



Australian Government

**Department of Industry, Science,
Energy and Resources**

Securing Australia's Domestic Fuel Stocks and Refining Capacity Regulation Impact Statement

May 2021

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Executive Summary

Liquid fuel security is about making sure that Australia has the fuel it needs to meet our economic, environmental, social and national security objectives. For many Australians, fuel security means having the confidence that there will be enough fuel for their journey to work, and ensuring that businesses large and small can keep running day to day. It also means knowing that when things go wrong, there is a plan in place to keep Australia moving.

The Fuel Security Package, first announced by the Prime Minister and Minister for Energy and Emissions Reduction on 14 September 2020, is being implemented in 2021 to increase Australia's fuel security, stimulate employment, secure our sovereign refining capacity and keep prices low for fuel users. The Package includes:

- Creation of a minimum stockholding obligation (MSO) to safeguard key transport fuels, including increasing diesel stocks by 40 per cent
- Investment of \$200 million in a competitive grants program to support up to 50 per cent of the costs of construction to assist industry in meeting the additional diesel stockholding obligation.
- A Government-funded adjustable production payment for refiners, in recognition of the fuel security benefits domestic refineries provide Australia
- A Temporary Refinery Production Payment Program to provide interim support to domestic refiners until such time as the permanent production payment is in place
- Co-investing with domestic refiners to undertake the necessary infrastructure upgrades required to provide better quality fuel
- A plan to modernise emergency and fuel reporting legislation.

The Package ensures Australia is in a position where, under any scenario, fuel is available to those who need it. A sovereign refining capacity helps to maintain our fuel security and shields us from potential shocks in the future.

This Regulation Impact Statement (RIS) examines the MSO, permanent production payment and funding for refinery upgrades. The RIS focuses on the impacts of implementing these new measures and the associated regulatory burden.

This RIS was prepared and lodged with the Office of Best Practice Regulation for interim assessment as part of the 2020-21 Budget. At the point where the RIS supported the announcement of a decision and enabling legislation, this RIS was finalised and progressed through first and second pass assessment.

This RIS does not assess all the measures which form part of the Package. The modernisation of emergency and fuel reporting legislation will require new legislation and will be assessed at a later point.

This RIS also does not assess information relating to previous decisions by Government, including Australia's return to full compliance with our International Energy Agency (IEA) obligations by 2026 and previous changes to fuel quality standards.

1. What is the problem that Government is trying to solve?

Liquid fuels underpin Australia's economy, particularly in the critical sectors of mining, agriculture and manufacturing. More than half of the total energy Australians use comes from liquid fuels. Growth in liquid fuel demand in Australia is much higher than that of countries with similar economies. Prior to the COVID-19 pandemic, Australia's demand for liquid fuels grew by an average of 1.8 per cent per year over a 10 year period to 2018-19, outstripping population growth. Over the same period, diesel demand grew by 5.0 per cent per year (DISER 2020a). The Australian economy is now experiencing a strong recovery from the COVID-19 downturn, with fuel consumption projected to grow over the coming years. Concurrently over the last decade, the domestic production of liquid fuels has been in decline. Recent announcements of impending closures mean that soon only two domestic refineries will remain, leaving Australia reliant on imports for around 80 per cent of our refined products.

While Australia's international supply chains for liquid fuels are diverse, our reliance on the import of refined products for domestic fuel security means that Australia is potentially vulnerable to moderate to severe supply chain disruptions, particularly across the Asia-Pacific region. Sourcing 98 per cent of its energy from liquid fuels, Australia's transport sector represents 69 per cent of Australia's liquid fuel demand. Transport is therefore highly exposed to supply disruptions and has limited alternatives. The mining and agricultural sectors are particularly dependent on the reliable supply of diesel for their operations, representing 10 per cent and 4 per cent of Australia's total liquid fuel demand respectively (Figure 1). Furthermore, some remote regions rely on liquid fuels to generate electricity.

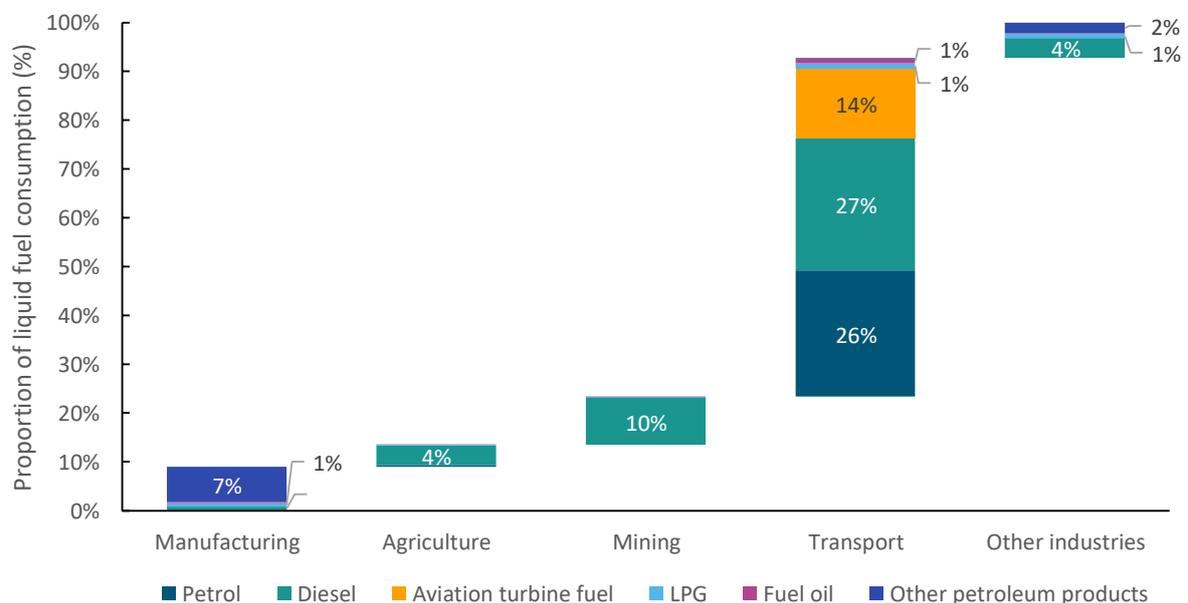


Figure 1: Liquid fuel use per sector as a share of total share of total liquid fuel consumption, 2017–18

Businesses, both fuel suppliers and large fuel users, manage market risks through long-term contracts or maintaining their own stocks. These mechanisms have worked well and add stability to the market under normal market conditions.

However, a major disruption to liquid fuel supply would result in significant impacts to the Australian economy. In the event of a total stoppage of supply, Australia's GDP is estimated to fall over a six-month period by 31.8 per cent, which is equivalent to a reduction of around \$225 billion.

Policy consideration of Australia's liquid fuel sector is centred on the appropriate management of future risks and ensuring we are prepared for supply disruptions, should they arise. Improving Australia's fuel security will increase our self-sufficiency during emergencies. This strategy includes reinforcing fuel supply chains, increasing strategic storage capacity, and retaining the refining capability required to maintain critical services to ensure Australia is prepared for future supply disruptions.

In a worst case scenario, Australia may not be able to import liquid fuels. Having a domestic refining capability means that, in a large-scale emergency, Australia is able to refine the crude oil that is produced in the country to maintain liquid fuel supply for critical services. The fewer onshore refineries we maintain, the more vulnerable Australia is to supply shortfalls (see Table 1).

Proportion of demand that supports critical services (% normal demand)				
		Demand that supports critical services		
	Diesel	16%		
	Petrol	4%		
	Jet	6%		

Critical services includes: Emergency services, public health care, pharmaceutical and medical; telecommunication, distribution of water and sewerage; food and essential goods; gas, electricity and fuels; domestic agricultural production etc.

Fuel	Consumption days	Diesel keeps the country going in an emergency. This is how long Australia can support critical demand with no imports using domestic crude		
		No refineries	1 Refinery	2 Refineries
Diesel (2018-19 levels)	20	125	207	465
Diesel (+ 8 days)	28	175	290	651
Petrol (2018-19 levels)	24	600	indefinitely	indefinitely
Jet (2018-19 levels)	24	400	indefinitely	indefinitely

The analysis contained in Table 1 was conducted in mid-2020 when four refineries remained in operation in Australia. There are many underlying assumptions and uncertainties underpinning the analysis, including: the mix of crude oil and condensate refined; the proportion of refined products produced; the amount of flexibility in production levels of refined products; and the order of closure of refineries.

Table 1: Refineries' contribution to support demand in a no-imports scenario

1.1 The continuing importance of liquid fuels

Projections show that liquid fuels will continue to remain important beyond 2030. Even under modelling of highly unlikely events, diesel demand is expected to remain critical for all sectors of the economy over the next decade.

By 2030, the Department of Industry, Science, Energy and Resources' (the Department's) Emissions Projections 2020 report forecasts battery electric vehicle sales to reach 26 per cent of annual new vehicle sales (DISER 2020b).

While increased use of electric vehicles can reduce the demand for petrol, it does not yet pose a viable alternative to substantially reduce diesel demand over the medium term. Analysis to date shows that even in countries with high electric vehicle adoption, such as Norway, the correlation with a decrease in diesel demand is not established.

Of all the major transport fuels - automotive petrol, automotive diesel and aviation turbine fuel (jet fuel) - diesel is the most important for all Australians, as it underpins the economy (including road and rail freight, mining and agriculture) and critical services, and helps people get through emergencies. For example, diesel is critical to:

- Fire and ambulance services: vehicle fuel
- Elements of the defence forces: vehicle fuel and some naval capabilities
- Distribution of food and medicines – heavy transport fuel, road and rail
- Backup electricity generation: hospitals, water supply and sanitation
- Large-scale liquid-fuel fired power system generators: ensuring sufficient generation capacity for peak demand, reserve generation for emergency use, and as the only source of electricity smaller remote off-grid communities.
- Utilities: water and sewerage, telecommunications, waste, and electricity and gas transmission and distribution services
- Public transport: bus, rail, ferry and taxi services fuel if private vehicle use needs to be restricted

However, diesel is also the fuel which has the lowest level of consumption cover (see Figure 2). Consumption cover¹ is a measure of how long refined products would last if all supply was cut off and demand continued at normal levels. Consumption cover is an appropriate measure of Australia's fuel stocks, as it counts stocks based on how many days they will last under normal demand. Consumption cover does not count fuel held at service stations or in people's vehicles; therefore, actual days of cover may be higher. Over the last decade, the trends in consumption cover of petrol, jet fuel and diesel have been different (see Figure 2). Petrol consumption cover has steadily increased; jet fuel has remained relatively stable; and diesel has increased over the last five years after bottoming out mid-decade.

