Regulatory Impact Statement: Minimum Fuel Stockholding Obligation Design

Coversheet

Purpose of Document	
Decision sought:	Seek Cabinet agreement to the final regulatory design of the minimum fuel stockholding obligation on fuel importers with rights to access bulk storage facilities in New Zealand.
Advising agencies:	Ministry of Business, Innovation and Employment
Proposing Ministers:	Minister of Energy and Resources
Date finalised:	21 April 2023

Problem Definition

In 2022, Cabinet agreed to the high-level design of the minimum fuel stockholding obligation **(MSO)**, however a regulatory regime will need to be developed to enable its implementation and administration. The obligated parties (fuel wholesalers) will be required to hold a certain level of fuel stocks in New Zealand to improve and maintain fuel security. The regulations will set out how the MSO will be calculated, and compliance is enforced, however:

1) There is no agreed scope for determining what fuel stocks should be included in the MSO.
2) There is no agreed calculation methodology for determining minimum stockholding volumes.

This Regulatory Impact Statement **(RIS)** will assess options to address the two problems identified above.

Executive Summary

The probability of a significant fuel disruption is low but hard to predict. Any disruption however could have significant impacts on businesses, consumers, and the New Zealand Economy.

Fuel wholesalers have limited incentives to hold reserve stocks above commercial fuel stockholding level and invest in back-up fuel storage and distribution facilities. In the absence of government intervention, the sector may not keep sufficient domestic fuel stocks or back-up arrangements to mitigate the impacts in plausible fuel disruption scenarios adequately.

In October 2022, Cabinet agreed to a package of measures to improve New Zealand's fuel supply resilience [DEV-22-MIN-0243 refers]. The package included agreement to introduce a MSO. The high-level design has been agreed by Cabinet and was supported by a regulatory impact statement, which is available at https://www.mbie.govt.nz/dmsdocument/25591-regulatory-impact-statement-fuel-resilience-policy-package-proactiverelease-pdf.

The objective of the MSO is to ensure there are sufficient fuel stocks to manage the impacts of plausible fuel supply disruption scenarios adequately, while balancing that the

economic costs associated with meeting the MSO are not disproportionate to the low probability, high impact event.

Cabinet has agreed the MSO will initially be set at:

- 28 days of consumption for petrol,
- 24 days of consumption for jet fuel, and
- 21 days of consumption for diesel.[1]

These stockholding numbers are the estimated national fuel stockholding levels that existed prior to the closure of the oil Refinery at Marsden Point **(the Refinery)**.

This RIS focuses on the detailed design of the MSO, which will be introduced through regulation. It focuses on two main issues:

1. There is no agreed scope for determining what fuel stocks should be included in the obligation – that is, whether fuel stocks in bulk storage facilities, retail sites, pipelines, and on water should all count towards the MSO.
2. There is no agreed calculation methodology for determining minimum stockholding volumes – that is, how to determine what volumes of fuel constitute the agreed days of fuel cover by Cabinet for each obligated party.

This RIS also discusses how the MSO will be implemented, administered, evaluated, and reviewed. This includes a discussion of when obligated parties may be exempt from the obligation, such as when a disruption to fuel supply chains occurs.

Preferred option – what fuel stocks should be included

The preferred option is that a fuel wholesaler's stocks in bulk storage facilities and stocks on water within New Zealand's Exclusive Economic Zone (EEZ) are counted towards the MSO. This approach is in line with the approach taken in Australia for similar stockholding legislation. Fuel importers commented that they own the fuel cargoes on water. Once a fuel tanker is in the EEZ, it can be diverted from one regional port to another easily. It typically takes about one to two days of sailing to travel from the boundary of the EEZ to the closest port in New Zealand. This means that the fuel cargoes on the tanker within the EEZ can be moved around the country in a timely manner and can be used to mitigate local fuel supply disruptions quickly.

Preferred option – calculation methodology for determining minimum stockholding volumes

The calculation method of the MSO has been broadly considered by Cabinet. The detailed methodology is considered in this RIS. There is one component of the calculation that is out of scope, which is the minimum days' cover for each fuel stock, as these numbers have already been decided by Cabinet.

The broad calculation method is as follows:

$A = B \times C$

[1] Cabinet also agreed to government procurement of reserve fuel stocks, with an initial aim to increase diesel stocks by at least 70 million litres (roughly seven days of consumption taking the total to 28 days of cover with the MSO). The government procurement of additional diesel stock is not a feature of this RIS.

