the last decade the growing volume and frequency of petroleum products imported into Australia have increased domestic supply reliability. According to the official statistics (APS), about 3 weeks of supply owned by Australian companies is typically on the water at any time, with a large proportion of this stock in Australian waters. This is some 30 per cent of all stock owned by AIP member companies.

The significant volume and wide distribution of cargoes of crude oil and petroleum products on the water serves as a form of floating storage which provides a diverse and flexible source of supply. It also provides an efficient and cost effective logistical and storage solution, which is now fundamental to managing ongoing reliable supply of liquid fuels to Australian markets and customers.
The highest level of fuel supply flexibility and reliability is achieved when stock on water can be readily diverted between Australian locations on an as needs basis.

Australia's access to diverse supply sources and well-established international and domestic supply networks suggests that any future disruption risks are unlikely to compromise Australia's access to the physical supply of liquid fuels.

Industry Management of Supply & Disruptions

AIP members seek to ensure continuous and reliable supply of fuel to all customers and areas of Australia, which involves simultaneously managing all aspects of the supply chain. Industry considers reliable supply of high quality fuel essential to maintain customer brand loyalty, as well as to maximise business commercial viability.

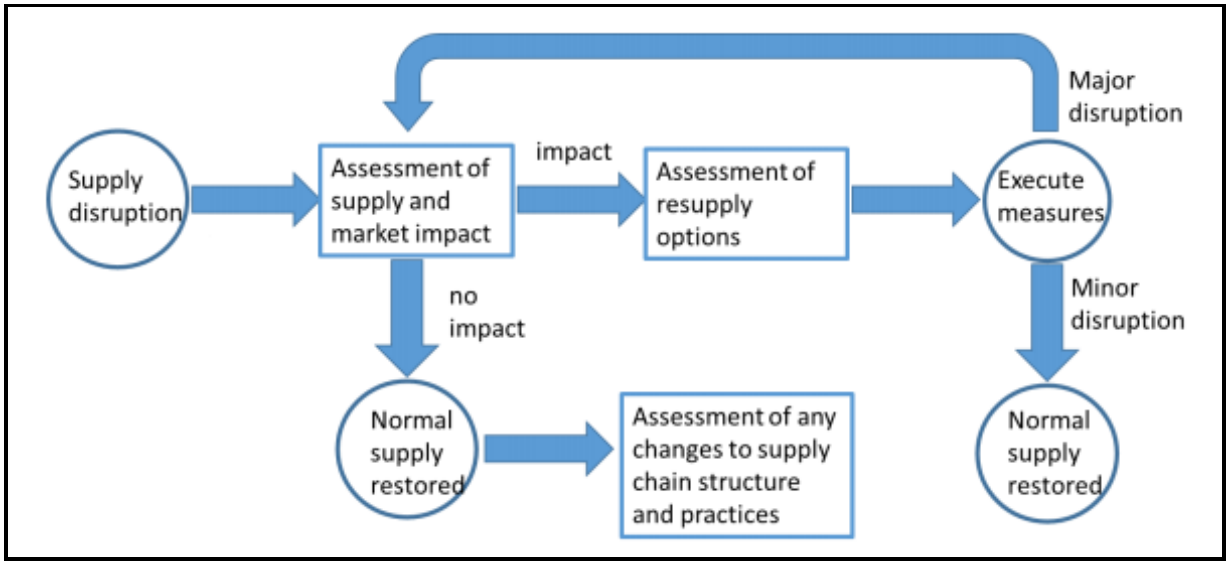
Nonetheless, unplanned events can create fuel supply challenges at short notice including unplanned refinery disruptions, breakdowns in key supply infrastructure or pipelines, delays in ship arrivals, natural disasters, and customer demand exceeding contracted supply requirements.

Each supply disruption develops in its own way and requires dynamic industry management. Almost all supply problems are capable of being managed by industry and the market, as noted by the Interim Report

However, there are also well-established arrangements for relevant ministers and departmental officials to be kept fully informed of developments when there are emerging issues or actual supply disruptions so that governments are well positioned to assist with supply management if needed.

As the management of reliable fuel supply is the industry's core commercial business, there is constant monitoring and review by fuel suppliers of supply chains, customer demand, commercial stockholdings and bulk fuel transfers/shipping in every location. As a result, a disruption event which impacts or is likely to impact the supply chain or reliability will set off a reasonably orthodox organisational management approach to managing risk – as illustrated in the chart below.

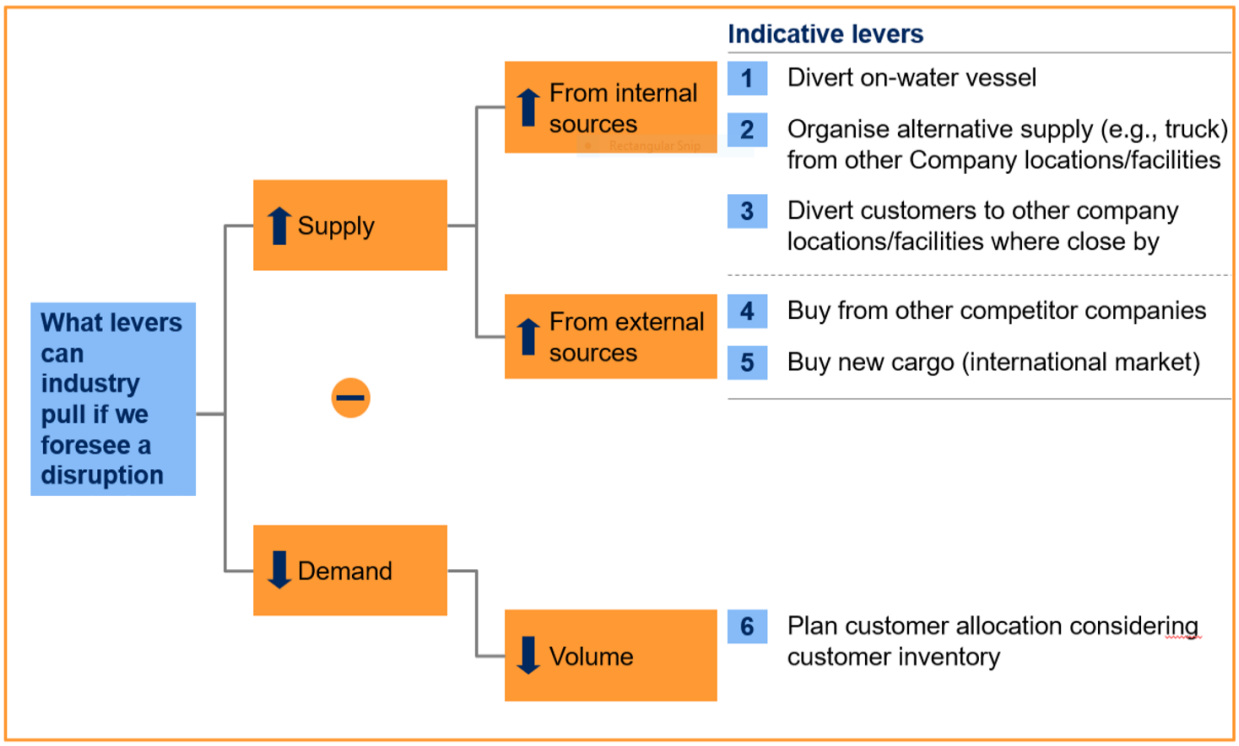
The fuels industry is no different from other industries in that regard, except its responses will take place within the timeframes to which the fuels industry operates.



As noted in the Interim Report, industry has rapid and comprehensive industry response strategies in place to address or replace any lost supply. These strategies include:

- numerous technical options within refineries
- utilising alternative supply infrastructure and supply and distribution routes
- sourcing supplies from other Australian refiners and/or fuel wholesalers
- sourcing supplies from international sources and the spot market
- equitably allocating bulk fuel to customers
- drawing down industry stockholdings.

Industry response strategies, in simple terms, are illustrated in the chart below.



Given the wide range of logistical options and contingencies, the management of fuel supply disruptions is dynamic to respond to specific market circumstances at the time, which is more targeted and valuable. As this is part of normal day-to-day industry operational processes, it is not handled like emergency situations in the electricity and gas sectors, and even very serious fuel supply disruptions are handled in a similar way to moderate disruptions (but would typically involve a broader range of response options, internal parties and external stakeholders).

The flexibility of the fuels supply chain to respond to specific events or circumstances also greatly assists the management of emergencies outside of the industry's direct control (e.g. other energy sectors, extreme weather events). For example, the petroleum industry provided good support and diesel supply to other energy sectors experiencing problems such as the Varanus Island gas explosion and the Tasmanian electricity disruption.