¹ Consumption cover is different to IEA days. IEA days is a measure of our import dependence, and is measured against our obligation under the IEA Treaty to maintain stocks equivalent to 90 days of our annual net imports.

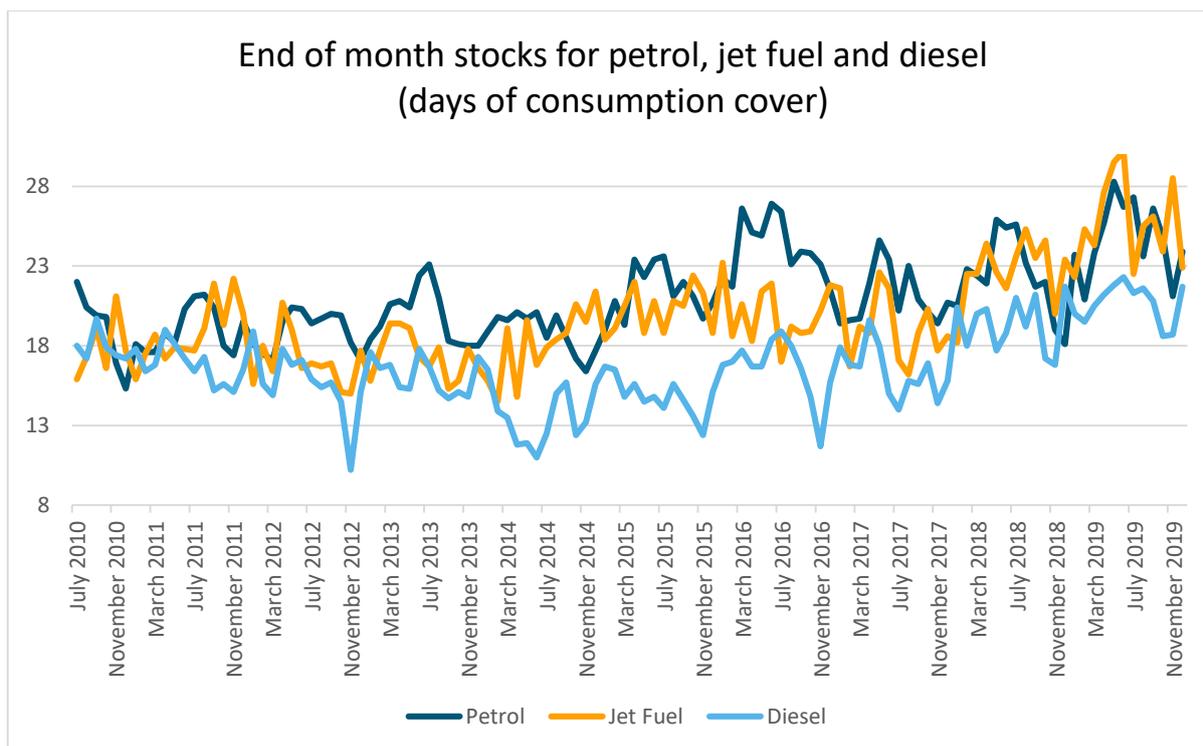


Figure 2 Month end consumption cover stocks for petrol, jet fuel and diesel in Australia.

Source: Australian Petroleum Statistics December 2019

The decade low point of 10 consumption days for diesel stock (November 2012) coincides with the unscheduled outages at both Melbourne refineries which resulted in a significant drop in diesel production and led to some stock outs in Victoria. The low diesel stocks in November 2016 (12 consumption days) coincides with unexpectedly high demand from the agricultural sector due to a bumper crop. Most agricultural fuel is purchased on the spot market.

Localised disruption events do not have a large impact on fuel prices, which are based on import parity pricing and are dominated by global oil prices. During the low diesel stock events in 2012 and 2016, there were no reported impacts on the price of fuel.

1.2 Refinery capability

Maintaining a domestic refining capability remains strategically valuable for Australia, allowing it to increase its resilience to supply chain shocks. However, Australian refiners are facing increased competition from regional refineries with more modern technologies. Since 30 October 2020, two refiners have announced the closure of their Australian facilities. Without Government intervention, more closures are likely, leaving all Australians vulnerable when our critical services (which include emergency services, utilities, food production and distribution) could be subject to shortages in the event of a severe supply disruption.

Global refining capacity has been increasing, with refining centres concentrated in the Middle East, China and India. Forecasts suggest that existing and planned refineries will meet and exceed the world's demand for refined products into the 2030s. The reduction in domestic and international travel in response to the COVID-19 pandemic has exacerbated

the global oversupply of refined product by causing a collapse in demand, which is likely to be prolonged (McKinsey 2020).

Comparatively, Australian refineries are relatively small, old and less complex than the export-oriented refineries internationally. They also experience higher labour costs than their competitors. In current market conditions and in base case demand scenarios, they do not generate sufficient returns for the owners to invest additional capital in turnarounds and upgrades. Given this, there is a need to reduce our vulnerability to supply disruptions and insure against forecasts suggesting a medium to high probability that all Australian refineries will close within the next 10 years (McKinsey 2020). The prolonged collapse in global demand is holding refining prices down and putting additional pressure on Australia's already struggling refining sector.

Australian refiners are also facing expensive infrastructure upgrades in the next decade. In 2018 the former Minister for the Environment regulated improvements to fuel quality standards, to progressively come into effect between 2019 and 2027. The 2027 change to the petrol standard will require refiners to conduct major infrastructure upgrades to deliver ultra-low-sulfur petrol (≤ 10 ppm sulfur). Given the financial hardships refiners are currently faced with, it is unlikely that refiners will be able to justify the cost of the major infrastructure upgrades necessary to supply ultra-low-sulfur petrol. These impending upgrades are placing further pressure on refiners' commercial viability.

In 2019, our refineries processed imported and domestic crude oil and provided 47 per cent of refined products in Australia. This domestic refinery production comprised 61 per cent of our petrol, 30 per cent of our diesel and 41 per cent of jet fuels (DISER 2021). As BP and ExxonMobil close their refineries this domestic production will reduce. The remaining refineries are currently running at about 90 per cent capacity. This means there is very little capacity to increase production in response to a surge in demand.

While refiners were already under financial pressure, the COVID-19 crisis was the final trigger for the closure of the BP and ExxonMobil refineries. In the current low demand, low margin conditions, both companies assessed that their Australian refineries were not currently financially viable and that no level of Government support would alter these closure decisions. Recent announcements from the remaining refiners, which are both ASX listed, have highlighted significant financial losses. In 2020, Viva Energy reported financial losses from refining of \$95.1 million. Given refining profits totalled \$117 million in 2019, this was an overall loss of \$212 million compared with the previous year. Ampol incurred a refining loss of \$76 million in 2020 at their Lytton refinery, which included the cost of bringing forward planned maintenance. As at May 2021, Ampol is conducting a comprehensive review of its Lytton refinery and related supply chains to determine the best operating model over the medium term. The review is expected to be concluded by the second quarter of 2021.

The loss of domestic refineries would have further adverse consequences for Australia, including:

- the loss of our ability to refine domestic crude oil, if required
- putting the petrochemical industry, particularly in Victoria, at risk.

Modelling of the supply chain and testing of disruption scenarios showed that refineries have an important strategic role to play in our fuel security. In a country that relies on imports and that has long supply lines, refineries can assist in managing contaminated fuel loads, particularly for jet fuel. Some terminals are able to filter contaminated fuels and, if further

refinement is required, Australian refineries can return product to the market quickly. Without domestic refineries, this product would need to be returned to regional refineries in Asia. As noted earlier, domestic refineries can also help in emergencies by ensuring Australia is able to refine the crude oil that is produced in the country, to maintain liquid fuel supply for critical services.

1.3 Domestic stockholdings

Australia is heavily reliant on commercial stocks of crude oil and refined products to maintain fuel supplies. The use of commercial stocks provides an effective buffer in the case of minor disruptions, however fuel companies do not hold sufficient stocks to cover moderate to severe disruption events. This means that during a national liquid fuel emergency, resilience depends on sufficient supplies being held by industry, placing Government and consumers at risk.

While some major users (such as mining companies and the agricultural sector) hold their own stocks, many users hold limited stocks, expecting that either fuel suppliers will deliver what they need—even in disruptions—or that the Government will step in. Setting a minimum stockholding obligation (MSO) is a common international practice, and will provide industry, users and governments with confidence about the level of risk and redundancy in fuel supply. It will also provide the Government with the ability to make effective decisions in the case of severe shortages. During an emergency, Government relies on the commercial assessments of companies as part of their decision-making process. The MSO adds an extra 'tool' to the Government's response options and gives us greater oversight of actual stock levels.

The MSO is becoming more important as the number of domestic refineries reduces. As the country transitions to a market with two domestic refineries, Australia no longer has indefinite protection against supply shortages. As outlined in Table 1, in a situation with no imports, critical diesel demand using domestic crude is supported for a finite time. This table demonstrates how the MSO increases the time Australia can keep the country going in an emergency. If another refinery were to close, the MSO would become even more critical to sustaining Australia's fuel supply, and the Government could consider increasing the MSO to take this into account.

In 2018–19 Australia sourced crude oil from 40 countries, with 90 per cent sourced from 10 countries. Australia has about 0.3 per cent of the world's oil production but only 0.2 per cent of proven global reserves with reserves depleting faster than they are being replenished by new discoveries. In 2017-18, oil exports brought in \$5.2 billion to the Australian economy. Our largest crude oil supplier was Malaysia, followed by the United Arab Emirates, Brunei Darussalam, Algeria and Indonesia (DISER 2020c). Australia sourced refined product from 66 countries, with Singapore providing the largest amount, followed by the Republic of Korea and Japan. As with crude, we have a diversity of supply, although the majority of refined product was sourced from a small number of countries (80 per cent of refined product from five countries (DISER 2020c); see Figure 3).