Where:

- A is the obligated party's minimum average stockholding level for the compliance period for the fuel type (measured in thousands of litres).
- B is the required national average stockholding level for fuel importers/wholesalers for the fuel type, i.e. minimum days of cover for the fuel type (measured in days of cover for meeting fuel demand).
- C is the expected daily consumption (the obligated party's offtake from bulk storage facilities) of the fuel type concerned in New Zealand (measured in thousands of litres per day).

For component A (the minimum average stockholding level for the compliance period), the preferred option is taking an average of a month. In this option the average is calculated and reported every month based on an estimate of daily stock levels.

For Component B, Cabinet has agreed it will initially be set at 28 days of consumption for petrol, 24 days of consumption for jet fuel, and 21 days of consumption for diesel.

Component C (the calculation of the expected daily fuel consumption), will be calculated by taking the historical average of daily fuel consumption in the latest 12-month period.

Potential Impact

The benefits of this policy materialise if a fuel supply disruption occurs. Holding a minimum level of fuel stocks will increase the response time for fuel wholesalers to reorganise supply chains and more smoothly manage the impacts of a disruption on their downstream consumers. This also increases the time and options available to the Government to respond to a disruption. This can lead to a more effective and efficient government response.

The MSO is not expected to have significant impacts on fuel costs, as minimum levels are set based on estimates of the expected average levels of domestic fuel stocks held by the fuel industry after the closure of the Refinery. Nevertheless, some fuel importers have indicated that their current fuel stockholding level is lower than the expected average level.

In the medium to long term, the costs of providing minimum stockholding levels per consumer could increase as fuel users transition to low emissions alternatives such as EVs. Some would be offset by the reduction in the obligations volume as it is pegged to historical demand (i.e. the last 12 months). Fixed costs however, such as for storage infrastructure, may be spread over a smaller number of consumers if fuel wholesalers are still recovering the cost of additional infrastructure.

The stockholding level will be reviewed five years after its introduction to ensure the balance between maintaining fuel security and managing economic impacts is being maintained.

Stakeholder Engagement

Public consultation occurred in early 2022 on the wider fuel resilience policy package. This included the high-level design of the MSO. In early 2023, targeted stakeholder engagement was held with fuel importers and distributors, Channel Infrastructure and major users of fuel in order to inform the design of this policy.

There is not a clear consensus on all of these issues from the range of stakeholders. This is to be expected given that they operate at different levels of the fuel supply chain and at times have competing or diverging interests. In general, fuel importers and distributors are not in favour of the MSO, but major users and Channel Infrastructure are. There is likely to be quite a significant interest in the development of this policy from stakeholders.

Some fuel importers indicated that the announced minimum average days of cover is higher than their current average stockholding level.

Regarding the calculation methodology for the MSO, stakeholders, including fuel wholesalers had divergent views on what the compliance period for variable A should be. Although, fuel wholesalers generally expressed the view that they prefer the approach of requiring them to meet the minimum days of cover on a rolling-average basis, rather than requiring them to meet an absolute minimum.

Measuring daily consumption (variable C), over 12 months was generally seen as a sensible approach by stakeholders. This reflects the design of the Australian MSO regime that the obligated parties are familiar with.

All stakeholders, including the Commerce Commission, commented on a potential adverse impact on competition if the MSO is specified in a way that discourages wholesalers from bidding for new customers. Basing average consumption (variable C) on a 12-month rolling average would reduce this risk.

Limitations and Constraints on Analysis

The analysis and options considered in this paper are limited to those that are considered within the scope of Cabinet's decisions of the fuel resilience policy package, and the high-level design of the MSO (discussed above). This paper does not look to revisit the issues previously considered in this RIS: https://www.mbie.govt.nz/dmsdocument/25591-regulatory-impact-statement-fuel-resilience-policy-package-proactiverelease-pdf.

The major constraint on MBIE's ability to assess the potential impacts of the options examined in this RIS is that MBIE is not privy to commercially sensitive information.

To assess the potential impact of introducing minimum fuel stockholding requirements, MBIE made some indicative estimates of additional fuel storage costs at different levels of minimum fuel stockholding levels. These were based on a consultant's estimate of the annual fuel storage cost per cubic metre of fuel[2]. MBIE does not have a detailed breakdown of the estimated annual fuel storage cost, e.g. the upfront capital cost of constructing new tanks, and operational cost of maintaining fuel stocks and running a fuel storage facility.

There are also challenges in estimating how the compliance costs associated with the MSO requirements will be passed on to fuel consumers. During consultation, fuel wholesalers have indicated that they would fully pass on the costs of compliance. The extent of the pass-through however, will depend on how obligated parties will meet the requirements through stock and asset management practices, and on the dynamics in the fuel wholesale and retail markets.