Industry is confident in its supply management and the commercial stockholdings held and has a very longstanding reputation for reliably and safely meeting their customers' demands. This confidence is demonstrated by the fact there has been no widespread or sustained fuel shortage for decades in Australia (including during major global disruptions and wars like the US Hurricanes, Global Financial Crisis, Iraq War, Kuwait invasion, and Libya crisis).

In this context, AIP members believe that the most appropriate action for dealing with all but the most serious supply disruption is for the market to be allowed to operate with minimal government intervention.

This view is supported in the Interim Report, the LFE Act, the National Liquid Fuels Emergency Response Plan (NLFERP) and in the Emergency Plans at a jurisdictional level. The Interim Report states that *"disruptions are largely managed by industry, and government intervention is a last resort".*

While current industry response strategies are highly effective, these could be further enhanced by the more widespread adoption of active supply management and business continuity planning by major fuel users supporting the economy.

(2) The role of major fuels users

AIP member companies believe that fuel users are best placed to make decisions about their need for liquid fuels, and the way they use those fuels, based on information about the price and availability of fuels meeting their operational requirements.

Major fuel users can also make the best decisions about how they will manage the risks of a disruption so that their commercial and community interests are maintained.

Therefore, it is in the interests of all fuel users to understand their own fuel use and to consider how best to manage the potential impacts of reduced fuel supply, including:

- identification of current fuel supply management arrangements, the location, capacity and utilisation of supply infrastructure and storage, and demand by fuel type across business operational activities
- categorisation of business activities from highest to lowest priority, with fuel use for each activity clearly quantified and monitored (including differences in fuel use between normal and peak or emergency times)
- assessment of how a significant reduction in fuel supply for a prolonged period would be managed, including the use of different modes of operation during shortages (e.g. cancellation or deferral of non-essential activities).

Following this analysis, a robust business continuity plan should be established by major fuel users with effective response options to deal with the specific (and varying) circumstances of any fuel supply disruption.

Actions should also be taken to address any unacceptable business risks arising from a fuel supply shortage, including investing in extra stockholdings and storage capacity, improving fuel supply management (either on their own or through their major fuel supplier), and changing business operations to avoid or minimise the impact of possible fuel supply disruptions.

Based on this knowledge of customer planning and needs for various petroleum products in locations across Australia, the petroleum industry is able to develop and operate an optimally efficient supply chain, and best manage any supply disruption that might occur.

This planning approach is emphasised in national and jurisdictional emergency plans for liquid fuels, where all fuel users are expected to have business continuity plans to manage the impact of a fuel supply disruption on their operations, particularly large fuel users with the resources, expertise and business incentives to do so.

Effective contingency plans and actions taken by major fuel users will:

- reduce the need for intervention by government
- help maintain emergency and essential services to the community
- minimise the economic and community dislocation of any disruption
- ensure that available supplies are distributed as equitably as possible
- support normal fuel supply being restored in the most effective and timely way.

Importantly, it is well established that the LFE Act and supporting plans and instruments were not designed to manage or reduce the risk for consumers or major fuel users of a fuel supply shortage. Reviews of the LFE Act and instruments since commencement have stressed that it is incumbent on all fuel users whose activities are dependent on uninterruptible fuel supplies to undertake their own risk assessments and make their own arrangements including for any emergency.

However, fuel users and consumers have become accustomed to reliable supply to the domestic market. As a consequence, bulk fuel users, as well as many individuals, have assumed that supplies will always be readily available, and that there is no need for users to develop their own risk management arrangements to avoid the impacts of a supply disruption. At the same time, a community perception has developed that any disruption in supply, however minor, is viewed as indicative of a crisis.

This context is directly relevant to the review of the LFE Act identified in the Interim Report – particularly the need to ensure the maintenance of an ongoing focus on, and the creation of incentives for, active supply management and continuity planning by major fuel users, particularly those who have the resources and expertise to do so.

(3) Robust emergency management arrangements

Industry and governments recognise the potential impacts of a shortage of fuel supplies to business, consumers and communities. While every effort is made by industry to ensure continuing reliable supply, there are management plans at an international level (International Energy Agency, IEA), national level (NOSEC), and jurisdictional level (State Emergency Plans) to help ensure a coordinated response to any supply emergency at a national or international level.

These emergency response arrangements, which industry considers are robust, are discussed further in Chapter F.

F. THE ROLE FOR GOVERNMENT IN THE FUELS MARKET AND IN MANAGING FUEL SECURITY?

Australia's liquid fuel market is different to other domestic energy markets in that it is part of globally and regionally integrated supply chains which are mature, flexible and well-functioning and which deliver internationally competitive fuel prices and reliable supply to consumers and business.

Thus, there is much less of a role for government in the development of an efficient, reliable and competitive liquid fuels market as these conditions already exist.

However, there is still an important role for governments alongside the Australian petroleum industry in meeting future challenges, strengthening the diversity, security and operation of the fuels market, and facilitating the significant ongoing infrastructure investment required to meet Australia's growing liquid fuel needs.

Specifically, AIP considers that there are seven important roles for government:

(1) maintaining a clear and stable market-based policy framework and investment environment, and a level playing field for market operators
(2) ensuring that future regulatory decisions do not impose burdens on industry or undermine the competitiveness of liquid fuel refining and supply
(3) carefully reviewing and streamlining the existing complex and overlapping array of environmental and other regulatory measures to ensure that current measures are soundly based, cost effective and harmonised, including across jurisdictions
(4) maintaining multilateral efforts to ensure that world markets remain open and competitive
(5) ensuring that global energy governance is robust, comprehensive, and relevant to Australia
(6) ensuring that efficient, effective and market reflective response mechanisms are in place to mitigate the impact of supply disruptions and global oil supply emergencies.
(7) maintaining appropriate and proportional oversight of this competitive market and collecting robust market data in an efficient and cost-effective way for industry, consumers and government – see Chapter G.

These important roles are discussed in more detail below, and connected to the Interim Report's findings and discussion where canvassed in the Report.

(1) Maintaining a stable market-based policy framework

Policy stability and certainty is key to the delivery of ongoing energy security and attracting the necessary and significant industry investments to meet Australia's future liquid fuel needs.

An attractive investment environment and more efficient, timely and consistent planning, approval and regulatory processes, would support the ongoing investment in the growth, modification and maintenance of key infrastructure supporting the liquid fuels supply chain.

A strong market-based approach to policy settings by government will also provide a flexible and robust framework capable of responding to the changing global oil market and also to technology developments in the industry. As part of a stable market-based approach, AIP recommends a set of policy principles to guide governments and safeguard liquid fuel supply security in Australia — see Box 2 below.

BOX 2: A POLICY FRAMEWORK FOR LIQUID FUELS SUPPLY SECURITY & RELIABILITY

Government policies (including policies which may not directly relate to liquid fuels) will impact on the ability of Australian refiners and fuel importers to attract further investment funds for refinery, storage and terminal upgrades (and ultimately for major maintenance programs) and also impact on investments throughout the fuels supply chain.

A sound government policy framework for liquid fuels security should:

- maintain a strongly market based approach to liquid fuels with minimal regulatory intervention
- recognise the competitive pressures from regional refineries and the impact on the economy of any loss of Australia's competitive advantage as a result of government policies
- facilitate the development of liquid fuels supply infrastructure, including streamlining approvals for new or expanded infrastructure developments such as new storage facilities or port deepening
- place no additional and unjustified compliance, regulatory and cost burdens on the fuels supply industry that reduce the industry's ability to compete effectively in the region
- ensure R&D policy settings are appropriate and encourage the commercial development of transport fuels which can contribute to liquid fuel security in Australia
- seek to identify and address any government policy and regulatory impediments to Australia maintaining a high level of liquid fuel security over the longer term.

Within this policy framework, any government proposals for changes to current market-based policy settings, or intervention in the fuels market, need to clearly demonstrate that:

- a real market failure or vulnerability exists within the industry
- continued reliance on domestic and international markets is unable to deliver a similar outcome or that major fuel users and consumers cannot, or cannot efficiently, do these things
- new policy measures will produce a net benefit to the community (based on sound science and rigorous economic analysis) and will not impact adversely on the competitiveness of the industry or liquid fuel supply security and reliability.

Existing or new government regulatory regimes should:

- clearly define their objectives, costs and benefits
- be regularly reviewed to ensure the objectives are still relevant
- be harmonised across jurisdictions
- be enforced, and applied, consistently to all market participants
- be allowed to lapse when their objectives have been met.

This policy framework and principles reflects fundamental industry drivers including the significant capital employed by the industry, competing opportunities for capital within companies, and the risk to supply security if any policy changes make an ongoing domestic refining presence unviable in the future.