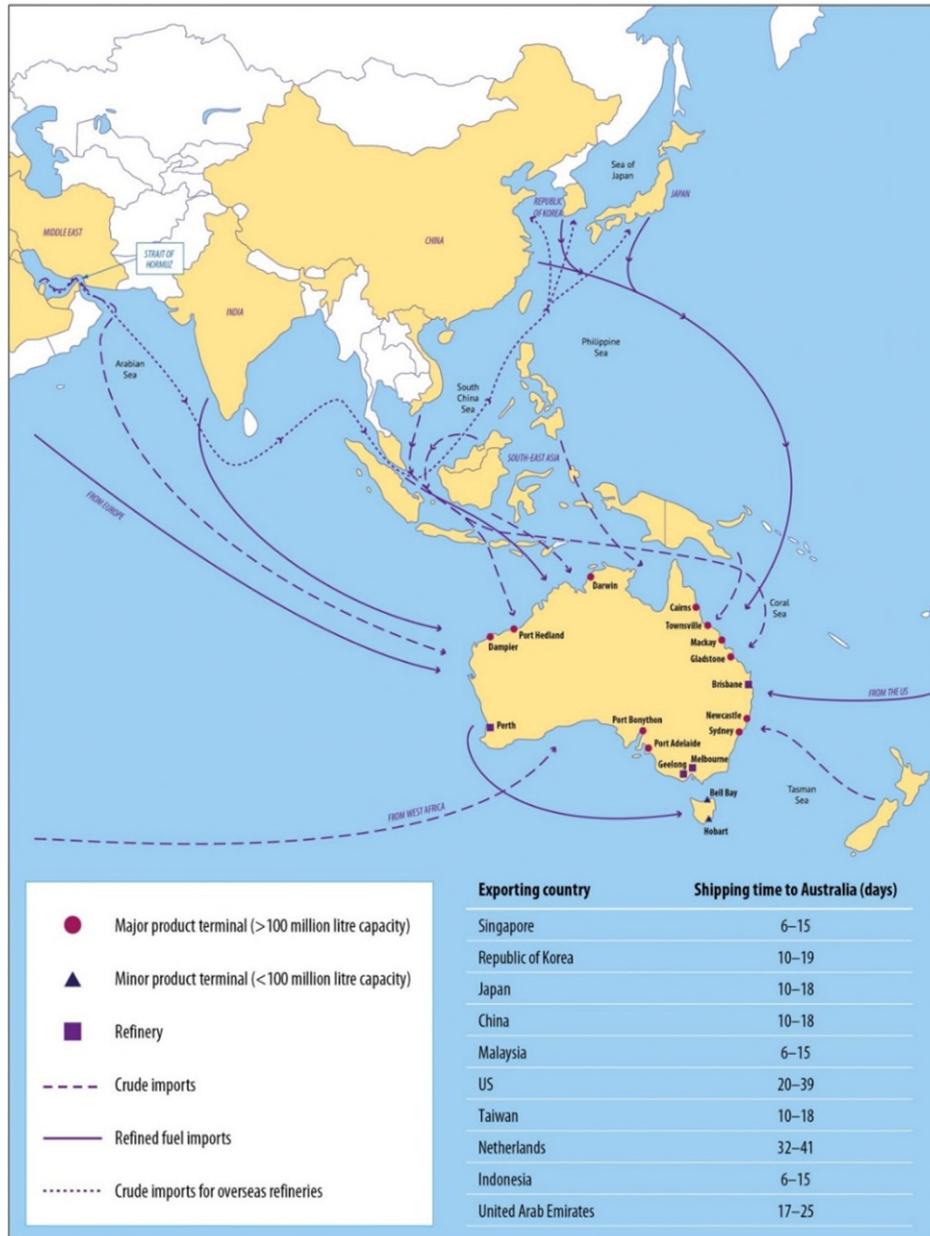


Figure 3 Major oil import routes to Australia

1.4 Historical disruption events

From 1990 to 2019 there were no major supply disruptions that impacted Australia. However, there were three international events during this period that precipitated the IEA's to call for collective action releases of oil/fuel stocks².

None of these global events directly impacted Australia's fuel supply chains, but they did lead to varying short-lived price impacts in benchmark oil markets.³ As these types of events are relatively localised, their impacts on global oil and petroleum markets are moderated by the sheer size, diversity and flexibility of the global markets and supply chains.

² The Iraqi invasion of Kuwait (1990-91); Hurricane Katrina in the US Gulf (2005); and Libyan unrest (2011).

³ \$15, \$10 and \$25 USD/bbl increases respectively.

Disruption scenario modelling suggested that an unprecedented event would need to occur to significantly impact on fuel supply in Australia at the national level. We cannot predict what might happen in the future, hence the need for mechanisms, such as the MSO, that effectively provide insurance against possible future disruptions.

1.5 Expanding stockholdings

Fuel stocks on land and en route to Australia are fundamental to normal supply operations and for managing unexpected supply disruptions. Individual fuel supply companies balance supply and demand within their supply chains through a number of means.

Petroleum businesses maintain a “pipeline” of supply to meet their contracted volumes and anticipated non-contract sales volumes. These volumes are managed by balancing capacity and throughput in storage facilities/terminals with the fuel coming from refineries and international shipments.

Storage capacities can be effectively operated within a range of utilisation rates before increased demand/throughput necessitates more storage capacity being built. For bulk fuel deliveries, more frequent cargoes can offset the need to invest in new storage capacity, delaying new capital and operational expenditures. It is prudent for commercial businesses to maximise the return derived from their assets and to avoid overcapitalising too early. In a competitive market, businesses will naturally seek to minimise their costs to remain competitive and strengthen profitability.

There is evidence industry has changed the way it manages storage capacity in the past three decades with lower volumes of commercial refined product stocks relative to total consumption. Figure 4 shows the average month end consumption cover of refined petroleum stocks since 1990. This figure shows a weighted average of all refined fuels.

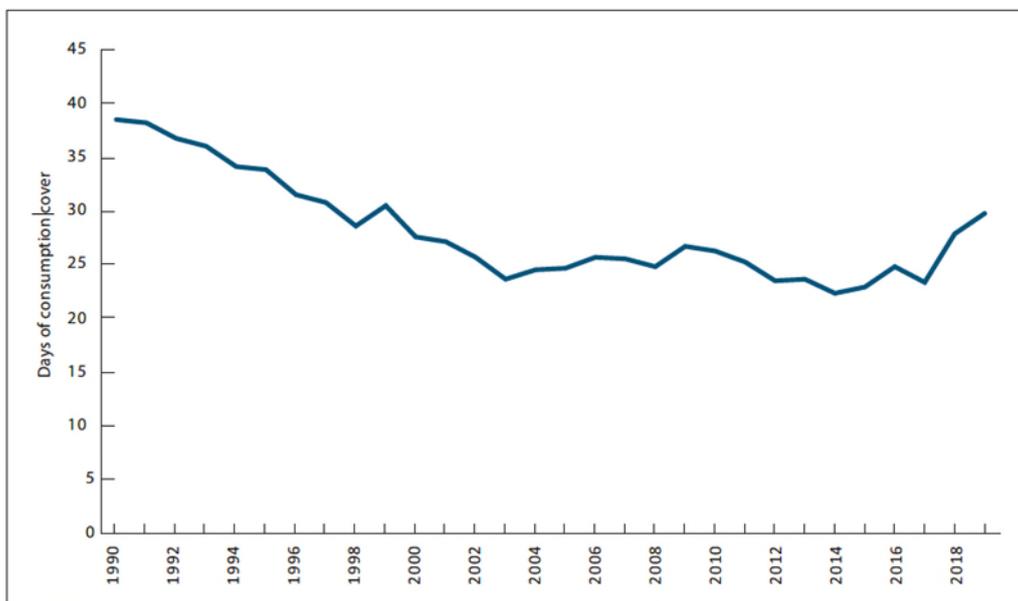


Figure 4 Month end average consumption cover stocks of all refined petroleum products.

Between 1990 and 2003 a declining trend in consumption cover stocks is observed before a relatively consistent level of consumption stocks is maintained (albeit at a lower level) through to mid-2017. Since mid-2017 there has been an increase in average consumption cover stocks across the average of refined petroleum products.

The recent increase in stocks does not necessarily reflect an improvement in fuel security, Two of the main factors behind the recent increase in consumption cover include mandatory stock reporting (since 2018) and the closure of three domestic refineries between 2012 and 2015. Refinery closures have been accompanied by conversion to import terminals, which hold higher levels of refined product stock than terminals supplied by refineries. Unlike refinery terminals, which receive a continuous supply of product, import terminals need to hold sufficient stock to manage the arrival of shipments, typically every one to two weeks.

In the 2020-21 Budget, the Government agreed to implement a regulated fuel security obligation to set a minimum level on fuel stockholdings. It was proposed that the minimum for Australia's jet and petrol stocks be held at a level equivalent to pre-COVID-19 consumption levels, with diesel stocks to increase by 40 per cent by 2024. This reflects the importance of diesel to the economy. It is also the fuel that our refineries have the lowest capacity to produce.

The MSO will alleviate the risks to fuel supply currently borne by consumers as the result of Australia's sole reliance on industry to manage disruptions.

2 Why is Government action needed?

Government action is required to mitigate the risk of a shortfall in liquid fuel supply in the event of a significant disruption event. It acts effectively as insurance against shocks that would otherwise cause significant economic damage. While businesses are well placed to manage direct risks to their operations, Government is better placed to manage whole of economy risks. Building resilience to such events requires the Government to maintain domestic refining capacity and increase fuel stocks.

2.1 Securing domestic refining capacity

Government is well placed to provide the external intervention required to ensure domestic refineries remain viable while refinery market conditions remain poor (due to low refinery margins). This is consistent with the Government's commitment to Australia's liquid fuel security, safeguarding our economy, national security and job creation by supporting the ongoing operations of domestic refiners. Refiners play a unique role in maintaining Australia's fuel security, which can never be delivered by fuel stockholdings alone.

Since October 2020, two refiners have announced the closure of their Australian facilities, and the remaining two refiners face a medium to high risk of closure. Without Government intervention these closures become more likely.

2.2 The need to increase fuel stocks

There is currently no commercial incentive for entities to hold fuel stocks to cover for low likelihood, high impact events. Individual businesses do not generally mitigate against whole of market risks or take steps to hold stocks that would offer contingency against a significant disruption to a competitor's supply position. While market participants do occasionally trade with each other to alleviate small supply pressures, this is not a viable mechanism to protect consumers in the event of a large scale disruption. One existing lever is the *Liquid Fuel Emergency Act 1984* (LFE Act) which empowers the Minister responsible for Energy to issue directions to fuel industry corporations in the lead-up to, and during, a declared national liquid fuel emergency.