[2] The consultant, Hale and Twomey, has expertise in fuel-related issues. Its estimate of the annual fuel storage cost took into account the expected capital cost of building bulk fuel tanks, the cost of maintaining these tanks and the cost of keeping fuel stocks in these tanks.

There is not an expected value assessment of the benefits of fuel stockholding, given the difficulty in quantifying the probability of various fuel disruption scenarios. The consequence of a sustained import disruption is also difficult to quantify. As a result, it is challenging to objectively assess what the optimal level of fuel stockholding would be.

Because of time constraints, MBIE ran a targeted stakeholder engagement process, without a formal written submission process. In January and February 2023, we held a series of stakeholder engagement workshops and one-on-one meetings, with groupings of "upstream" and "downstream" participants. Upstream participants included fuel importers and Channel Infrastructure and downstream participants included two separate groups of "major users" and "distributors". Major users consisted of representatives from automotive associations and airports for example, and distributors were represented by fuel distribution companies that are not importers, like Allied Petroleum, or GAS.

We received some fuel stockholding data from Channel Infrastructure and fuel importers during the targeted stakeholder engagement process. Major fuel importers have provided their recent stock data at the national level and at Auckland Airport, while Channel Infrastructure has provided some recent data on stock level at Marsden Point. Due to time constraints, our options analysis has focused on stockholding level at the national level. In this RIS, we have not included options analysis regarding potential stockholding requirements specific to Auckland Airport. As fuel importers refrained from commenting on the adequacy of stockholding level at Auckland Airport during targeted engagements in January and February 2023 (due to concerns about commercial sensitivity and potential breaches of competition law), we did not have a chance to test the options for potential stockholding requirements specific to Auckland Airport with fuel importers.

In terms of wider fuel resilience policy, this RIS does not discuss options for building new production capacity for mineral-based fuels and alternative fuels as a means to reduce dependence on imported fuels. The Government has other policy measures in place or under development to reduce dependence on imported fuels, increase development and adoption of low-carbon energy options (hydrogen and electric vehicles), and reduce transport energy demand. Those policy measures do not avoid the need for adequate resilience to a sudden fuel supply chain disruption in the period to 2040. Liquid fossil fuels will remain an important energy source for transportation for many businesses and New Zealanders.

Responsible Manager(s) (completed by relevant manager)

Dominic Kebbell

Manager, Resources, Gas and Fuel Supply Policy

Energy and Resource Markets

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Quality Assurance (completed by QA panel)

Reviewing Agency:	Ministry of Business, Innovation and Employment
Panel Assessment & Comment:	MBIE's Regulatory Impact Analysis Review Panel has reviewed the attached Impact Statement prepared by MBIE. The panel considers that the information and analysis summarised in the Impact Statement meets the criteria necessary for Ministers to make informed decisions on the proposals in this paper

Section 1: Diagnosing the policy problem

What is the context behind the policy problem and how is the status quo expected to develop?

1. The Marsden Point oil refinery **(the Refinery)** shut down permanently on 1 April 2022 and has become a fuel import terminal. As a result, New Zealand is now fully reliant on imports of fuel products that have already been refined.
2. All refined fuel products are delivered by international tankers to ports across New Zealand. There are no domestic coastal tankers for delivering fuel products between ports within New Zealand.
3. The Refinery used to supply about 65 to 70 per cent of New Zealand's total demand for refined fuels, and 100 per cent of its jet fuel. The fuels produced by the Refinery were supplied through pipelines and coastal tankers commissioned by COLL, a joint venture between Z Energy, bp and Mobil. The balance was imported mainly from refineries in Singapore and South Korea.

Timely to review our fuel resilience

4. The closure of the Refinery and the subsequent change in fuel supply chains for New Zealand is not expected to have a major impact on fuel security. Indeed, industry and independent expert advice is that the shift to a 100 per cent fuel import model improves New Zealand's fuel resilience in some respects. For example, there is no longer a "single point of failure" risk associated with an outage of the Refinery. Fuel companies now deliver fuels to New Zealand in more frequent shipments from more diverse sources, with 15-18 international fuel tankers visiting New Zealand each month. The new supply model also provides more flexibility to respond to local disruptions, as international tankers can be redirected to ports where they will be most useful for fuel distribution by road.
5. Furthermore, as the Refinery was designed to refine heavier crude oil from overseas rather than domestic crude it would not be able to run normally in the absence of imported crude. Keeping the Refinery would provide very little extra resilience in scenarios where New Zealand's import supply chains are heavily disrupted.
6. Nevertheless, it is timely to review New Zealand's fuel resilience in light of the change in our fuel supply chains, as well as other developments affecting international and domestic fuel supply and demand.
7. As crude oil stocks and intermediate products are no longer held at the Refinery following its closure, the overall level of oil and fuel stocks held by fuel companies in New Zealand is lower than before the Refinery's closure.