(2) Not reducing the competitiveness of Australian refining and supply

There is a changing and challenging market environment for the downstream petroleum industry – globally, regionally and domestically – and this environment is expected to continue. This is particularly so for Australian refineries, given ongoing excess supply in the Asian region and continued competitive pressure from Asian refineries which enjoy significant cost, scale and technology advantages. In this market environment, the industry requires a supportive policy framework and stable investment environment to enable it to continue to make significant infrastructure investments, as well as seek further efficiencies in refining and supply, to ensure ongoing supply security and reliability and industry competitiveness.

Apart from challenging market conditions, there are also other challenges impacting on the industry's ability to grow and invest efficiently:

- The increasing cost of doing business in Australia (energy, labour and capital costs), and the cumulative cost impact of a wide range of complex and overlapping government regulation is impacting on the domestic refining industry's ability to compete in the region and remain viable longer term.
- The future industry investment task is significant to ensure ongoing supply security and this can be best supported by a favourable and stable investment environment, as well as soundly-based, harmonised and streamlined regulation across all levels of government
- A major obstacle to liquid fuel supply reliability is the absence of a level playing field for competing transport fuels (e.g. there is no commercial access to imported ethanol or biodiesel, which is hampering the development of an efficient and competitive domestic biofuels market).
- Any future requirement for industry to hold (and particularly fund) additional stockholdings to meet Australia's international compliance obligations could impose further (unjustified) cost on industry and lead to higher fuel prices for consumers and major fuel using industries.

Thus, while a market-based policy framework will help respond to these ongoing industry challenges, governments have an important role in ensuring that regulatory decisions and imposts do not undermine the competitiveness of liquid fuel refining and supply (e.g. where the manufacturing of fuel imported from other nations may not be subject to similar imposts). Governments also have an important role in addressing non-commercial barriers to effective market operation and in ensuring that ongoing liquid fuels supply security is a priority consideration across and within levels of government.

In this regard, AIP supports future government reforms focused on ensuring that planning, approval and regulatory processes are efficient, timely and nationally consistent, to support long term investment in fuel import, storage and distribution infrastructure. There is also a need for jurisdictional governments (and private port operators) to maintain investment in port facilities and associated fuel handling infrastructure to remove supply bottlenecks and to meet expected growth in fuel imports and demand over time.

AIP members are also concerned about the future availability of, or encroachment on, appropriately located land for the major liquid fuels supply infrastructure that will be essential for future supply reliability and security. Competing land uses are limiting options for liquid fuels infrastructure growth, for example:

- existing sites used for liquid fuel supply infrastructure are increasingly being constrained through residential and light industry encroachment into buffer zone areas, and areas traditionally regarded as industrial are now attracting residential developments to make use of inner city and coastal amenities
- expansion or modification of sites to enable increases or improved efficiencies in storage and handling facilities are increasingly being limited by planning authorities
- port handling facilities have limited capacity for further expansion or for improved handling facilities
- road transport access to terminals for handling increasing volumes of fuels is becoming more difficult and options to distribute fuel to consumers is constrained due to the increased use of tunnel infrastructure in larger city road networks.

These competing interests can bring long delays or inhibit current and near-term development plans for liquid fuel infrastructure investments.

Given the importance of liquid fuels for Australia's economy, AIP strongly believes there is a need for a cross jurisdiction initiative to consider long term planning for Australia's liquid fuel infrastructure, to ensure that appropriate land is identified for terminals and distribution corridors, and that appropriate planning arrangements are put in place to ensure that future investments in liquid fuel infrastructure can proceed in a timely and cost effective way that meets the variety of community expectations associated with liquid fuels and industrial activity.

Overall, policy stability, a level playing field for competing transport fuels, and efficient, well-targeted and harmonised government regulation will help support the industry's future investment task as well as the development and growth of robust, efficient and commercial markets for all transport fuels.

(3) Streamlining and harmonising regulation

Where government activity is needed in the market, and a clear market failure has been demonstrated, AIP and its member companies advocate policies and regulation that apply equally to all industry participants and are based on comprehensive economic analysis and sound science.

The downstream petroleum industry operates across Australia and is therefore subject to a range of policies in each jurisdiction that entail significant regulatory and compliance costs. AIP considers that there can be major benefits in pursuing a harmonisation of these regulations across jurisdictions. The benefits of such action would include common and consistent approaches and frameworks that would lower costs for regulators and industry and lead to greater certainty in regulatory outcomes.

Particular areas of concern include:

- ambient air quality
- assessment of site contamination
- remediation of contaminated sites
- underground petroleum storage systems
- retail site regulation including local council Development Approvals
- heavy vehicle registration and safety compliance monitoring
- biofuel mandates
- greenhouse gas abatement measures.

Various models could be pursued to harmonise regulations in these areas, including:

- formal intergovernmental agreements with mirror legislation in each jurisdiction, along the lines of the National Environment Protection Measures (NEPM) process (but noting the need to streamline the unwieldy review process)
- Jurisdictional implementation of independently developed national guidelines supported by a practitioner accreditation program
- Commonwealth legislation.

Experience to date has demonstrated the benefits that can be derived through harmonisation of regulations in some of these areas, and highlights the potential for further significant productivity gains that could be realised without any significant loss of environmental or community benefits.

(4) Multilateral efforts to ensure open and competitive global trade

With increasing fuel import requirements since 2003, the domestic fuels industry has taken the opportunity to fully integrate into the deep and growing Asian market to meet growth in Australian fuel demand, and has established multiple and reliable sources of supply from the region and beyond.

Importantly, further significant expansion in the diversity and flexibility in the Australian supply chain is expected over time with the ongoing growth of Asia as the global hub for the oil market and the emergence and proximity to Australia of major new petroleum export centres (e.g. India). The increasing export orientation of the US will also be important to the Australian market.

Australia's direct involvement in global trade in crude oil and petroleum products provides security through the diversity of source countries and multiple import terminals and the relative ease with which crude oil and petroleum products can be moved in readily available ships, pipelines, or surface transport.

However, effective international engagement is becoming more important with the shifting global oil map and pattern of trade, greater energy diversification, rapid technology innovation and uptake, and also to attract investment in a highly competitive capital market.

AIP and its members companies support multilateral efforts to ensure that world markets remain open, Australia continues to be well integrated into regional and global commodity markets, and that effective and market –reflective response mechanisms are in place to mitigate the impact of short-term supply disruptions and global oil supply emergencies.

AIP therefore supports broad engagement with the IEA, as well as with the G20 and APEC, to support these market orientated goals. Working in close partnership with industry and other key stakeholders, the Government is encouraged to pursue common energy goals such as energy security, flexible and resilient markets, and energy and technology innovation.

However, it is important that these multilateral fora are well informed about market realities, changes in market conditions, and market operations so as to encourage actions that:

- support efficient, transparent and open domestic, regional and global markets that create clear incentives for timely investment and efficient operation and end use
- promote and strengthen energy supply chains and market efficiencies, reduce barriers to trade, and improve market and regulatory transparency.

Any actions on these terms, and which reflect our Asian region and domestic market realities, will help ensure that energy security is achieved at least cost to Australia and in ways that do not create further market distortions.

(5) Ensuring global energy governance is robust, comprehensive and relevant to Australia

The global oil market has changed substantially from the 1970s (when the IEA was established), from an undeveloped market then to a mature, deep and diverse market now with very many active players, various regional markets, transparent trade and fuel prices, and with oil infrastructure (shipping, storage, refining) all increasingly commoditised.

This sophisticated and highly diverse and flexible current oil market has demonstrated that it is very capable of quickly responding to a supply disruption (typically within days) and returning to balance (typically within a month), which raises the question of how relevant is it to still hold emergency stocks of 90 days net imports?

The IEA rules were developed in the 1970's and reflect the supply chain features operating at that time and when, for example, the volume of seaborne trade in oil and petroleum products was a very small fraction of what it is today. The IEA rules have not changed since that time.

Reflecting the fact that current IEA member countries now account for only 46% of global oil demand (as noted in the Interim Report), the IEA itself has acknowledged that modernisation is necessary and broadening the IEA membership is essential for the IEA's mechanisms and governance to have relevance in the future.

Australia is critical to world and regional energy governance and, as one of the largest exporters of coal, LNG and other commodities, is central to supporting continuity of energy supply.

Flexibility in the application of IEA rules will send a strong signal of the IEA's commitment to modernisation and help facilitate the expansion of IEA membership into non-OECD Asia, the global centre for oil supply and trade and Australia's most relevant market.

This will strengthen energy governance, cooperation and market transparency in this critical region, and therefore globally.

The significant volume and diversity of seaborne trade is fundamental to supply operations, inventory management and open trade in the Asia-Pacific region.