However, the LFE Act is not intended to be used to manage minor or intermittent supply shortages. Most of the disruptions and resulting shortages that Australia has experienced have been localised at state or territory level. If the market or industry do not resolve the disruption, state and territory governments may become involved. In the event that industry and states or territories are unable to resolve the fuel shortage, the Government can intervene as a last resort to manage the disruption using special emergency powers under the LFE Act.

The powers under the LFE Act are intended to be used where the consequences of a disruption are of a national scale or the disruption is beyond the capacity of the fuel supply industry and relevant State and Territory governments to manage without support.

Around the world, many other developed nations, including IEA members, China, and non IEA member European Union members have built and maintained fuel stockpiles over a number of years to protect against fuel market disruptions. Appendix A outlines the emergency stockholding approaches in IEA member nations.

The Government can improve Australia's fuel security by improving resilience to shocks, reinforcing supply chains and taking steps to minimise supply impacts in emergencies.

Based purely on growth in demand prior to 2020, diesel and jet fuel are the key fuels where the market will need to be proactive in managing stock levels, storage capacity and throughput to continue to reliably meet demand growth into the future. While petrol demand is slowly declining, it remains a key transport fuel and careful management of petrol stock levels will remain of ongoing importance.

The COVID-19 pandemic has highlighted the limited flexibility in the fuel storage market in Australia. The demand destruction in jet fuel caused by COVID-19-related travel restrictions created a significant oversupply of jet fuel, with inadequate storage available. This resulted in refiners taking measures such as adjusting production to reduce jet fuel supply, reducing refinery operations and bringing forward maintenance schedules. The Government also allowed temporary changes to the diesel standard to enable the refineries to reduce jet fuel production.

The size and portfolio of fuel types for potential domestic emergency fuel stockpiles would need to be carefully considered on a cost benefit basis, and be calibrated to the Government's evolving risk assessment processes and risk appetite. Increasing diesel stocks is a priority as it underpins a wide range of economic activity including road and rail freight, mining and agriculture, and is a vital in supporting a number of critical services as outlined earlier.

Consumption cover stocks of key fuels in Australia vary by fuel type over time in response to delivery/production schedules and demand trends. Market participants make commercial decisions on what level of contingency they maintain in their supply chains. Fuel consumers do not have visibility of their exposure to shortages of supply or of supplier's actions to ensure secure supplies. Aggregated consumption cover statistics published in the APS Report six weeks in arrears does not assist with understanding business to business risk transfer. Lean commercial operations can be a source of competitive advantage, however there may be increased risks to reliable supply from taking this approach.

There is a role for the Government to regulate the minimum level of specific fuel stocks that must be maintained at all times by certain segments of the fuel market. This would provide certainty to fuel consumers and governments that a minimum quantity of fuel is always maintained, in proportion to demand. This could be applied to certain businesses based on their volume of sales, which would be similar to approaches in other countries that have adopted industry stockholding obligations.

3 What policy options are under consideration?

The reforms being considered in this RIS seek to improve Australia's fuel security for the medium-term through carefully balancing the risks with the cost of implementation.

In light of this mounting pressure on our refining sector, a new market and regulatory framework was developed, and put forward for Government consideration, containing two key elements:

1. The setting of a MSO to establish a floor – a minimum level of held stocks – for different fuel types to provide certainty of oil stocks in Australia.
2. Measures to provide support to refiners, financial or non-financial, to lock in their continued operation until at least 2027.

3.1 Maintain the status quo

The Department considered a scenario where there is no Government intervention. Under this scenario there is no MSO established to provide certainty of fuel stocks, and no Government support is provided to refiners. Refiners are left to face the impacts of the COVID-19 crisis on their own, and must assess the commercial viability of undertaking the necessary and significant infrastructure upgrades to meet the improvements to fuel quality standards.

The likely benefits of this option are outlined in Section 4.

3.2 Securing a minimum level of stocks for domestic fuel security

Through setting a minimum level on stocks on certain fuel types held by importers and refiners, the Government will enhance fuel security and provide consumers and businesses with certainty of key refined fuel stocks in Australia. Increasing our oil stocks will strengthen Australia's resilience in the event of a fuel supply disruption, which is particularly valuable in light of diminishing domestic refining capacity. This mechanism will also help Australia meet our international obligations, in complying with the requirements of the IEA.

By setting a legislated industry stockholding obligation, Government will have the ability to adjust Australia's fuels stocks and storage capacity, protecting consumers and the economy from disruptions as part of Australia's strategic capability. The consultation process explored alternative options that are proposed to ensure a market-led approach is adopted. Options for implementation have been listed below.

The MSO would be imposed on corporate entities that import and refine petrol, diesel and jet fuel in Australia. It would set an initial requirement to hold a minimum of stocks equivalent to current consumption levels for the three regulated fuels. In mid-2024, the stockholding obligation would be extended to require entities to hold an additional 40 per cent of diesel stocks above the pre-COVID-19 average consumption cover levels.

The obligation would be placed on corporate entities that undertake the activities of refining or importing these fuels in Australia if they exceed a minimum threshold. This will avoid directly impacting small businesses, result in the least number of regulated entities needed to capture the majority of fuel supplied to the Australian market, and capture the entities that own or lease the majority of fuel storage capacity.

A national level obligation is recommended. This will allow regulated entities to hold eligible stocks anywhere in Australia based on their commercial supply chains and commercial drivers, thereby minimising compliance costs.

It would require obligated entities to hold a specified minimum quantity of each major transport fuel across their portfolios nationally, as follows:

- Petrol (all grades in aggregate) at pre-COVID-19 average levels, with a consumption cover target set at 24 days for obligated entities.
- Aviation fuel at pre-COVID-19 average levels, with a consumption cover target set at 24 days for obligated entities.
- Automotive diesel to increase by 40 per cent on pre-COVID-19 average levels (consumption day target to be finalised during consultation on the Rules).

The setting of these minimum levels reflects the importance of diesel to our economy. The demand for petrol has flat-lined and is now slowly declining. Jet fuel and diesel demand is increasing, but diesel is the fuel most critical to emergency services. Appendix B outlines the demand of each fuel type over the last decade. Settings in the MSO will hold petrol and jet fuel levels at pre-COVID-19 levels, while diesel levels will be increased by 40 per cent, reflecting the role that diesel plays in supporting critical services.

In recognition of the refining capabilities provided by refiners, and the unique fuel security service they provide compared to importers, two exemptions were considered:

1. Allowing refiners to count crude stocks held at their facilities as part of their diesel, petrol and jet fuel stocks.
2. Exempting refiners from the 40 per cent increase in diesel stocks aspect of the obligation.

Additionally, a combination of these two exemptions was considered.

There are three options under consideration to facilitate an intermediary market:

1. **Direct contracting** – Under this mechanism, shortfalls or surpluses in own stock positions would be managed through the purchasing or selling stock to third parties through individual contracts. This option would impose the full costs of the obligation on industry and may have pass through costs to consumers (contingent on the Rules developed for the MSO under the Fuel Security Act to be examined at a later stage).
2. **Tradeable stockholding certificate** – Under this mechanism, entities would be required to hold a number of certificates proportional to their consumption. Their own stock position would be redeemable for certificates, while shortfalls or surpluses would be managed through the buying or selling of certificates on an open market
3. **Central balancing book** – Under this mechanism, a central entity ensures two elements are in balance. Entities with insufficient stock at the end of a period pay 'interest' on their shortfall (i.e. cost of non-compliance), while stockholders receive an interest return on stock above their obligation. The interest rate is set by a central entity, who may need to hold reserves of stock. The interest rate mechanism would control price as a way to manage volume.

3.3 Maintaining domestic refining capability

The Government considered options that would help maintain our sovereign refining capability and minimise the risk of additional refinery closures. Australian oil refiners that manufacture key transport fuels would be eligible to receive this support.

A Fuel Security Service Payment (FSSP) was considered and developed as the mechanism to provide support to refiners during periods of low margins, limiting their downside risk and providing the certainty of returns they need to continue operating in Australia to 2027. This payment recognises the fuel security services which sovereign on-shore refining capability provides all Australians.

Through this mechanism, Australian refiners would be entitled to support based on their domestic production of primary transport fuels (automotive petrol, automotive diesel and aviation turbine fuel). The payments would be set as a function of refinery market conditions, ensuring that refiners are receiving payments only while their margins are low.

Refiners that manufacture primary transport fuels in Australia would be eligible to receive the FSSP. The inclusion of a repayment mechanism was considered in the design, which would be triggered if companies did not meet their agreed commitment.

Four options for the FSSP were considered:

- *Fixed production payment* where refiners benefit from a fixed cent per litre based payment on their production volume of domestically produced eligible transport fuels
- *Availability support* where refiners benefit from a payment to support a target set for availability of fuel supply
- *Margin support* where refiners benefit from support to their margins set against a refinery margin marker
- *Adjustable production payment* where refiners benefit through a cap and collar arrangement set against a refinery margin marker and production payment on a cents per litre basis for eligible fuel product.

Alternate mechanisms to the FSSP were also considered:

- **Discount to refiners on the existing fuel excise** - Instead of providing direct support through the FSSP, Government could provide indirect support to refiners through a discount to the fuel excise. This would be a differential excise that involves amending the existing fuel excise to provide a discount to domestic refineries and an increase for importers. This would provide indirect support to refineries – they would receive the benefit of the discounted excise but no direct payments. This would preserve existing fuel tax credits and Government revenue. If fuel tax credits were to apply, on-road fuel consumers are expected to pay more.
- **Local content obligation** - Under this mechanism, the Government would mandate that a certain percentage of total petroleum refined product sold by wholesalers is refined domestically to guarantee local production volume. The Government would also confer greater price setting powers on the remaining domestic refiners.

While a FSSP would provide support during periods of low margins and limit refiners' downside risk, these companies still face the infrastructure upgrades necessary to meet the improvements to fuel quality standards. To maintain the fuel security benefits associated

with domestic refineries and the delivery of cleaner fuels and the associated health benefits to Australians, there is also a role for Government to incentivise companies to undertake infrastructure upgrades where there is underinvestment by businesses.

Funding to undertake infrastructure upgrades will allow refiners to supply better quality fuel and put them on a more equal footing with importers.

4 What is the likely net benefit of each option?

The net benefits to all policy options are dependent on the severity and duration of fuel supply disruptions that may occur in the future, as the options are effectively insurance against a highly unpredictable disruption to global fuel markets, with the benefits highly scenario dependent.

4.1 Maintain the status quo

An absence of Government intervention is equivalent to a lack of insurance against low likelihood, high impact events in the liquid fuels sector.