Expected drop in fuel stocks available domestically, taking into account crude oil that used to be held and then refined at the Refinery

8. Following the exit of the Refinery, the estimated average amount of petrol, diesel and jet fuel available in New Zealand has reduced by about 100,000 tonnes in total. This is equivalent to about five days of New Zealand's fuel consumption (aggregated across all fuel use).
9. Modelling commissioned by MBIE in late 2020 (before the closure of the Refinery) indicated that, after the Refinery's closure, the average stock level for petrol, jet fuel and diesel would be equivalent to 28 days, 24 days and 21 days respectively in terms of daily consumption. Some fuel importers indicated during targeted stakeholder

engagements that their average stockholding levels (particularly their diesel stocks) are lower than this.

10. MBIE's data suggests that, at the end of April 2022 (the first month after the Refinery's closure), the days' cover for petrol and jet fuel are higher than the modelled average, while the days' cover for diesel is similar to the modelled average. However, it is important to note that MBIE collects data at the end of each month, rather than on a daily basis. Because of this, it does not receive granular information about stocks and therefore likely does not see maximum or minimum national fuel stocks that could occur within a month.

11. The fuel stockholding level for some of the fuel wholesalers fluctuates over time. It can be below 15 days of cover on some days and well above 20 days of cover on other days. Hale and Twomey estimated that domestic stocks equivalent to 20 days of normal fuel demand would be adequate for managing the risk of a partial fuel import fuel disruption.[3]

Expected fall in demand for petrol and diesel, limiting incentives to invest in fuel infrastructure

12. Climate change initiatives and technological developments (such as electric vehicles (EVs)) mean that demand for petrol has plateaued and will start to decline from mid-2020s. Demand for diesel is expected to decline slightly between now and the mid-2030's, as low-carbon alternatives for heavy transport are still relatively limited, and EVs and renewable liquid fuels are not yet commercially viable replacements.

13. Developing fuel infrastructure incurs high upfront capital costs, and the energy transition could raise the risk of stranded assets. The fuel sector will likely have declining incentives to invest in infrastructure to maintain fuel resilience over time.

14. Nonetheless, fuel supply resilience remains critical to the national economy. Liquid fossil fuels will continue to be a source for transportation in the period to 2040, despite the rise of EVs. In particular, diesel and jet fuel used in heavy vehicles and aviation. Its use will remain central to the operation of critical services, such as emergency services and delivery of food and essential goods.

Jet fuel demand is expected to increase in the future and additional infrastructure is likely needed to support its growth

15. Unlike petrol and then diesel, jet fuel demand is expected to grow in the foreseeable future in-part because of the lack of commercially viable low-carbon options for long-haul flights. Sustainable aviation fuels are being increasingly used but are expected to remain much more expensive than mineral-based jet fuel. Population growth and tourism are also expected to contribute to growing jet fuel demand.

16. The 2017 Government Inquiry into the Auckland Fuel Supply Disruption (the Inquiry) found that jet fuel storage at or near Auckland Airport, which represents the majority of New Zealand's jet fuel demand, was insufficient considering the risk to the pipeline and the jet fuel demand at that time. The Inquiry found that investment in additional storage capacity was needed and recommended the Government put in place backstop regulation and use it if the fuel suppliers failed to invest adequately.

17. While the MSO will improve jet-fuel resilience, it is possible additional measures will be taken, to provide confidence jet-fuel infrastructure will be developed in time to meet

[3] Hale & Twomey. (2020). *Fuel Security and Fuel Stockholding Costs and Benefits*. MBIE. Page 17.

growing demand. This will be a future piece of work that is not considered further in this RIS as it is not required to support Cabinet's decisions.

Cabinet has agreed to introduce a package of measures to improve domestic fuel security, including a minimum fuel stockholding obligation

18. Following public consultation in early 2022 Cabinet agreed to a package of measures to improve New Zealand's fuel supply resilience [DEV-22-MIN-0243 refers]. The package will require both primary legislation (the Fuel Resilience Bill) and regulations.

19. The package included agreement to introduce a MSO. The high-level design has been agreed by Cabinet and was supported by a regulatory impact statement, which is available at https://www.mbie.govt.nz/dmsdocument/25591-regulatory-impact-statement-fuel-resilience-policy-package-proactiverelease-pdf. This analysis is not repeated in this RIS.

20. The objective of the MSO is to ensure there are sufficient fuel stocks to manage the impacts of plausible fuel supply disruption scenarios adequately, while balancing the economic costs associated with meeting the MSO so they are not disproportionate to a low probability, high impact event.