As noted above, about 21 days of Australian supply is typically on the water at any time, with a large proportion of this stock within Australian waters and under ownership by Australian companies. This represents around 30 per cent of all stock owned by AIP member companies.

This is not recognised in current IEA rules and provides a significant barrier to Australia's own compliance and to regional membership expansion.

There is also significant overseas stock already purchased by Australian companies and awaiting delivery to Australia which is now (since January 2018) reported to the Australian government, but the APS acknowledges this dataset is still under development in consultation with industry.

The IEA's outdated market approach and limited membership provides limited value to Australia in its current form.

As highlighted by the Minister, AIP strongly supports ongoing negotiations with the IEA to modernise outdated IEA rules and limited membership which disproportionately penalise Australia and do not recognise the full extent of stockholdings held through the Australian fuels supply chain and available in an emergency.

AIP considers that some of the key touchstones for strengthening international collaboration and global energy governance include:

- sharing of information and policy and operational experiences
- building consensus about best practices to reinforce open market operations and consumer preparedness to manage both small and large market disruptions
- developing and implementing robust processes for coordinated assessment of information about market operations and market perturbations.

Intergovernmental collaboration should be based on strategies and mechanisms that support the operation of open markets without limiting the scope for national governments to take actions that support individual national priorities.

(6) Maintaining a robust emergency management framework

In the case of the liquid fuels market, industry and governments recognise the potential risks and impacts of a disruption to liquid fuel supplies. AIP and its member companies actively participate in government sponsored management committees like the National Oil Supplies Emergency Committee (NOSEC), a committee of the COAG Energy Council.

While every effort is made by industry to ensure continuing reliable supply, NOSEC and the International Energy Agency (IEA) have established emergency response plans that would help ensure a coordinated response to any liquid fuel supply or oil emergency at a national or international level.

AIP considers that Australia has a robust 'Emergency Response' framework and emergency management plans for liquid fuels which are consistent with Australian market characteristics, utilises established and tested industry commercial practices, and adopts those best practice IEA practices that will be effective in our specific market circumstances.

The main features of Australia's emergency response framework include the following:

- A tightly integrated industry-government response strategy, with stakeholders focused on their core areas of responsibility and competency.
    - *At the government level*, wide-ranging and flexible Ministerial powers to address any emergency situation as well as effective government communication procedures.
    - *At the industry level*, existing and proven commercial practices to allocate and distribute supply efficiently and equitably under government direction.
    - *At the consumer level*, voluntary demand restraint measures consistent with IEA best practice.

- Robust legislation (the *Liquid Fuels Emergency Act 1984*), legal instruments and emergency plans to deal with the specific/different circumstances of any liquid fuel emergency or IEA collective action.
    - These plans and legislation are appropriately focused on supply restraint and the priority needs of 'essential users' defined in the legislation.
    - Importantly, the emergency management framework and associated plans, has been reviewed extensively since 2002 and close consultation with industry and all levels of government.

- Industry has an enshrined and active role in the NOSEC and a close day-to-day relationship with key managers and advisors across all levels of government on liquid fuel supply matters.

Importantly, this AIP assessment is shared by relevant authorities. For example, according to previous detailed IEA reviews of Australia's emergency response capability, the security of supply in Australia is well served by an industry which operates a resilient and diversified supply chain. It is also supported by a regime of policy and regulatory emergency measures, regular in-depth vulnerability assessments, and international advocacy of open global energy markets.

Against this background, AIP reiterates our support for the principle (as stated in the Interim Report) that government intervention to manage disruptions should be "last resort". Also, decisions to intervene should be based on an agreed transparent, objective and regularly tested emergency framework that ensures cooperation between industry and government to minimise market distortions and return to normal supply as quickly as possible.

AIP also strongly supports the principle, including reflected in some State Fuels Emergency Management Plans, that in the event of a disruption, energy market participants should be able to make independent decisions in response to price signals and existing or revised contractual arrangements. These decisions are likely to provide the most effective, flexible and timely responses to minimise the impact of disruptions at least cost. This principle is discussed further below under 'market oversight'.

Importantly, the above framework and principles for liquid fuels have been proven to be robust in the context of major localised supply disruptions and incidents that have occurred in Australia over the last decade, including across energy sectors (e.g. the 2011 Queensland floods and the Varanus Island gas explosion).

AIP considers that major changes to Australia's emergency response framework and operation for liquid fuels <u>are not required</u>, but the framework should be periodically tested and reviewed to ensure it continues to align with current market realities and commercial practices and deliver operational certainty and effectiveness in the event of an emergency for both industry and government.

AIP therefore welcomes, and will actively participate in, the upcoming review of the *Liquid Fuels Emergency Act 1984* foreshadowed in the Interim Report.

This includes because AIP and its member companies wish to understand the claim in the Interim Report that the current arrangements and emergency management framework has burdensome administrative requirements that could delay an effective 'government' response to an emergency. Such claims could usefully be tested in the context of a NOSEC Exercise and AIP (as well as all NOSEC members we expect) would welcome the release of the modelling underpinning this conclusion.

> *"Modelling also tested the legislative steps required to commence rationing under the LFE Act and how this would play out in a large-scale disruption. Modelling also suggests that burdensome administrative requirements of the LFE Act mean that the steps would take one to three weeks to complete before the Government could direct fuel to essential users. There will be further work undertaken to test how fit for purpose the current legislation is and whether it can respond to emergencies effectively in today's market context."*

In this context, AIP understands that recent changes to the *Liquid Fuel Emergency Guidelines 2019* were aimed at streamlining the Government's decision making process. However, in this streamlining process significant operational guidance and appropriate protections for industry were also removed in the interest of simplicity, and the application of the guidelines was broadened to a greater range of market participants. Industry is still assessing the operational and legal implications of these changes, and feedback will be provided in the context of the broader LFE Act Review. In contrast, the *Liquid Fuel Emergency (Activities – Essential Users) Determination 2019* was remade without changes, which industry strongly supported.

AIP also supports, in principle, the suggestion in the Interim Report that *"there may be value in looking at mechanisms that formalise communication channels and allow earlier coordination and information sharing before disruptions escalate to a national scale. Earlier cooperation may prevent the spread of shortages and reduce their impact."*

In their NOSEC roles, AIP and its member companies have long recommended that communication protocols agreed between industry and some jurisdictional governments could be mirrored in NOSEC's National Plan (NLFERP) to ensure a harmonised and seamless approach to communications and management of both jurisdictional and national emergencies, and to provide more operational guidance at a National level.

G. APPROPRIATE FUELS MARKET OVERSIGHT: EFFECTIVE COLLECTION OF MEANINGFUL MARKET DATA & INFO AND ROBUST SUPPLY COMMUNICATIONS

High-quality liquid fuels data and market information is crucial for government, business and consumers to be able to make efficient and well-informed decisions and perform robust analysis.

Robust liquid fuels data not only contributes to improved market monitoring, decision making and international reporting/compliance, but also informs government security assessments of the liquid fuels market as international factors and market forces reshape the global and domestic market.

The key issue is the extent to which current market data/information and industry reporting to Government support these objectives and robust market monitoring by Government, industry and consumers.

An additional key consideration is striking the right balance between ensuring industry reporting provides a sound basis for quality decision-making by government and industry and actually improves community understanding and confidence, whilst minimising the regulatory and administrative burden imposed on both industry and government.

Such reporting and market oversight also needs to strictly protect commercial sensitivities and boundaries (given the fuels market is a highly competitive market quite different to the regulated electricity sector) and also operate in strict accordance with competition law.

AIP's assessment of current market reporting and oversight arrangements is discussed below, including to respond, in particular, to the Interim Report's assertions that *"greater oversight and monitoring of the liquid fuel market"* is needed, and also *"closer to real-time information in the domestic fuel market would enable the Government and industry to identify short-term issues with supply."* We take particular issue with, and dispute, the statement that "industry" needs such information to identify short-term issues with supply in company supply chains.

Any consideration of additional or more regular industry reporting requirements needs to consider the raft of information and data already provided to Government agencies (a large part of which is not published), the extent to which this data and information can be shared between government agencies, and the capacity of existing data collections, systems and communication frameworks to meet market monitoring objectives.

Given their inherent cost burdens and complexities, the benefits of additional reporting requirements also needs to be demonstrated via rigorous cost-benefit analysis to ensure such measures provide real benefits to government, industry and consumers, and also encourage timely investment and supply management decisions by industry.

Overall, AIP and it's member companies consider that current government market oversight and reporting by industry is comprehensive and appropriate, including to respond to emergency situations.

However, AIP does identify scope for improvements in existing frameworks, and to improve industry-government communications (rather than data collections) to provide early warning signals of any emerging supply issues.