Australia has not experienced a major fuel shortage or disruption in over 40 years. The market has historically adjusted well and quickly during disruptions—including instances of geopolitical tensions—with only limited impacts felt by fuel users. Australia imports fuel from many countries so when there is a disruption in one region we can rely on other countries more heavily to maintain a constant and affordable supply. Businesses, both fuel suppliers and large fuel users, also manage market risks through long-term contracts or maintaining their own stocks. These mechanisms have worked well and add stability to the market. This is partly why prices of fuel in Australia have remained relatively low compared to other developed countries.

However, an absence of Government intervention makes the chance of further refinery closures more likely. It is unlikely that domestic refiners could last through the impacts of COVID-19 and the impending upgrades to meet improvements in fuel quality standards. As outlined in Table 1, Australia would become more and more vulnerable with each refinery closure.

Losing our domestic sovereign refining capability forgoes some significant economic activities. A report by ACIL Allen estimated that the total economic contribution in 2018-19 from the four domestic refineries was \$3.4 billion, which equates to approximately 0.2 per cent of GDP.

Australia is now on the verge of a future where two domestic refineries remain. ACIL Allen's estimates from are for 2018-19, when two of the four refiners reported their facilities were profitable. As detailed earlier, as a consequence of recent financial pressure arising from COVID-19, Australia's remaining refiners both reported losses in 2020.

The closure of Australia's remaining two refiners would also have an adverse effect on adjacent industries. For example, in 2018-19, the LyondellBasell polypropylene plant, which is reliant on Viva's Geelong refinery, employed 2,055 Australians directly and indirectly. Without domestic refineries, these industries would be reliant on imported feedstock, which would adversely impact their commercial viability, and would risk Australian jobs.

A lack of onshore refining facilities would also place Australia at greater risk in the event of supply shortfalls. For example, further analysis showed that in the event of a total stoppage of supply, Australia's GDP is estimated to fall over a six-month period by 31.8 per cent, which is equivalent to a reduction of around \$225 billion. In situations that do not involve a total stoppage of supply, while we have fared well over the past 40 years, Australia would find itself in a more vulnerable position.

The presence of domestic refineries provides competition in the liquid fuel supply market, and further closures would risk price increases for consumers.

4.2 Minimum stockholding obligation and the Fuel Security Service Payment

An indicative list of costs and benefits associated with the different policy options considered under these two mechanisms can be found in Table 2. Many policy parameters were considered qualitatively before quantitative analysis was undertaken on viable options.

Table 2 - Indicative list of costs and benefits associated with the different policy options

Mechanism	Cost	Impact	Benefit
Minimum Stockholding Obligation			
<p>MSO Metric Options:</p> <ol style="list-style-type: none"> Net import days Consumption cover days (CCD's) Absolute volumes 	<ol style="list-style-type: none"> Disproportionately impacts importers over refiners and is more appropriate for the full upstream and downstream oil/petroleum sector. Lower cost than option 3 as the national requirement level set would remain appropriate even if aggregate fuel demand changes. Higher costs due to annual resetting of the aggregate requirement due to national level fuel demand changes. 	<ol style="list-style-type: none"> The net import day option, which aligns with the International Energy Program Treaty metric, is not a suitable approach for measuring domestic fuel security but is rather an indicator of import dependence (imports minus exports). Consumption cover days are an indicator of how long fuels would last under normal demand. Can be modified to suit entity level stock minimums and is a measure that can be set in legislation that does not need to be changed when there are changes in aggregate fuel demand. This measure also scales well to different sized entities and compliance costs are proportional to the entity size. Setting absolute volume requirements on regulated entities would initially deliver the same outcome as option 2 however the volume set may not remain appropriate if aggregate demand changes or an entity significantly loses or gains market share. The regulated quantity per entity and nationally would need to be changed frequently in subordinate legislation to maintain scale. 	<ol style="list-style-type: none"> Limited and not quantified. Metric based on fuel consumption/supply and easily relatable to maintaining fuel supply security. Could be applied to any entity in the supply chain proportionally to volume supplied to the market. Minimum consumption day target figure remains relevant even if aggregate demand of one or more fuels changes. Limited and inflexible in application to entities and would require annual adjustment to scale with aggregate demand changes.
<p>Target Level Setting:</p> <ol style="list-style-type: none"> External regulation benchmarks e.g. IEA or EU. Historical consumption cover stocks 	<ol style="list-style-type: none"> Much higher cost than needed for the Australian context. 90 net import days or 61 days of inland consumption. Considers historical consumption cover representing normal commercial levels then adjusted to deliver necessary fuel security 	<ol style="list-style-type: none"> The most appropriate MSO metric option (CCD's) identified above aligns with the European Union's oil stockholding directive. The quantum of the EU directive is significant and reflects the risk analysis and risk appetite of its members. Mirroring this benchmark is not appropriate based on analysis by the Government undertaken between 2018 and 2020. Basing the quantum of minimum stocks with reference to historical Australian CCD's for key fuels and calibrating from 	<ol style="list-style-type: none"> Using an external benchmark beyond using the same metric does not necessarily lead to a net benefit and could result in over insuring against identified risks unnecessarily increasing compliance costs. Basing the target MSO quantities on the

Mechanism	Cost	Impact	Benefit
<p>3. Dynamic based on market conditions and risk assessments</p>	<p>enhancement to keep costs commensurate with objectives.</p> <p>3. Similar to option 2 in that dynamic target level setting would likely become a pseudo historical consumption cover approach noting that significant time is needed to build new storage. This means that stock levels to meet the most recent dynamic analyses would not be met for 1-2 years if new storage is needed.</p>	<p>there to risk analyses and appetite in the Australian context means the balance between fuel security improvements and compliance costs can be weighed. Historical average fuel stocks across the 2018 and 2019 calendar years (normal demand patterns prior to the impacts of the COVID-19 pandemic) were used as the starting point.</p> <p>3. The impact of a dynamic target level – i.e. one that could go up or down in magnitude, introduces uncertainty for regulated entities that increase costs and could present as a barrier to new entrants. Planning and construction of new storage capacity takes a significant period of time and variable targets would disrupt investment decisions and could lead to speculation about upward or downward movements in the target. This could see an underinvestment in stocks and storage when it is needed. Dynamic MSO targets could lead to more efficient fuel stock holding costs.</p>	<p>Government’s risk analysis keeps compliance costs lower than using an international benchmark target.</p> <p>3. This approach is impractical as storage and stocks take time to bring online but is similar to option 2.</p>
<p>Fuels to be regulated:</p> <p>1. Major fuels consumed by critical services</p> <p>2. Option 1 plus crude oil</p>	<p>1. Limits costs to securing the key fuels used in the Australian economy. Avoids unnecessary regulatory intervention in commercial decisions on less important fuels.</p> <p>2. Regulating crude oil stocks in addition to finished fuels would increase costs to refiners disproportionately to importers of fuel. Regulating finished products will have an indirect effect on securing crude stock levels without the need to regulate directly.</p>	<p>1. Regulating minimum stocks of petrol (aggregate of all grades), diesel and jet fuel will provide certainty of stocks of these fuels at any point in time in Australia. These fuels are vital to maintaining critical services and the economy in the event of an extended fuel supply disruption.</p> <p>2. Adding crude oil to the list of regulated fuels does not provide any additional security unless there is refining capacity in Australia. Refiners will be regulated as part of the MSO to hold finished products. To produce these products refiners need feedstocks. Regulating crude oil as well is unnecessary.</p>	<p>1. Targets the key fuel to maintain critical services and supplies for an extended period of time – particularly diesel.</p> <p>2. No additional benefit to option 1 but higher regulatory burden and compliance costs – hence lower net benefit.</p>

Mechanism	Cost	Impact	Benefit
<p>Geographic granularity of MSO:</p> <ol style="list-style-type: none"> National Subnational 	<ol style="list-style-type: none"> Lower cost, lower regulatory burden than option 2. Higher cost and regulatory burden than option 1 due to greater prescriptiveness of this approach. 	<ol style="list-style-type: none"> Allows regulated entities to acquit their fuel stockholding obligation anywhere in Australia. Would require regulated entities to meet MSOs in defined geographical regions e.g. state and territory level. This would potentially create a barrier to businesses expanding into new marketing areas or the entrance of new fuel supply businesses. 	<ol style="list-style-type: none"> This approach would enable entities to make commercially driven decisions to keep costs to a minimum or to augment their own supply chains as may be beneficial to their operations. Allows potential economies of scale to be captured, and reduces the risk of barriers to entry and reduced competition. A subnational approach could see standardisation of stock levels in each defined region leading to theoretically equal fuel security distribution across the country.
<p>Point in value chain to be regulated:</p> <ol style="list-style-type: none"> Refiner and Importer Wholesaler Retailer 	<ol style="list-style-type: none"> Costs would be incurred by the largest businesses in the fuel supply chain and those with the greatest storage capacity owned or leased. MSO regulation would lie on one side of the point of fuel excise being payable. Depending on whether the obligation lies before or after the point of excise will impact the number and size of the entities regulated. If there are a large number of regulated entities then economies of scale may not be achieved and higher 	<ol style="list-style-type: none"> These businesses represent the entry point for the supply of fuel into Australia. This ensures that all fuel supplied to the market is accounted for (without double counting input) and with the least number of regulated (directly impacted) entities. The point of excise represents a single point in the supply of excisable and excise equivalent fuels into the market which is different to that in option 1. This would again avoid double counting of throughput of fuel in the system to ensure the MSO reflects a level of fuel security relative to demand. A potentially larger number of regulated entities (compared to option 1) fall into this category. Some of these may be smaller distribution companies which have limited storage and stocks and could face the need to significantly increase their stocks and storage. There is potential to negatively 	<ol style="list-style-type: none"> Least number of regulated entities who are the largest owners of stocks and storage in the Australian fuel market. Core business relies on bulk stock and storage management. The main benefit of this approach is that excise is a single point in the supply chain against which the MSO could be anchored, and the excise system is familiar to fuel market participants. This is also possible under option