21. Cabinet agreed that the required national average stockholding level for fuel wholesalers will initially be set at:

    - 28 days of consumption for petrol;
    - 24 days of consumption for jet fuel;
    - 21 days of consumption for diesel on a three-month rolling average basis.

22. These fuel stock levels reflect the results of modelling undertaken in 2020 and correspond to the average levels of fuel stocks held then. The diesel stockholding levels will be supplemented by an additional seven days' cover which will be procured and held by the government. The government procurement of additional diesel stock is not a feature of this RIS.

The detailed design of the minimum fuel stockholding obligation

23. To enable the implementation and administration of the MSO, regulation would need to specify detailed methodologies that enable obligated parties to calculate the volumes of stock they are required to hold to comply with the legislated days of cover.

24. This RIS will focus on two main issues regarding the introduction of regulation and the design of the MSO.

    1. The first is that there is no agreed scope for determining what fuel stocks can count towards the MSO.
    2. The second is that there is no agreed calculation methodology for determining minimum stockholding volumes for each obligated party based on their market share.

What fuel stocks should count?

25. There are a range of options for what fuel stocks could count towards a fuel wholesaler's contribution to the national average stockholding level. Any fuel stocks included will need to be measurable, reportable, and auditable. Critically, any stocks included should contribute directly to New Zealand's fuel security (i.e. they can be readily accessed in the event of a fuel supply disruption).

26. Most of the fuel in New Zealand is in bulk storage facilities (defined in the Fuel Industry Act 2022 as a facility for the storage of 5 million litres or more of engine fuel). However,

a significant amount of fuel is also in pipelines, retail service stations, distributed smaller tanks, and in engine tanks.

27. Fuel wholesalers monitor stock levels in bulk storage facilities regularly (usually taking measurements on a weekly basis). They also have oversight of the stock level at retail sites owned by them, but not the stocks held by independent fuel retailers not owned by fuel wholesalers. Accounting for pipeline stocks is challenging, as fuels are pumped down the pipelines, many of which are shared by multiple parties.

28. In addition, industry have argued that fuel stocks that are on-water (i.e. in shipments) and on route to New Zealand should also be considered, as these also provide New Zealand with fuel resilience and security.

Why is a calculation methodology important, and what are the complexities with different methodologies?

29. Any methodology developed will need to account for fuel market dynamics, whilst ensuring there are sufficient fuel stocks to manage the impacts of fuel supply disruption scenarios. Fluctuations in stock levels can make this hard to achieve given the impossibility of predicting when a fuel disruption could occur.

30. Cabinet has agreed to a national average stockholding level for each type of fuel, and that fuel wholesalers will need to contribute to this average stockholding level in a manner that reflects their market share. Achieving this will require the regulations to set out a methodology that enables fuel wholesalers to know how much stock they need to hold, by volume, to contribute to their share of the agreed national days of cover.

31. The broad calculation method has also been developed:

$$A = B \times C$$ Where:

- A is the fuel wholesaler's stockholding level for the compliance period for the fuel type (measured in thousands of litres).
- B is the required national average stockholding level for fuel importers/wholesalers for the fuel type, i.e. minimum days of cover for the fuel type (measured in days of cover for meeting fuel demand).
- C is the expected daily consumption (the fuel wholesaler's offtake from bulk storage facilities) of the fuel type concerned in New Zealand (measured in thousands of litres per day).

32. This methodology is dynamic, it reflects changing market shares (by supply volume) and fuel demand. Variable B has already been agreed by Cabinet (28 days for petrol, 24 days for jet fuel and 21 days for diesel), but the details of variable A and C need to be determined in the regulations.

33. Variable A will need to determine the length of the compliance period and how the stock holding level will be measured (average or a minimum level). An absolute minimum would mean that at any point, stocks should not drop below the agreed days of cover (variable B).

34. Under the status quo, stock levels fluctuate in response to supply and demand dynamics. While demand (variable C) is relatively predictable for fuel companies, it does vary due a range of factors such as price or the time of the year and public holidays. Supply (variable A) on the other hand is lumpy due the nature of its import supply chains. When fuel-stock arrives at a port-terminal it is discharged into bulk storage and stock levels in storage increase by the size of the shipment. These

dynamics mean that managing stock levels efficiently is challenging as it depends on optimising import supply chains and good demand forecasting.

Who are the impacted stakeholders and what is their view of the problem?

35. The primary stakeholders are the regulated parties that includes bp, Mobil, Gull, Z Energy and TasminFuels. Channel Infrastructure is also a highly engaged stakeholder as they manage fuel storage and distribution infrastructure.