(1) Information and modelling on the Australian supply chain and storage capacity

The ACIL Tasman Audit of *'Petroleum Import infrastructure in Australia'* commissioned by the Department was published in August 2009. AIP and its member companies were actively consulted in this independent review (as well as other market operators), providing extensive data and supply chain information, and the review outcome was a comprehensive stocktake of Australia's fuel storage infrastructure and capacity.

Since that time, AIP has sought to keep the Department updated at regular intervals on investments in new storage capacity by AIP members (which doesn't include a range of market operators), and this advice has been an input to other government security and policy reviews.

AIP has recommended for some time that the 2009 Audit should be updated, using the same framework and methods but capturing all market operators, to provide a complete picture of storage and import capacity across the Australian market and to monitor whether capacity and supply operations are keeping pace with domestic demand for fuel. Such substantive updates could usefully occur, and be published, every 2-3 years to provide relevant information to government and industry.

We note that the ACCC collects information on terminal/storage facilities and has previously published some information (but not since 2014). Previous ACCC reports (and ACIL) highlighted significant increases in storage capacity by independent operators, particularly for petrol, but their underutilisation of this capacity and significant spare capacity available.

We note there are data sharing arrangements between the ACCC and the Department under the Mandatory Reporting Regime, and this might assist with the development of an overall storage capacity picture for all market operators.

AIP also note that the Interim Report foreshadows the Department is developing with consultants a *"model of the fuel market and its supply chains"*. According to the Interim Report, this model *"tracks liquid fuel supply from oil wells, both overseas and in Australia through to fuel stations around the country … and captures shipping, refinery production here in Australia and overseas and the distribution network around the country"*.

The objective, according to the Interim Report, is to model the supply chains of the Australian liquid fuel market to *"provide better insight than the Government has had before*" and to identify supply constraints and other emerging issues. The Interim Report also notes that *"this new capability of supply chain modelling will improve over time and will continue to need data and insight from users and industry."*

AIP and its member companies welcome the development of such capability in-principle, and look forward to consultation on the model's design and application, as market operators with decades of operational experience in Australia and as part of global fuel supply chains.

As such models inevitably involve significant investments by industry in their development and ongoing maintenance, there is a general expectation that these tools are available and tested by industry to ensure they are robust and market reflective, and do actually achieve their stated objectives. A particular challenge for such models is adequately capturing the dynamic and complex nature of the fuels market, and its inherent flexibility to deal with changing market circumstances and trends. We also note that such a model will require significant ongoing resources and expertise to maintain is relevance and value.

(2) The Mandatory Reporting Regime (MRR) for petroleum data

For over a decade, AIP strongly supported Government efforts to develop higher-quality and broader coverage of domestic liquid fuels data and consolidate liquid fuels data collection and analysis across Government agencies (noting there are currently 12 different liquid fuels reporting requirements across Commonwealth agencies alone). A single definitive and robust dataset for liquid fuels through data consolidation and streamlining will also lead to a significantly lower collection and reporting burden on both government and industry.

As a result, AIP and member companies supported a move to a mandatory reporting regime (MRR) for petroleum statistics, if comprehensive data collection could not be universally achieved across industry via voluntarily action or if some market operators chose not to supply data to government.

Consequently, AIP was strongly supportive of the decision to introduce 'mandatory' petroleum data reporting, since a voluntary approach did not deliver a complete and robust dataset, despite Government efforts over many years to expand the coverage of petroleum data. However, as AIP member companies had supplied data voluntarily for many years, AIP's support for a regulated approach was based on the minimisation of additional reporting burdens and a presumption of data sharing across government.

The national mandatory reporting regime for petroleum statistics commenced on 1 January 2018, with the Act introducing mandatory reporting on the production, refining, consumption and stock levels of fuel for Australia and across jurisdictions.

AIP member companies made very significant investments to support the Government in the development, legislation and implementation of a robust and workable mandatory reporting regime, in accordance with the Government's stated objectives and timetable at the time. This includes major investments in new systems and processes internally within companies to comply with the regime's requirements and legal obligations. These systems, both within industry and government, are largely established now.

As a result, AIP and its member companies consider that the MRR legislation, systems and architecture (at government and industry levels) should be the platform for current and future data reporting to support any monitoring and oversight of the domestic liquid fuels market.

Whilst improvements in the dataset are ongoing, the implementation of the MRR has been highly successful and has delivered a more comprehensive and robust dataset, a large part of which is published through the Australian Petroleum Statistics on a monthly basis, and which provides a comprehensive picture of the petroleum industry in Australia over time.

Whilst this is acknowledged in the Interim Report (i.e. *"an important first step towards improving the Government's understanding of the liquid fuel market"*), the Interim Report also suggests that:

(1) "the information is about six weeks old when published in the Australian Petroleum Statistics (APS) Report"

(2) "closer to real-time information in the domestic fuel market would enable the Government and industry to identify short-term issues with supply."

(3) "provides little opportunity for proactive management if supply issues are identified"

AIP responses to these claims follow:

<u>Lag in Data Availability</u>

Under the Act, industry must report data to Government within 15 days of the end of the month. Four weeks after industry has reported to Government, the Australian Petroleum Statistics publishes the compiled data submitted by industry (hence the 6 week lag).

Whilst this government time lag is understandable for data compilation and quality assurance purposes, there may be scope for more timely government compilation and publication of data with greater resources to support more rapid processing by government.

More frequent MRR Data Reporting than Monthly

AIP continues to strongly support MRR data reporting being on a monthly basis (ex-post), as there are existing policy, practical and process reasons supporting a monthly reporting frequency for MRR purposes.

A monthly reporting basis is consistent with the current and previous APS reporting timeframe (proven to be workable) and would also continue to meet the IEA's reporting requirements which is a key objective of the MRR. There is also significant and valuable data history now available on a monthly basis which provides a sound basis for government assessment of past and emerging trends in the industry over time.

Moreover, the Australian supply chain is based on longer term supply management with pre-ordering of most crude oil and petroleum product imports from regional suppliers (e.g. 3 months out from delivery in Australia) to support the operations of the domestic supply chain. The entire supply chain is underpinned by scale and efficiency, so very short term views of the supply chain and reliability are in conflict with how the industry operates in the context of our market realities, and can provide misleading supply picture.

Typically, the existing IT systems within AIP member companies are generally compatible with monthly reporting. Monthly business reporting is also consistent with the direction of government reforms over many years, particularly in relation to tax obligations.

AIP considers that monthly reporting strikes the best balance between data timeliness and providing a robust basis for ongoing decision making, and best achieves the MRR principles and objectives.

In particular, a shorter frequency would likely create major risks in terms of less robust information for supply assessment and policy decision making given the inherent volatility in month-to-month stockholdings in the Australian market and supply chain, which is greatly heightened on a week-to-week reporting basis.

A significant part of the volatility in month-to-month stockholding volumes relates to the shipping patterns for the supply of crude oil and petroleum products, as storage tanks at Australian refineries and import terminals operate between full and relatively low inventory on a regular basis, in line with demand draw-down and tanker cargo arrivals to replenish stocks. Importantly, there is a minimum planning inventory which provides these facilities with security of supply in the event that tankers or supply from other sources is delayed. Thus, even under business as usual conditions, there will be inherent variability in stock volumes.

In addition, there are also a range of other shorter term 'market factors' (largely unanticipated but which occur with some regularity) that can influence the stockholding profile and contribute to month-to-month volumes. For example production disruptions, extreme weather events, unanticipated demand impacts, seasonal impacts like harvest periods and Christmas stock building, global market and commercial developments, shipping availability and freight rates impacting on import patterns.

Thus, weekly reporting would create very significant risks for the purposes of robust and meaningful market oversight and supply assessment, and indeed Government briefing and decision-making, and "real-time" data reporting (even if technically feasible, which it is not) is unrealistic and impractical in this context.

Given the above, any proposals to move, on an ongoing basis, to more frequent data reporting (e.g. weekly) would not be supported by AIP as they would result in a significantly higher reporting burden for all businesses than currently and would not provide a meaningful basis for government monitoring and decision-making.

However, it is AIP member companies' general expectation that data requests outside a monthly MRR reporting timetable may be requested in the event of an emerging or actual emergency, and AIP member companies do and would comply with any such request as they have done in the past.

Indeed, it is a longstanding NOSEC approach that APS data can be reported more frequently than monthly in the event of an emergency, or indeed as part of IEA Emergency Response Exercises (EREs) which has occurred in the past with reporting on a condensed timeframe.

It is AIP's long held view, however, that such requests should simply ask for the existing MRR data templates to be completed on a revised timeframe, rather than issuing new (unfamiliar) data templates and information requests. This will naturally help to ensure emergency data is reported in a timely and accurate way, and not create additional scope for data collection problems, errors and misinterpretation.