Mechanism	Cost	Impact	Benefit
	<p>compliance costs may be incurred than under option 1.</p> <p>3. Large number of retailers ranging from large chains to individual independent retail sites. These are generally high turnover low storage businesses relying on frequent deliveries, and not bulk storage, to meet demand. Potentially very high cost to comply, particularly for small businesses.</p>	<p>impact these smaller entities to the point where they could be forced out of the market – reducing competition.</p> <p>3. Other than the major fuel companies who are vertically integrated, the impacts of an MSO on retailers would be significant in terms of costs and in terms of stock management operations. The retail segment of the market does not hold bulk stocks or have access to storage to build stocks to the levels expected under the MSO.</p> <p>NOTE: A number of businesses operate in all these market segments. Under a national obligation applied at the company level, a large company that is vertically integrated could hold stocks in any part of their supply chain against the obligation regardless of the specific segment regulated.</p>	<p>1, however option 1 has additional benefits.</p> <p>3. There are no clear benefits to this option over options 1 and 2.</p>
<p>Included stock locations:</p> <p>1. On land in Australia (based on stock locations currently reported under POFR). This includes intercoastal shipping of stocks that have arrived to an Australian port previously.</p> <p>2. Option 1 with the inclusion of stocks on incoming tankers within Australia's exclusive economic zone (EEZ).</p>	<p>1. Limited costs with this option. Existing fuel stock reporting arrangements through the POFR scheme mean that likely regulated entities are already required to report this information to Government.</p> <p>2. Some marginal additional costs with this option for companies to increase rigour of existing reporting of stocks on water.</p>	<p>1. The Government has a long time series of historical data of fuel stocks held by potentially regulated entities and at the national level. The basis of the MSO national average stocks of petrol, diesel and jet fuel uses this historical data for stocks on land (and in intercoastal shipping). Using the same basis will ensure that the MSO for petrol, diesel and jet will be relevant to these well understood fuel stock locations.</p> <p>2. The time series of data on fuel stocks in tankers within Australia's EEZ relates to only the last few years and the early data from 2018 and 2019 is somewhat patchy. Expanding the MSO to include stocks in the EEZ would not necessarily increase or reduce compliance costs, but the actual MSO targets would need to encapsulate this larger "boundary" within which stocks can be counted. As a result, the MSO targets would be commensurately higher.</p>	<p>1. Encompasses stock locations and quantities that are well understood and are consistent with long term fuel stock reporting. Aligns with long term historical consumption cover and net import stock statistics.</p> <p>2. For the purposes of the MSO, there is limited additional, if any, benefit to including stocks on tankers with Australia's EEZ. The actual minimum stocks to be held by regulated entities would need to increase to offset the larger eligible boundary for stocks. This could be beneficial for</p>

Mechanism	Cost	Impact	Benefit
			some regulated entities but detrimental to others.
Administration model: 1. Government Department/Agency 2. Independent Market Operator 3. Private industry body	<p>The most appropriate administrative model will vary depending on other policy settings, particularly the intermediary market model (see next row for details).</p> <ol style="list-style-type: none"> Least cost administratively to government and regulated entities - appropriate for a direct contracting model. Higher administrative cost to government and industry as new systems need to be set up by both parties – appropriate for a certificate or central balancing book system. Most appropriate for a central stockholding agency which is industry funded. Costs of the body are funded by industry to build and maintain strategic fuel stocks. 	<ol style="list-style-type: none"> Fuel market participants facilitate all actions to achieve compliance with the MSO for each fuel type through normal fuel market practices. A branch or section within a Government department or agency would be responsible for administering the regulatory framework, compliance monitoring and enforcement actions. An independent market operator, like the Clean Energy Regulator, would manage the certificate clearing house or a central balancing book system. This would facilitate the trade in stock certificates or balancing “credits” and “loans” between market participants who have excess fuel stocks and those that have insufficient stocks. A private industry body would build and manage stocks on behalf of the fuel industry in exchange for a fee proportional to the size of each entity’s individual obligation. The fee would be passed on or absorbed to the extent possible in a competitive market. This option could be mandated by the Government or could be created independently. 	<ol style="list-style-type: none"> Leaves all fuel market transactional arrangements to market participants. Least regulatory burden on businesses, as regulated entities can, at their discretion, create flexible and bespoke contracts to suit their needs and preferences. Potentially the most efficient in allocation of resources by breaking down storage and stocks into liquid and transparent tradeable commodities or through setting a transparent interest rate within the central balancing book. High regulatory burden, particularly for smaller importers. This option could organically form within the fuel market place if it was considered a commercially viable option. This would also leave all market transaction and fee setting to the market.
Intermediary market model:	<ol style="list-style-type: none"> There will be a cost to government to implement and 	<ol style="list-style-type: none"> Refineries and importers: The difference in obligation between importers and refiners confers a benefit on 	All options

Mechanism	Cost	Impact	Benefit
<ol style="list-style-type: none"> 1. Direct Contracting 2. Tradeable certificate scheme 3. Central balancing book 	<p>monitor compliance to ensure obligation meets legislative requirements. Industry will need to bear compliance costs of meeting obligations including audit and enforcement functions, noting that recording and reporting of stock volumes is a continuation of current practice. Compliance costs will be passed on or absorbed to the extent possible in a competitive market, with this to be further assessed during consultation on the Ministerial Rules.</p> <ol style="list-style-type: none"> 2. Cost to government to oversee the open market for certificates trading ensuring that competition and market dynamics supports well-functioning market operations. There would be costs on industry to own stock position redeemable for certificate and managing shortfalls or surpluses through buying or selling of certificates on an open market. Consumer cost impacts are likely to be similar to direct contracting as it can evolve into a tradeable certificates scheme overtime. 3. More active participation in the fuel market will be required from government, with likely higher administrative costs compared to direct contracting. Obligated entities to register with central balancing book regulator, and 	<p>refiners through the greater obligation imposed on importers responsible for the 40% increase in diesel stockholding across market. Importers will be obligated to hold approximately 10-14 consumption cover days above pre-obligation average levels to achieve the total 40% increase in diesel.</p> <p>Economic incidence and impact on competition: With refiners and importers managing the obligation there is lower variation in current stockholding across players. Downstream players may be disadvantaged if upstream players hold stock. Refiners and importers are sophisticated market participants with the capability to handle the obligation.</p> <ol style="list-style-type: none"> 2. Economic incidence and impact on competition: There is a risk that the small number of participants would create inefficiencies in the open market and has potential for competition issues. Market participants: Tradeable stockholding has potential for high price volatility of certificates which causes less predictability for market participants. 3. Economic incidence: The greater burden on market participants with a shortfall e.g. obligated entities may deter new entrants into the market. It may also encourage new market entrants e.g. non-obligated entities which can report stocks with Government and earn interest on their reporting. Market participants: Dependent on adjustments to the interest rate, there is likely to be volatility in the market price during initial implementation as industry adjusts to new requirements. 	<p>Jobs: New construction likely to create jobs, with the focus probably being in locations where existing fuel infrastructure exists. Fuel security: Potentially a significant increase in fuel security, pending size of stockholding obligation.</p> <p>Additional certainty on the level of fuel stocks available in Australia to be used in an emergency.</p> <p>Economy: Stimulation through major infrastructure project. Greater ability to maintain economic activity during disruptions (trucking, agriculture, mining, etc.)</p>

Mechanism	Cost	Impact	Benefit
	<p>can either pay or earn interest depending on held stocks. Third parties (non-obligated entities) can report stocks with regulator, earning interest. As the objective is to achieve target volumes across the market, the costs of additional storage and production to meet the obligation is expected to be passed through to consumers.</p>		
Fuel Security Service Payment			
<p>Production payment to refineries through a market-based mechanism based on the following options:</p> <ol style="list-style-type: none"> Fixed production Availability Margin Support Adjustable production 	<p>Government: impact on Budget or through revenue option for alternatives a to d. Administrative costs associated with calculating refinery margin marker based on external market factors (refined product prices, crude prices, freight costs to Australia) and providing production payments to refiners.</p> <p>Consumer: Cost pass through to fuel prices if the mechanism is funded through a revenue option. If paid through via consolidated revenue, there would be limited impact.</p> <p><u>Industry:</u> There are costs with complying with the regulatory requirements, including reporting production levels of eligible fuels. There would also be business costs to support the target set for availability of supply.</p>	<p>Refineries:</p> <ol style="list-style-type: none"> Drive competition and create incentives for higher utilisation. Potential to create inefficiencies in the optimal operations of refineries including driving incentive to minimise downtime to maximise payment. Creates advantage for refiners that have better configuration than those that are less well managed. <p>Fuel consumers: Options a to d will have minimal impact at the bowser as support kicks in when there is downside pressure on fuel price and payment is provided on the basis of supporting refinery viability. If funding is provided through a revenue option: Under an adjustable production payment mechanism, the net impact is positive when compared to a fixed payment mechanism. When margins fall, refinery unit support is triggered to make up for the shortfall in margins to reach breakeven.</p> <p>Economic incidence:</p> <ol style="list-style-type: none"> Increase competition in supply with fuel importers. 	<p>Jobs: The proposed options seeks to minimise the impact on refiners' incentives and provides certainty to the volumes produced locally. This would have the impact of maintaining direct employment and indirect employment associated with refinery operations.</p> <p>Fuel security: The ongoing viability of refiners offer protection during extreme disruptions to fuel supply. Refiners are able to convert crude to product and can support critical industries.</p> <p>Economy: Local refineries help keep fuel prices low, and support domestic industries such as petrochemicals. If Australia's refineries close, this is expected to increase prices for petrol, diesel</p>

Mechanism	Cost	Impact	Benefit
		<p>b) Proposed competitive disadvantage that could lead to vertical consolidation for fuel importers and retailers i.e. with refiners.</p> <p>For options c and d, due to being tailored to market conditions, the impact of support is reduced. When refinery margins are at a specified level which enables domestic refineries to breakeven (the collar), no FSSP support will be provided. When margins drop below the collar, the level of FSSP will be adjusted to enable refineries to continue to achieve breakeven conditions. Although the level of FSSP will be capped, and not fully cover refinery losses under very low margin conditions, there is a low probability that such conditions will occur.</p>	<p>and jet fuel by up to one cent per litre.</p>
<p>Option 2. Absolute local content obligation</p>	<p>Government: Cost to implement and impose guaranteed local production volume on industry through a certificates scheme</p> <p>Industry: Price setting power by domestic refiners with disadvantage conferred to wholesalers.</p> <p>Consumer: Significant cost increase on local product due to a low competition (with few domestic refiners in the market) and higher transport cost to be factored in i.e. transported from refiners.</p>	<p>Fuel consumers: Higher prices for fuel consumers due to price setting power conferred to refiners and the limited ability of wholesalers to access adequate and suitably priced supply.</p> <p>Market participants: Due to the limited number of domestic refiners in Australia, there is potential for market power to be exercised by these refiners. A local content obligation would also introduce inefficiencies for wholesalers especially in regions without a local refiner where they are able to buy locally.</p>	
<p>Option 3: Differential Excise</p>	<p>Government: Cost for implementation but Budget neutral as the reduction in revenue from the domestic fuel excise imposed on the wholesale market for transport fuels is offset by the increase in fuel excise for imported fuel.</p>	<p>Fuel consumers: As discussed below, the cost pass through to consumers of differentiated excise treatment between imported and domestic refined fuel is uncertain. Based on import parity pricing, the price should increase to reflect the excise rate on imported fuels. However importers may absorb some of these costs to gain market share.</p> <p>Market participants: A differential excise that involves amending the existing fuel excise to provide a discount to domestic</p>	