36. Fuel consumers are also impacted to the effect that the MSO could increase the price of fuel if it is too stringent. They also benefit from having a resilient fuel supply that is robust enough to respond to disruptions should they occur, and too the changing market dynamics that are accompanied with the transition to a low emissions economy.

37. Between January and February 2022, MBIE consulted on high-level options for improving fuel supply resilience. This included the proposal to introduce a minimum fuel stockholding level (the MSO). During the consultation, MBIE received 21 submissions, mainly from the fuel and transport sectors.

38. The fuel wholesalers expressed concerns that if the MSO was too stringent it would be requiring them to hold reserve stocks above their normal/historical stockholding level. They argued that this would result in significant compliance costs through the development of new storage infrastructure. Additional costs would be passed onto fuel consumers and could increase the price consumers face at the pump.

39. Furthermore, as demand for ground fuels is expected to decline over the coming decade as New Zealand transitions away from fossil fuels, there is risk that new storage facilities could become stranded assets.

40. Some fuel wholesalers and fuel resellers also raised concerns about the potential for adverse outcomes for market competition. They consider that the MSO could disincentivise fuel wholesalers from taking on new supply agreements. This could affect the ability for fuel distributors or resellers to switch from one fuel wholesaler to another to secure fuel supplies and more competitive prices. They are of the view that fuel stockholding requirements would increase with every new supply contract, and fuel wholesalers may need to hold onto stocks to meet the required minimum stockholding level.

41. Earlier in 2023, MBIE undertook targeted engagement with regulated parties and fuel industry experts on the detailed design of the MSO. The major areas of contention were the scope of the MSO (i.e. what stocks can be counted), and the methodology for calculating the volume a fuel wholesaler must hold over the designated time period. These are the two issues this RIS will focus on.

42. Transport users generally consider that the required minimum stockholding levels will need to be high enough to avoid situations where fuel shortage occurs when all fuel wholesalers' stockholding levels are at the bottom of the inventory cycle at the same time.

43. Fuel wholesalers consider that, if the Government proceeds with the MSO, they prefer having to meet the required minimum stockholding levels on a rolling average basis than having to meet an absolute minimum. In terms of how the rolling average is calculated, fuel wholesalers commented that they can provide reasonably good estimates of daily fuel stockholding level (without taking exact measurements at the tanks every day) and calculate the average daily stock over the month concerned. If they were required to take daily measurements at the tanks, it would be too onerous. They would be able to take weekly measurements (as per their current practice) and extrapolate those weekly data sets to estimate the daily stockholding levels.

44. Regarding how the expected daily fuel consumption (component C of the calculation method) is estimated, some fuel wholesalers, such as Mobil, prefer it to be based on a 12-month historical average, as this would allow them to have a clear idea about the minimum stockholding level, they must meet for the month concerned and plan ahead.

On the other hand, Z prefers the expected daily fuel consumption to be based on the average of the most recent three months, as this would allow the required minimum stockholding level to be move in sync with changes in fuel demand. Those changes could be caused by seasonal variations, significant fuel market developments (e.g. an obligated party losing a major customer), and more broadly the transition away from fossil fuels.

45. In terms of the types of fuel stocks that can be counted for compliance with the required minimum stockholding levels, all fuel wholesalers would like to be able to count all stocks on land and all stocks on water, including those on international tankers outside of the EEZ. Regarding stocks in retail outlets and pipelines, some fuel wholesalers noted that such stocks constitute only a relatively small proportion of fuel stocks. They do not have a clear oversight of the stocks held by retail outlets that are not owned by the fuel wholesalers. .

What objectives are sought in relation to the policy problem

46. The overarching objectives are to:

- *Maintain or improve fuel security/resilience in a changing context* - New Zealand's ability to mitigate the impacts of plausible domestic and international fuel supply disruption scenarios will be maintained or improved.

- *Avoid disproportionate economic cost* - the measures for maintaining or improving New Zealand's fuel supply resilience should not result in unduly high compliance costs for businesses and should not significantly affect fuel affordability for consumers. To encourage economic efficiency, the risk of stranded assets in view of the clean energy transition and adverse effects on fuel market competition should be minimised.

Section 2: Deciding upon an option to address the policy problem

What criteria will be used to compare options to the status quo?

47. For the regulatory regime we will assess the following criteria for the different elements of the proposal:

    - Improving and maintaining fuel resilience (New Zealand's ability to mitigate the impacts of plausible fuel supply disruption scenarios will be maintained or improved).
    - Economic impacts (this includes compliance costs, stranded asset risk, and the flow on impacts to fuel prices)
    - Difficulty of implementation and complexity
    - Administration costs.

48. The key objectives of the regulation is to maintain or improve fuel resilience. The criteria for fuel resilience will therefore be double weighted in the mulit-criteria analyisis.