(3) The concept of "real time" market monitoring of fuels stockholdings

The Interim Report's concept that real-time fuels market data is actually available and can be provided by the range of industry operators, compiled by government or third parties, and then made available to stakeholders and market participants in "real time" is neither feasible nor desirable for any party, and would breach commercial boundaries and potentially competition law.

This concept or suggestion by the Interim Report appears to be based on the claimed benefits of the reporting and monitoring arrangements applying to the electricity sector, and presumably the perceived outcomes those arrangements have delivered in terms of supply reliability and affordability for electricity.

For example, the Interim Report states that *"One of the challenges for measuring Australia's liquid fuel stock levels is that there is no comprehensive, real-time picture of all fuel available within the national supply chain. This is different from electricity, where information about the reserves is readily available."*

The fuels market and the electricity sector are two totally separate and largely unrelated forms of energy, that have totally different markets in terms of their structure, conduct, price response and performance/operation, including in the event of a supply disruption. Whilst most of the electricity sector can be considered as a national supply chain with significant interconnectedness across states and geographic regions, the liquid fuels market is not interconnected in a similar manner.

Petroleum is a primary energy source and is the largest globally traded commodity with boundless supply diversity and market participants – both globally and domestically. It is a 'genuine market' with market determined prices and intense competition to supply the fuel that local consumers and business demand. Electricity is a secondary energy source focused domestically with regulated monopoly infrastructure and with limited market suppliers and alternatives in in event of a supply disruption.

The difference between the two sectors in terms of supply diversity, logistics flexibility (energy transport and storage) and supply contingences in the event of disruption, as well as rigorous market competition to supply the end-user, necessitates a very different approach and policy framework by Government.

Moreover, the performance of the two sectors in delivering reliable and affordable energy over the last decade could not be more stark and strongly questions why there is any case to apply electricity market and oversight arrangements to the fully functioning and high performing transport fuels market. Even if "real time" monitoring of the petroleum market was technically feasible, to what value would this be to decision-makers and at what cost to industry and motorists?

Instead, the interim Report makes the following conclusion:
"One of the key lessons learnt from past disruptions is that better information and improved communication across the liquid fuel sector could limit the length of disruption and potentially reduce the overall economic impact. Greater market transparency would allow for other market competitors to compensate for shortfall from one company. This needs to be carefully managed so it does not create anti-competitive behavior. Improved close to real-time data, like that reported in the electricity and gas markets, potentially coupled with changes to market operation, could create efficiencies and reduce the risk of disruption while still maintaining robust competition.

Whilst improved bilateral industry-government communications in the event of disruptions is supported (see below), AIP and its member companies are strongly opposed to any reporting regime which telegraphs to competitors, in a fully competitive market, the details of an individual company's supply capacity and inventory position at any point in time (let alone in 'real time'), including during periods of supply disruption for that company. This is simply unheard of in a competitive market setting, would likely breach competition law, and would deprive that company of the opportunity to remedy the situation through commercial means and meet its contractual obligations with its customers.

While a 'bulletin board' approach to regulated monopoly infrastructure in the electricity sector might be appropriate, it certainly isn't in the competitive fuels market. In the event of a disruption, fuels market participants must be able to make quick and independent decisions in response to price signals and existing or revised contractual arrangements. These decisions are likely to provide the most effective, flexible and timely responses to minimise the impact of disruptions at least cost, as noted in government liquid fuels emergency response plans.

Therefore, what is important is ensuring that industry-government communications in the event of an emerging or actual supply disruption are particularly timely (daily or even more frequent in certain circumstances), which has a credible basis, would be more valuable to decision-makers, and certainly has more existing operational experience in the fuels market. Effective communications provide a much better "*opportunity for proactive management of supply issues"* and will always by definition and operation be more timely and closer to real time compared to data provision and compilation. They will also protect commercial sensitivities and contractual arrangements.

In this regard, there is a longstanding NOSEC practice under the National Plan, and also between jurisdictional governments and industry, that during localised emergency events (like natural disasters, extreme weather events, unplanned shutdowns etc), individual major fuel suppliers with a presence in the affected areas/regions provide regular briefings to government on the localised fuels supply picture for their company, including on a daily and inter-day basis depending on the nature and impact of the event and other market developments.

There has been extensive feedback from jurisdictional governments following such events that industry reporting was robust and timely, and met their emergency management and briefing requirements. However, there have been some disruptions (like some identified in the Interim Report) where industry-government communications have not been as effective as planned. However, industry communication protocols, and those between some governments and industry, have been strengthened as a result following reviews and lessons learnt from such events.

However, AIP does support, in principle, the suggestion in the Interim Report that *"there may be value in looking at mechanisms that formalise communication channels and allow earlier coordination and information sharing before disruptions escalate to a national scale. Earlier cooperation may prevent the spread of shortages and reduce their impact."*

In their NOSEC roles, AIP and its member companies have long recommended that communication protocols agreed between industry and some jurisdictional governments could be mirrored in NOSEC's National Plan (NLFERP) to ensure a harmonised and seamless approach to communications and management of both jurisdictional and national emergencies, and to provide more operational guidance and certainty at a National level.

(4) Government oversight of fuel pricing

The interim report states that "*transparency and market oversight are important elements to consumer confidence in fuel pricing."*

The level of market oversight and public information provision for fuel pricing in Australia is comprehensive and involves government, industry and third-party providers and analysts.

Australian fuel market prices are highly transparent along the entire supply chain – at the international, wholesale, and retails levels, providing confidence and transparency to consumers and enabling them and broader community to observe fuel price movements and trends and to track how international prices flow directly through to prices here in Australia (as confirmed by the ACCC).

The fuels market is highly transparent due to a range of activities including:

- ACCC monitoring of international, wholesale and retail prices for petrol, diesel and LPG in the market (and providing extensive public information from these monitoring activities based of substantial data and information provision from market operators).
- Under the Oil Code regulations, the weekday publication of wholesale (Terminal Gate) prices by all market participants
- The development and availability of fuel price apps and price information on company and third-party websites
- Highly visible price boards at every service station
- Detailed weekly prices reports published by AIP (for international, wholesale and retail prices Australia wide) and also daily prices data published daily on the AIP website
- Daily price reporting on television and in print media, based on data provided by AIP and other domestic and international data providers
- International prices reporting by a range of global agencies.

In this context, AIP and member companies see no case for any additional fuel prices oversight to that which already exists and which requires a significant investments by industry and government.

The Interim Report states that *"jet fuel pricing is treated differently from other fuels in Australia"* (which is incorrect, see Chapter H) and also that *"there is less transparency on jet fuel pricing"*. Daily international jet fuel prices are readily available from global markets and agencies, enabling jet fuel customers (airlines) to monitor the market and assess contractual prices. The international price of jet fuel plus the 'landed costs' to ship jet fuel to Australia represent almost the entire price (typically around 95%) of jet fuel prices paid by airlines. Moreover, in comparison to ground fuels (petrol, diesel and LPG), jet fuel is not a 'consumer good'. Jet fuel prices are only relevant to major fuel users (airlines) not consumers, and which are determined in commercial contracts between airlines and fuel suppliers reached through highly competitive and regular tendering process at a domestic and global level.

H. DOES THE INTERIM REPORT DESCRIBE THE OPERATION OF AUSTRALIA'S FUELS MARKET WELL?

This Chapter addresses the consultation question *"does the Interim Report describe the operation of Australia's liquid fuel market well? If not, provide information that will help improve the Government's understanding of the market for the final report?"*

AIP's responses or views on some important aspects of the Interim Report, which do underpin some of the Report's findings and general directions, is presented in this Chapter. In particular, factual or interpretive flaws in the Interim Report are identified which we recommend are addressed in the Final Report to provide a more robust basis for government consideration and stakeholder and community understanding.

In summary, the discussion of the jet fuel market and its operation is particularly flawed and reflects a misunderstanding of that market's structure and operation. The presentation of fuel stockholdings in the Australian supply chain is misleading and unhelpful in some instances, and the description of industry operational models and trends over time in relation to commercial stockholdings is incorrect. Further, there is an underpinning rationale or inference throughout the Interim Report that the Government's market oversight, regulation, and general arrangements that apply to the electricity sector should be applied to the liquid fuel sector. This is fundamentally flawed, as discussed in Chapter G.

(1) Australia does not hold between 16- 25 days of fuels consumption cover

The Interim Report goes to great lengths (correctly) to provide a more complete picture of the fuel stockholdings held throughout the Australian supply chain, owned by Australian companies and available to Australia in the event of an emergency.

As part of this, the interim report concludes that the IEA's *"method used to count the 90-day stockholding does not capture the full picture of domestic liquid fuel security"* and the Australian Petroleum Statistics estimates that Australia averages around 80 IEA days of net import coverage.