Mechanism	Cost	Impact	Benefit
	<p>Industry: Cost to industry to comply with new reporting, disbursement and refund processes under differential excise for importers and domestic fuel consumers that currently access rebates through the fuel excise regime.</p>	<p>refineries and an increase for importers. This could provide indirect support to refineries – they would receive the benefit of the discounted excise but no direct payments. This would preserve existing fuel tax credits and government revenue. There is a risk that importers may not fully pass through their higher excise costs to fuel consumers, reducing the level of indirect support to domestic refineries.</p> <p>There would be impact on the fuel industry, due to the administrative complexities of applying differentiated excise rates to domestic refined and imported product. The excise would continue to be applied at the terminal gate, so amending the fuel excise would impose only a minor regulatory burden, as the framework is already in place.</p> <p>Implementing this option would require three amending Acts:</p> <ul style="list-style-type: none"> • An amending Act to amend the Customs Tariff Act 1995 • A separate amending Act to amend the Excise Tariff Act 1901 • An amending Act to amend the Customs Act 1901 and the Excise Act 1901 and the Fuel Tax Act 2006. <p>There would significant work involved to prevent imported fuels being taxed at the domestic rate once they enter the domestic excise system. A further primary Act would be required if this option also included the establishment of a special account.</p>	

5 Who was consulted about these options and how were they consulted?

The Department undertook public consultation on the FSSP and the MSO.

Formal consultation on these measures commenced on 12 January 2021, with meetings conducted in-person or via video/teleconference, and either as bilateral meetings with individual stakeholders, or as part of a roundtable session. The Department organised consultation sessions with 25 stakeholders representing a broad spectrum of the liquid fuel sector. These stakeholders can be grouped into the following sub-categories:

- Refiners
- Importers
- Consumers
- Market entrants
- Fuel Sector/Other

As at 19 May 2021, over 100 meetings have been conducted, with further meetings scheduled.

5.1 Objectives

The main objectives of consulting with fuel sector stakeholders are to:

- provide a holistic view of the measures progressed, the Government's policy objectives, and intended outcomes
- keep stakeholders fully informed on the proposed implementation pathway and timeframes
- give stakeholders the opportunity to identify design settings that are preferable or not preferable
- better understand any implications, or direct and indirect impacts to stakeholders flowing from implementing the measures
- enable greater involvement and engagement from stakeholders in the policy design process.

5.2 Fuel Security Service Payment

Stakeholders were presented with four potential mechanisms:

- a) Availability payment
- b) Fixed production payment
- c) Margin support payment
- d) Absolute local content obligation.

Based on feedback received during consultation, an adjustable production payment (that is, a combination of options b and c) was identified as having the preferred characteristics for the implementation of the FSSP. For example, feedback received indicated that:

- refiners valued support which varied to help offset losses/gains in regional refining margins
- importers and market entrants are wary of mechanisms which create a competitive imbalance and market distortion (for example, sustaining payment to refiners during high margin times)

- a local content obligation should be ruled out on the basis of complexity, and the risk of creating a captive market given the limited number of market participants.

Fuel consumer stakeholders were generally more concerned with understanding how funding for the FSSP would be recovered, rather than the detailed designed settings underlying how the FSSP would be made to refiners under the respective options.

5.3 Minimum Stockholding Obligation

Key elements of the MSO presented to stakeholders included:

- the metric for setting the MSO and relevant target level
- the type of stock that should be countable towards the obligation
- level of geographic granularity
- which entities are accountable for the MSO
- types of storage included
- an intermediary market mechanism to enable entities to share their obligation efficiently across the market
- frequency of reporting.

There was general preference for a national level obligation, as setting the obligation at a state and territory level would limit industry autonomy and present greater risk of market distortion.

Refiners value being able to count crude towards their stockholding levels, but importers are wary of design settings that would put them at a competitive disadvantage to refiners, despite the different services that refiners and importers provide to the market.

With the exception of some consumer stakeholders, there was general concern among stakeholders as to the burden that weekly reporting (as opposed to reporting at less frequent intervals) and maintaining an absolute minimum threshold of stocks (as opposed to an average minimum) would add to their operations. During the COVID-19 pandemic most fuel companies reporting under the POFR scheme agreed to voluntarily report key data on a weekly basis. Regulating weekly reporting places a legal impetus on companies to ensure that they meet their legislated obligations. This requires increased quality assurance and internal clearance processes which in turn increases administrative costs on the business above the already increased costs of reporting weekly on a voluntary basis.

An intermediary market to deliver the MSO through a direct contracting approach, a tradeable stockholding certificate scheme and through a central balancing book was discussed with stakeholders.

Stakeholders, including some consumers and refiners, viewed the direct contracting approach in a more favourable light on the basis of simplicity, familiarity, and cost-effectiveness, as compared to the other intermediary market mechanism options. Direct contracting allows businesses to develop bespoke contract solutions that meet their needs at least cost. The very large European Union fuel market allows oil stock ticketing for trade between entities that are long or short on required fuel stocks. Tickets are a type of direct contracting between two parties.

5.4 Further consultation

The next stage of consultation will focus on the implementation of the FSSP and MSO through legislation.

Development of legislation has been informed through video/teleconference with affected entities, with targeted consultation on an exposure draft expected to occur with obligated entities. Consultation will continue to occur after introduction of the legislation to inform the development of associated Ministerial Rules.

6 What is the best option from those considered?

Key insights from stakeholder consultations include:

- An adjustable payment mechanism (to deliver the FSSP) is expected to have the least distortionary impact and mitigate the risk of over-supporting refineries
- Direct contracting is likely to be the simplest mechanism to deliver an intermediary market for the MSO
- A national level target for a MSO will minimise the risk of inefficient stockholding behaviour.

In addition to these insights, the following principles, which form the market and regulatory framework to enhance Australia's fuel security, were developed to guide the policy development process and helped to form the recommended preferred approach by narrowing down options.

- Intervention should minimise market distortion, and seek to maintain a competitive market not only between the two remaining refiners, but also maintain competition with fuel importers.
- A common level of support to refiners to maintain competition in the market.

As a result, the preferred approach is as follows:

- The direct contracting model for the administration of the MSO, with the obligation set upon refiners and importers which minimises market distortion as it sits in the part of the supply chain where there is a consolidated market.
- An adjustable production payment, funded out of consolidated revenue, as the mechanism for the FSSP which is triggered only when refiners are operating under low margins to maintain Australia's sovereign refining capability, while avoiding overpayment when margins improve.

7 How will the chosen option be implemented and evaluated?

7.1 Challenges

The major implementation challenge of the policy proposal will be establishing fit for purpose legislation, with adequate stakeholder consultation and ensuring the appropriate delivery mechanisms are in place to support the commencement of legislation on 1 July 2021 in relation to the FSSP and MSO.

One issue for Government to consider in the longer term will be the ongoing challenge of ensuring sectors do not use the MSO to further justify scaling back business continuity arrangements. For example, if Industry is now holding above commercial stocks levels, sectors may use this as an opportunity to further reduce costs related to emergency contractual arrangements or hold their own supplies.

7.2 Implementation

Following Government decision on the Fuel Security Package, the Department will enter a period of regulatory and administrative oversight of the framework. In this phase, it is expected the ongoing costs will primarily relate to staffing and specific regulatory functions with anticipated efficiencies stemming from the consolidation of the regulatory and administrative functions to be delivered by a joint unit within the Department. There will be approximately 40-50 industry participants regulated or impacted by the Fuel Security Framework on an ongoing basis.

7.2.1 Fuel Security Service Payment and Refinery Upgrades

Implementation will focus the collection and assurance of production data from refineries, and administering the payment, but will also include the assessment of applications against criteria as set out in the legislative instruments, and making recommendations on whether funding should be disbursed, and determining payment amounts. Activities include:

- Verification with reported production under POFR Act
- Tracking and acquittal of administered expenditure

The Government will also support refiners to undertake the infrastructure investment required to comply with improved fuel quality standards. The program will require refiners to provide a business case for the grant and will incorporate a financial penalty if a refinery leaves before the end of the commitment period. The grants will be delivered by the Business Grants Hub which is a specialised design, management and delivery body with extensive expertise and capability in delivering similar programs.

Refineries will continue to report as required under the POFR Act, and will also be required to separately notify certain additional matters prescribed by the legislation. Refineries may also be required to undertake compliance audits regarding POFR reporting. It is expected that refineries will be able to absorb this cost as part of the compliance activities to participate in the scheme.

7.2.2 Minimum Stockholding Obligation

Compliance and enforcement activities associated with the MSO include:

- Engagement with, and education of, regulated entities on their regulatory requirements
- Monitoring compliance: desktop audits on a monthly basis and comprehensive independent audits of regulated entities
- Identifying, receiving and assessing allegations of non-compliance;
- Identifying and responding to instances of non-compliance including developing, preparing and managing enforcement responses to non-compliance
- New reporting requirements, to be determined in consultation with industry with the development of Ministerial Rules
- Development of a national inventory and ICT processes for example, additional module of PSIMS to be developed to manage the new data reporting streams, as well as the calculations of the obligation and the compliance functions.