49. There is some trade-off between "maintaining or improving fuel security/resilience" and "avoiding disproportionate economic cost", as minimising fuel security/resilience risks could mean that more investment in fuel infrastructure may need to be built and more fuel storage costs may need to be incurred. Achieving the right balance between improving and maintaining fuel resilience and avoiding disproportionate economic impacts will be a key consideration in our assessment of the options.

50. We have assumed compliance costs faced by obligated parties will be passed onto cosumers, resulting in fuel price increases. Because of this compliance costs are captured in the economic impacts criterion. This assumption reflects feedback received from the fuel sector during consultation.

51. The difficulty of implementation and complexity criterion is about ensuring the regulatory regime is able to be implemented in a timely and effective manner. It has some overlaps with compliance costs, for example if the calculation methodology is designed in a way that will require fuel wholesalers to build additional storage, this will make implementation of the regime in a timely manner more challenging as well as increasing compiance costs. A well designed regulatory regime should also enable efficient administration, which should keep administration costs low.

52. Difficulty of implementation and complexity, and administration costs are all important considerations, however the expected impact of these criteria on the total cost of the obligation is relatively small. The weighting of these criteria will not be modified in the multi-criteria analysis.

What scope will options be considered within?

53. The options discussed in this RIS focus on:

    a. The calculation method for determining minimum stockholding volume
    b. The types of fuel stocks to be counted.

54. In October 2022, the Government agreed to a fuel resilience policy package, part of which is the minimum stockholding obligation. The high-level design of the MSO was agreed, the key decisions include:

    - **agreed** to proceed with introducing minimum fuel stockholding obligation on fuel importers/wholesalers that have bulk storage facilities for diesel, petrol and jet fuel in New Zealand;

- **agreed** that the minimum fuel stockholding level that obligated parties will have to meet will be based on their market shares and the expected national average commercial stockholding levels for diesel, petrol, jet fuel and their biofuels equivalent after the Refinery's closure, taking into account the impacts of the Covid-19 pandemic, in terms of days of cover for meeting daily fuel consumption;

- **agreed** that the required national average stockholding level for fuel importers/wholesalers will initially be set at 28 days of consumption for petrol, 24 days of consumption for jet fuel and 21 days of consumption for diesel on a three-month rolling average basis;

55. The options and proposals discussed in this paper have been considered within this high-level design already agreed by Cabinet.

56. The counterfactual both sets of options will be compared against in the next section represents the current state of New Zealand's fuel resilience. That is, a the MSO has not been introduced.

Part One – stocks to be counted for compliance with the obligation

What options are being considered?

57. The options relate to what fuel stocks of diesel, jet fuel, and petrol should be counted towards the MSO.

58. Each option will require a different approach for measuring and reporting stock levels and have different impacts of fuel security and the economic cost of the MSO.

Option One – Stocks in onshore bulk storage facilities only

59. This option would only count fuel stocks in onshore bulk storage facilities towards the MSO. Bulk storage facilities are the last point in the fuel supply chain than fuel wholesalers collectively have complete visibility over stock levels. Monitoring and reporting systems for stock levels in bulk storage facilities are already set up as part of business-as-usual practice.

60. Bulk storage facilities will be defined as they are in the Fuel Industry Act 2020 - a facility for the storage of 5 million litres or more of engine fuel.

Option Two – Stocks in onshore bulk storage facilities and on-water within the EEZ

61. The stock that may be counted towards the obligation will be limited to stock held in a bulk supply facility (as defined in the Fuel Industry Act 2020) and fuel cargo in a vessel within New Zealand's Exclusive Economic Zone (EEZ) that is scheduled for delivery to a New Zealand port. The amount of stock on water within Exclusive Economic Zone is typically equivalent to less than one day of cover of each fuel type and could access a terminal on land within a day.

62. This option would not count stock downstream of bulk storage facilities such as pipelines and service stations.

Other options that were considered but determined to be out of scope or impractical

63. Unrefined crude oil that is extracted in New Zealand and exported would not count towards fuel stocks under any of the options due to their inability to be used in New Zealand's transport fleet.

64. Counting fuel stocks in retail service stations, pipelines and small-scale distributed storage facilities was considered but was ruled out. While fuel stocks in these parts of the fuel system arguably contribute to a degree of fuel resilience, it is not practical to include them in scope. Fuel wholesalers have limited visibility of fuel stocks beyond bulk storage facilities as these stocks are often managed by third-party distributers or retail fuel companies. It is not practical therefore to regulate fuel wholesalers to manage fuel stocks they do not own or manage.