In this context, it is therefore very disappointing for the Interim Report to then present tables like the below which represent an incomplete and misleading representation of the Australian market situation, and which have led to oversimplification or conflation by some commentators, as well as poorly informed (and factually flawed) assessments of the Australian market. This does not improve stakeholder or community understanding or confidence in the supply system.

EXTRACT **Table 1: Australian consumption days as at December 2018**

	Petrol	Diesel	Jet fuel	Crude oil
Consumption days	18	22	23	24

As the Department knows, the estimates above are simply the number of days, averaged across Australia, that the volume of a particular fuel is stored at refineries and wholesale fuel terminals, namely at one point in the Australian supply chain.

It is an incomplete and misleading picture of the total fuel volumes available to the Australian market because it does not include the significant fuel volumes held throughout the entire supply chain:

- The average volume of crude oil stored (noted above) will promptly be turned into petrol, diesel and jet fuel by local refineries extending the consumption coverage of those fuels noted above.

- The table above does not include fuel stored through the distribution and customer supply chain; that is, fuel stored at depots, major user storage tanks, service stations and indeed in the cars of motorists (conservatively 7 days on average, AIP estimate).
- It does not include the volume of transport fuels and crude oil owned by Australian companies that are on tankers on route to Australia (average 20 days ; APS estimate)
- It does not include the material quantities of contracted fuel volumes held overseas and awaiting transport to Australia (average 21 days; AIP estimate).
- It does not include the fuel stocks held by the Defence forces.

It is also a misleading picture because it is a simple 'average' number across the whole of Australia. Commercial fuel stockholdings will also vary greatly between fuels and locations around Australia depending on the presence of a refinery, fuel demand in each location, how fuel is supplied (by ship, pipeline, or truck), storage capacity, and the frequency of fuel re-supply to that location. There are many areas of Australia, particularly those serviced by a shipping cargo every few months, where stockholdings can be 50-70 days of supply reflecting this supply shipping pattern.

(2) Australia's major fuel suppliers do not hold a 'just-in-time' level of fuel stocks

The Interim Report makes the following statements and findings:

> *"Early research has indicated that fuel suppliers and some major fuel users are increasingly holding a 'just-in-time' level of stock. This has the potential to increase risk of disruption in the supply chain; however, this needs to be further tested."*
>
> *"Holding stocks of fuel costs money. The commercial imperative has driven both oil companies and major users to operate increasingly on a 'just-in-time' model, with limited stocks in reserve. This means there may be limited capacity within the supply chain for demand surge. Some users do have reserves for critical function. Large mining companies may vary stocks onsite to manage changing risks between wet and dry seasons. However, there are some users who are unprepared for disruption and maintain no fuel reserves, carrying all the risk of disruption. For some critical users, the expectation is that, in a crisis, the Government will intervene."*
>
> *"We also know the nature of the market is evolving. Early research has indicated that fuel suppliers and some major fuel users are increasingly holding a 'just-in-time' level of stock. This has the potential to increase risk of disruption in the supply chain; however, this needs to be further tested. The supply chain model being developed for the Government will allow scenario testing to better understand these risks and point to possible action to reduce those risks. Further consultation with industry and major users will also assist in assessing the level of risk. "*

While AIP agrees that a key vulnerability in the domestic supply of liquid fuels is that some major fuel users are not adequately prepared for supply disruptions through active business continuity planning (see Chapter E(2) above), AIP member companies strongly reject any suggestion that they operate in accordance with *"just-in-time"* operational models and hold *"a 'just-in-time' level of stock"*.

Just in time models are defined in terms of the elimination of inventory storage in the supply chain and the delivery of products exactly at the moment and in the location that customers need them or when the manufacturing process dictates to delivery of key inputs. This is simply not how the fuels industry operates. The current level of 'commercial stockholding' by Australian industry reflects a considered assessment of the operating conditions throughout the supply chain and the risks more likely to be encountered by refiners and others in operating the supply chain. Stock levels are reviewed on an ongoing basis to determine whether demand characteristics have altered sufficiently to warrant a change in stock levels or product held at certain locations.

There are very strong business pressures on fuel suppliers to maintain flexible, resilient and efficient supply chains. This is essential to maintaining market share and a reputation as a reliable fuel supplier and also important to maximise business viability and offer competitive fuel prices to consumers and end-users.

The industry's objective here is to reduce to an acceptable level the risks and consequences of supply disruptions - including over the longer term – and to manage working capital given the significant cost to hold much higher levels of additional stock. This involves balancing supply reliability with cost to consumers. There are commercial imperatives, which are also in the interests of consumers, for the industry not to hold excessive and unjustified inventory in parts of the supply chain (which customers do not wish to pay for). However, this does not imply that no inventory and buffer stocks are held at all, as would be consistent with just-in-time operational models.

As the Interim Report suggests, and the range of previous government reviews of fuel security have confirmed, the current level of commercial stockholdings in Australia and industry judgements around stockholdings and their management, have been fundamentally sound. Importantly, these reports confirm that commercial stocking coverage has not changed over the last decade or so and Australia has sufficient stocks on a commercial basis currently in the Australian supply chain for supply security and reliability and this will continue into the future with significant recent and planned increases in storage capacity. This is supported by industry's strong record of efficient and reliable supply and supply chain management which has seen no significant supply disruptions in Australia for decades.

Very significant fuels storage across Australia, and major growth in this storage capacity over time as highlighted in the Interim Report, directly conflicts with the concept of 'just-in-time' operational models. The Interim Report also states that:
"the way industry is managing storage appears to have changed in the past two decades and moved to a 'just-in-time' model around the early 2000s. This does provide cost efficiencies by ensuring fuel keeps moving throughout the distribution network rather than waiting in storage tanks. For the first time, the Department will be able to test the robustness of this approach through the use of the supply chain model. When completed, this will enable the Department to better understand current storage capacity and use and how this supports response to disruptions like a surge in demand during a good agriculture harvest season."

As noted above, AIP member companies do not hold 'just in time' level of stocks.

The industry has structurally changed over the last two decades with the closure of some domestic refineries and the resultant growth in imports which has provided more flexible inventory available on the water at any time to move where it is needed most domestically. There have also been significant changes in the sources of crude oil and petroleum products imported into Australia, as can be observed from Australian Petroleum Statistics Data, which has changed industry supply programming and stockholding management. This has provided further flexibility to the supply chain, and broader available options to consider in the event of supply disruptions.

The change in the structure of the domestic industry, including the increased participation of independent fuel suppliers and Australia moving to a structural importer since 2003, together with increased diversity of supply available to the Australian market (including closer proximity sources), would explain any observed data trends, not a conscious effort to move to a "just-in-time' operational model.

As noted above, the way "*industry is managing storage"* is by building more of it to meet growth in demand and their customer needs and the level of stock coverage held in this storage capacity has not changed over the last decade – both conclusions confirmed in the Interim Report.

Once again, AIP and its member companies welcome future consultation on the 'supply chain model' to ensure it is robust and market reflective and not based on flawed assumptions of industry operations.

(3) The jet fuel market is highly competitive in Australia

AIP members companies are very significant and long-term suppliers of jet fuel to the Australian market, through their integrated jet fuel supply chains including the production of jet fuel at their local refineries, sourcing of jet fuel from the Australasian region, the transportation and distribution of jet fuel through shipping, pipeline, trucking and storage operations, and the operation of specialised hydrant pipeline systems at major airports including aircraft into-plane refuelling services.

Their participation in the jet fuel supply chain requires very significant investment in specialised infrastructure, both at airports and upstream of airports. This infrastructure includes refineries, ports, wharves/berths, discharge facilities, pipelines to terminals, jet fuel storage tanks, underground hydrant pipeline systems at airports (referred to as a Joint User Hydrant Installation or JUHI Joint Ventures), and into-plane refuelling vehicles. Other key services that support the supply of quality jet fuel to the market include fuel testing laboratories who help to facilitate the release of fuel to the market.

AIP member companies have the operational and technical expertise required to own, maintain and operate this specialised and often dedicated jet fuel infrastructure, as well as the detailed knowledge on handling and dispensing of jet fuel that meets the high-quality standard required in the aviation sector. This expertise, as well as best practice approaches and technologies, also flows naturally from global affiliates to some of these local market operators.

AIP member companies are therefore very well positioned to provide expert advice on the Australian jet fuel supply chain and market.

AIP member companies and JUHI JV's have provided extensive information to the current Productivity Commission Review of the Economic Regulation of Airports which supports the current competitive market for jet fuel supply in Australia (see https://www.pc.gov.au/inquiries/current/airports-2019/submissions).