Appendix A: Emergency stockholding approaches in IEA member nations

Country	Structure of stockholding responsibility	Initial setup costs		Ongoing costs		
		Government budget	Bank loans/Bond issues	Government budget	Levy on industry	Tax/excise duty
United States	Government	✓		✓		
New Zealand ¹	Government	✓				✓
Czech Republic	Government	✓		✓		
Belgium	Government agency		✓		✓	
Estonia	Government agency	✓			✓	
Ireland	Government agency		✓		✓	
Italy	Government agency		✓			✓
Slovak Republic	Government agency	✓		✓		
Japan	Government/Industry obligation	✓		✓		✓
Republic of Korea	Industry obligation/ government	✓		✓		✓
Poland	Industry obligation/government	✓		✓		✓
Spain	Agency/ Industry obligation		✓		✓	✓
Finland	Agency/Industry obligation	✓				✓
Netherlands	Agency/ Industry obligation		✓			✓
Portugal	Agency/ Industry obligation		✓		✓	✓
France	Agency/Industry body/Industry obligation		✓		✓	✓
Norway	Industry obligation		✓			✓
Luxembourg	Industry obligation		✓			✓
Greece	Industry obligation		✓			✓
Sweden	Industry obligation		✓			✓
Turkey	Industry obligation		✓			✓
United Kingdom	Industry obligation		✓			✓
Austria	Industry body/Industry obligation		✓			✓
Denmark	Industry body/Industry obligation					✓ ²
Switzerland	Industry body/Industry obligation		✓		✓	
Germany	Industry body				✓	
Hungary	Industry body		✓		✓	

¹ To meet IEA requirements, New Zealand Government holds 18 days of emergency oil stocks in the form of ticketed stock above commercial stocks. It will transfer the funding mechanism from general taxation to fuel users through the Petroleum or Engine Fuel Monitoring Levy.

² Denmark no longer applies a levy to meet the cost of the industry obligation as the body has sufficient resources.

Some countries have a shared responsibility for the obligated stockholding. The **bolded** text identifies which structure and funding arrangement is used to meet the majority of the stockholding.

Source: IEA, Energy Security Supply 2014.

SUMMARY OF IEA MEMBER APPROACHES TO COMPLIANCE (2017)

Country	Public Stocks	Industry Obligation	Tickets	Funding	Administration
Australia	No	No	Yes	Budget	Department
Japan	Yes	Yes	No	Budget & Pass Through	Department
Korea	Yes	Yes	No	Budget & Pass Through	SOE
Austria	Yes	Hybrid	No	Pass Through	Private Agency
Finland	Yes	Yes	Yes (not used)	Levy & Pass Through	Public Agency
France	Industry must pay for oil stored in public facilities		Yes	Pass Through	Private Agency
Germany	Industry must pay for oil stored in public facilities		Yes	Pass Through	Hybrid Agency
Greece	No	Yes	Yes	Pass Through	Department
Hungary	Industry pays for Public Stocks		No (Seller)	Pass Through	Private Agency
Italy	Yes (started in 2014)	Yes	Yes	Pass Through	SOE & Department
Luxembourg	Yes (started in 2015)	Yes	Yes	Pass Through	Public Agency
Netherlands	Yes	Yes	Yes (domestic only)	Levy & Pass Through	Public Agency
Poland	Yes	Yes	Yes (but not used)	Budget & Pass Through	Public Agency
Portugal	Yes	Yes	Yes	Levy & Pass Through	Public Agency
Spain	Yes (paid for by business)	Yes	Yes	Pass Through	Private Agency
Sweden	No	Yes	Yes	Pass Through	Public Agency
Switzerland	No	Yes	No	Levy	Private Agency
Turkey	No	Yes	No	Pass Through	Department
UK	No	Yes	Yes	Consumer	Department

USA	Yes	No	No	Budget	Department
Canada	Net Exporter: No stocks, tickets or industry obligation				
New Zealand	No	No	Yes	Levy	Department
Belgium	Yes	No	Yes	Levy	Public Agency
Czech Rep.	Yes	No	No	Budget	Public Agency
Denmark	Net Exporter: Private agency manages using stocks and tickets, financed by pass through				
Estonia	Yes	No	No (Seller)	Budget	SOE
Ireland	Yes	No	Yes	Levy	Public Agency
Norway	Net Exporter: Industry obligation applies funded by pass through				
Slovakia	Yes	No	No	Pass Through	Public Agency

Appendix B: Demand and Consumption Cover in Australia

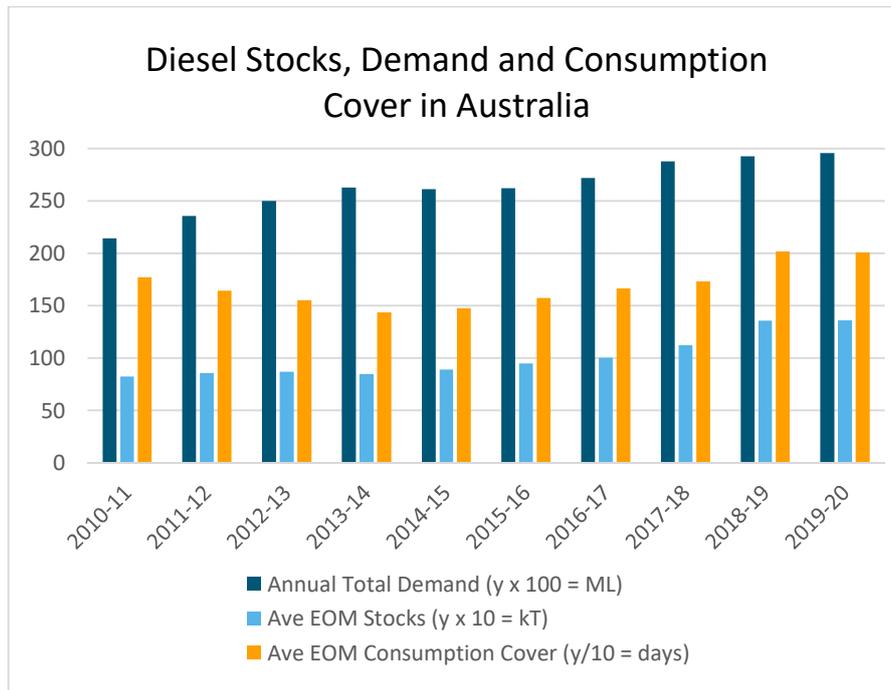


Figure 5. Diesel Statistics 2010-11 through 2019-20

Source: Australian Petroleum Statistics December 2020

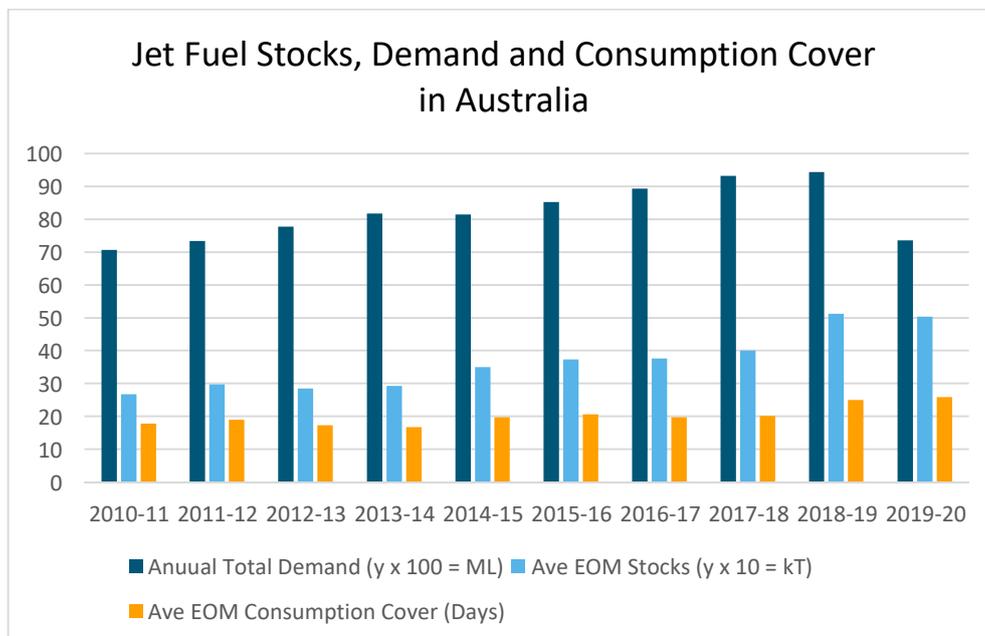


Figure 6. Jet Fuel Statistics 2010-11 through 2019-20

Source: Australian Petroleum Statistics December 2020

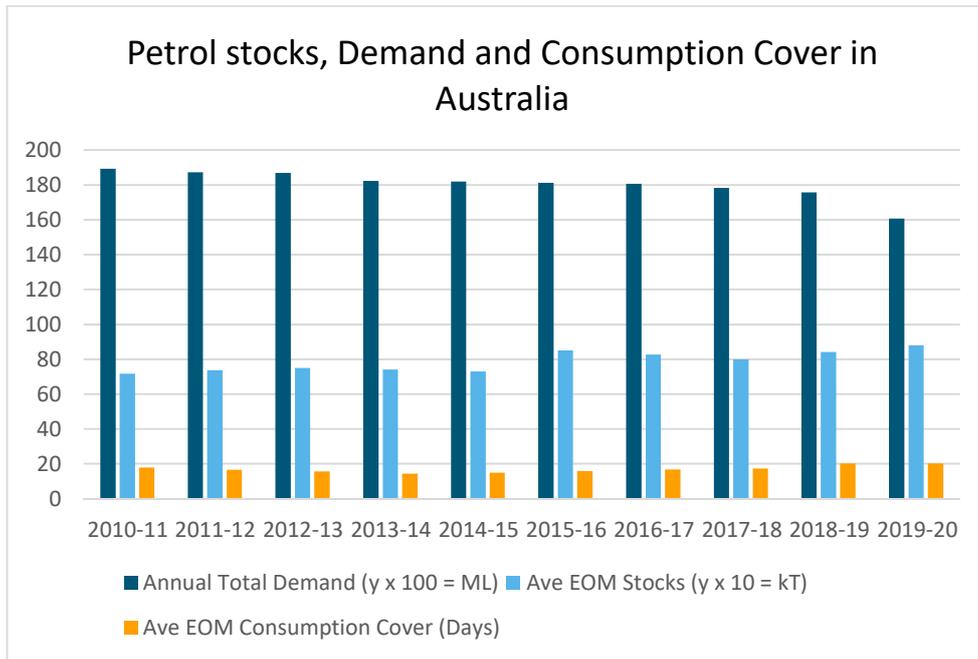


Figure 7. Petrol Statistics 2010-11 through 2019-20

Source: Australian Petroleum Statistics December 2020

Appendix C: References

DISER 2020a	Department of Industry, Science, Energy and Resources (2020) Australian Energy Statistics, Table F. Available at www.energy.gov.au/publications/australian-energy-update-2020
DISER 2020b	Department of Industry, Science, Energy and Resources (2020) Australia's emissions projections 2020 Available at www.industry.gov.au/data-and-publications/australias-emissions-projections-2020
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