Fundamentally, the diversity of available sources of jet fuel into and within Australia means the market is flexible and reliable, and with significant competitive tension and discipline in the supply chain. There are competitive tender processes for fuel suppliers to supply jet fuel at airline wingtips and rounds of bids and negotiations. This highly competitive and regular tendering process underpins competitive pricing outcomes for airlines, both domestically and internationally. There are no barriers to, and it is not uncommon for, airlines to switch their fuel supplier or split their volume amongst different suppliers as a result of this tendering process. This is a demonstration of a competitive, dynamic environment.

In summary, the consistent conclusion from this industry information is that the market for jet fuel in Australia is highly competitive, as the current market enables new entry and switching to alternative jet fuel suppliers, both of which create significant competition, including downward pressure on prices. This is underscored by the fact that at every step in the supply of delivery services, as well as the supply of jet fuel itself, sellers of jet fuel can choose to import or purchase from domestic suppliers, they can choose to transport jet fuel to airports via truck or pipeline investment, they can choose to access JUHIs or pipeline JVs as equity members or on a fee for service basis where available. They can also choose among an extensive range of alternative service providers for 'into-plane' fuel services.

On the basis of this evidence, AIP member companies strongly reject the statement in the Interim Report that the characteristics of the jet fuel market *"have enabled incumbent fuel suppliers to restrict competition which may contribute to higher prices".* See comments below in (5) in relation to jet fuel prices.

(4) JUHI's JVs are not bulk fuel terminals who sell jet fuel and determine prices

In summary, the Interim Report incorrectly states that JUHI JVs are bulk fuel terminals selling jet fuel to airlines, engaging in spots sales, and determining jet fuel prices charged to airlines.

"A Joint User Hydrant Installation (JUHI) is a terminal where jet fuel is distributed at airports for aeroplane consumption." ……"The JUHI operator will then enter into individual contracts with airlines. They will also undertake spot sales." ……."Spot market sales account for a small proportion of the market and are more common in jet fuel purchasing."

These market descriptions are factually flawed, and reflect a misunderstanding of the tightly defined 'infrastructure service role' played by JUHI JVs in the supply of jet fuel at airports.

All submissions to the PC Inquiry by JUHI JV operators across all the major airports have detailed the structure, basis and international protocols governing the operation of JUHI JVs and their infrastructure. This JUHI JV structure and operation is not unique to Australia, ands is used extensively at major airports across the world.

Largely without exception, the key features common across all JUHI JV facilities, include:

- the JUHI JVs are unincorporated JVs comprising different companies
- the JUHI JV members (and any new members) all participate on an equal footing with the same rights and obligations as all participants, and any interested parties can apply for membership
- the JUHI JVs own and operate the jet fuel infrastructure located at major airports (i.e. the storage tanks and the hydrant system which connects the storage tanks to the airport apron)
- the JUHI JVs themselves do not play a role upstream of the JUHI tank farm at the airport
- the JUHI JVs are not commercially involved downstream in provision of into-plane services at airports
- the JUHI JVs are not commercially involved in sales of jet fuel to airlines
- the JUHI JVs do not own the jet fuel that the infrastructure facility is transferring
- the JUHI JV takes deliveries of jet fuel that meets an appropriate specification to be supplied to aircraft, which is commingled with other jet fuel deliveries in the JUHI system; the critical importance of conformance to fuel quality specifications is outlined below
- the primary focus of JUHI JVs is operational efficiency and supply reliability, and timely investment and robust quality controls to support these objectives
- the JUHI JV maintains a strict confidentiality protocol amongst JV members, which is adopted from a global standard, provided by the Joint Inspection Group or JIG (see http://www.jigonline.com/).

In simple terms, JUHI JVs are infrastructure operators and owners, who store and transfer jet fuel on-airport on behalf of fuel suppliers. Jet fuel is delivered to JUHIs by multiple fuel suppliers by pipeline and or truck, it is then quality assured, stored and transferred by the JUHI at the airport, and then supplied directly into aircraft by separate 'into-plane' service providers of which there are multiple.

In the context of the above, particularly the fact that JUHI's are not bulk fuel terminals and jet fuel prices are based on international prices and are determined between airlines and fuel suppliers through commercial contract negotiations through regular and competitive market tenders domestically and globally, the concept in the Interim Report of extending of the publication of Terminal Gate Pricing under the *Oil Code 2017* is not relevant in this market and is obviously not supported by industry nor potentially by airline customers.

(5) Jet fuel pricing is not different from other fuels in Australia

Interim Report makes the following claims in relation to jet fuel pricing, and AIP's response to these follow.

"Jet fuel pricing is treated differently from other fuels in Australia."

"The Australian Competition and Consumer Commission (ACCC) provides an important role in monitoring petrol and diesel prices, but this is limited by the directions provided by Government. At the moment, there is not the same scrutiny applied to jet fuel pricing. Travellers and cargo owners bear this cost through rising ticket and freight costs."

Jet fuel pricing in Australia is market based and competitive.

As noted in a number of industry submissions to the PC Inquiry, there are competitive tender processes for fuel suppliers to supply jet fuel at airline wingtips and rounds of bids and negotiations. This highly competitive and regular tendering process underpins competitive pricing outcomes for airlines, both domestically and internationally. There are no barriers to, and it is not uncommon for, airlines to switch their fuel supplier or split their volume among different suppliers as a result of this tendering process. This is a demonstration of a competitive, dynamic environment.

AIP member company submissions have provided detailed information on price differentials, the relevance of comparisons to other airports, and on the standard components making up the delivered price of jet fuel to airlines in Australia.

In particular, the components of the jet fuel price offered to airlines under competitive tenders has been detailed and the key components include:

- **Product Cost of jet fuel**
    - This is a market determined and transparent price. The Mean of Platts Singapore (MOPS) price is the key jet fuel pricing benchmark for Asia-Pacific including Australia and is published daily.
- **'Landed' Costs**, including:
    - ocean freight – shipping cost to Australia (determined by market shipping rates)
    - forex exposure – all products (including jet fuel) are priced internationally in US dollars
    - product insurance and loss
    - wharfage costs, demurrage and surveyors' costs
    - infrastructure costs used for jet fuel discharge (e.g. terminals, pipelines, storage tanks).
    - quality control testing of jet fuel imports and refinery production
- **Transport costs to the Airport (whether by pipeline or truck)**
    - Costs of transporting jet fuel from import terminals/refineries to airports
- **On-Airport costs,** including
    - Storage costs at the airport
    - Cost of moving jet fuel into and through the airport (e.g. by pipeline or tanker) including JUHI costs, lease costs and any Airport throughput fees
    - Into-plane service costs
    - insurance costs and quality control testing of jet fuel.

AIP notes that the ACCC uses an 'import parity price' (IPP) indicator for petrol and diesel that represents the notional cost of importing fuel to Australia (including 'product' and 'landed costs'). As stated in member company submissions, the components of a notional import parity price for jet fuel are very similar to this.

As outlined in member company submissions and in engagements with the PC, and similar to the price of other transport fuels in Australia, the largest single cost component (typically > 90%) of the price to bulk fuel customers is the 'product cost', which is determined by international markets (Singapore MOPS price). The Singapore price plus the 'landed costs' noted above represent almost the entire price – typically around 95%. The remaining share is accounted for by transport costs to the airport and on-airport costs and fees, and a margin where competitively possible.

To support this assessment, for example, the Viva Energy submission provides a breakdown of the average jet fuel price for Sydney Airport for 2018 (see Chart 1, page 3) and also the Mobil submission provides a derived jet fuel cost analysis for Melbourne airport (see Figure 4, page 9).

Jet fuel price differentials between international airports can largely be explained by variances in freight/landed costs, transport costs to airports, scale and volume, and on-airport costs. Variances in these costs will largely be explained by relevant freight distances, and the specific characteristics of the local fuels supply chain servicing each airport (for example, how jet fuel is transferred, the distances and infrastructure involved, and jet fuel demand at the airport which will determine the scope for economies of scale).

For these reasons, simple comparisons of price differentials across airports, including internationally, cannot inform a robust assessment of price competition for jet fuel supply at a specific airport.

AIP recommends that the Department consult with the fuels industry, and indeed await the final PC Inquiry Report, before making further commentary or recommendations in relation to the jet fuel market.

I. NEXT STEPS

AIP and its member companies would welcome the opportunity to discuss any aspect of this submission with the Department and other government stakeholders.

We look forward to consultation with our industry on the range of consultant reports and supplementary analysis already produced for the Department which underpin the Interim Report, and to consultation on the ongoing workstreams identified, including the supply chain mapping model, the review of the LFE Act and the risk assessment work and analysis.

We hope that the information provided in this Submission, and subsequently, will lead to a robust final report being provided to Government and the community.

We are happy for this submission to be made publicly available.