65. Some fuel industry participants also argued that all stocks on water that are scheduled for delivery in New Zealand ports should be counted towards the MSO. Officials have ruled scheduled stocks on water outside of New Zealand Exclusive Economic Zone (EEZ) out of scope, as these stocks can be between 3 – 14 days away from New Zealand ports, and therefore are not considered as contributing to New Zealand's stockholding level at any given time. In the event of an international fuel disruption, there is a heightened risk that fuel stocks outside of New Zealand EEZ could be diverted to supply other countries. This would be counter to the policy objectives of the MSO of improving the level of fuel resilience in New Zealand.

How do the options compare to the status quo/counterfactual?

Part One – stocks to be counted for compliance with the obligation

	Counterfactual – regulation is not introduced	Option One – Stocks in bulk storage facilities only	Option Two – Stocks in bulk storage facilities and on-water within EEZ
Fuel resilience (New Zealand's ability to respond to supply disruptions, double weighting has been applied to this criterion)	0 *Fuel resilience may or may not improve based on commercial decisions*	++++ *This provides the most fuel resilience as it is the narrowest in scope, meaning all days of cover must be accounted from bulk storage facilities. Fuel resilience benefits contributed by other parts of the supply chain will still occur but wont be counted.*	++++ *This option provides more fuel resilience that the status quo as it ensures stock levels within the EEZ will be around the agreed days of cover. The resilience provided by this option is only marginally lower than option one (by about 1 – 2 days of cover) due to the broader scope.*
Economic impact	0 *There is no economic impact of the MSO, New Zealand's ability to respond to mitigate the economic impact of fuel supply disruptions will continue to depend on commercial decisions*	- - *It is possible that some fuel importers will need to increase fuel import shipments and/or build additional tankage to meet the agreed days of cover. This would result in fuel companies investing in assets that could become stranded as fuel demand declines. The cost of additional tankage would be passed on to fuel consumers and flow through the economy.*	- *It is unlikely that additional tankage would need to be built to meet the agreed days of cover. If fuel demand increases faster than expected however this could change. It is possible this option could result in more frequent, lower volume fuel shipments coming to New Zealand, increasing total transportation costs of delivered fuel.*
Difficulty of implementation	0 *The MSO is not implemented*	*0* *Fuel companies have monitoring and reporting processes in place to understand average daily stock levels in their bulk storage facilities.*	*0* *Fuel companies have monitoring and reporting processes in place to understand average daily stock levels in their bulk storage facilities. They also have systems in place to report when shipments enter the EEZ and how much stock is in each shipment.*
Administration costs	0 *There is no regime*	- *The regulator will face some increases in costs to monitor compliance, process exceptions, and undertake audits on bulk storage facilities.*	- *The regulator will face some increases in costs to monitor compliance, process exceptions, and undertake audits on bulk storage facilities.*
Overall assessment	0	+	

	Fuel resilience may or may not improve based on commercial decisions.	*Fuel resilience is expected to improve and be maintained as New Zealand transitions to a low emissions economy. Obligated parties may need to build additional infrastructure to meet the MSO in the initial years. There is a risk new assets become stranded as New Zealand transitions away from fossil fuel (particularly petrol and diesel). The cost of new storage facilities will be passed on to fuel consumers.*	**++** *Fuel resilience is expected to improve and be maintained as New Zealand transitions to a low emissions economy. Stock levels are expected to return to levels similar to before the closure of the Refinery.* *Obligated parties are unlikely to need to build additional infrastructure to meet the MSO, lowering the economic impacts of this option.*

Part Two – calculation method for stockholding level

What options are being considered?

66. Cabinet agreed that the minimum fuel stockholding level that obligated parties will have to meet will be based on their market shares and the expected national average commercial stockholding levels for diesel, petrol, jet fuel and their biofuels equivalent after the Refinery's closure, considering the impacts of the COVID-19 pandemic, in terms of days of cover for meeting daily fuel consumption. The required national average stockholding level for fuel importers/wholesalers will initially be set at:

    - 28 days of consumption for petrol;
    - 24 days of consumption for jet fuel;
    - 21 days of consumption for diesel.

67. The regulations will need to provide a detailed methodology for how the minimum stockholding volume can be determined for each fuel wholesaler to meet the national stockholding levels agreed by Cabinet. The formula for translating minimum days of cover to the required minimum stockholding volume is as follows:

$$A = B \times C$$

Where:

- A is the fuel wholesaler's minimum stockholding level for the compliance period for the fuel type (measured in thousands of litres).
- B is the required national average stockholding level for fuel importers/wholesalers for the fuel type, i.e. minimum days of cover for the fuel type (measured in days of cover for meeting fuel demand).
- C is the expected daily consumption (the fuel wholesaler's offtake from bulk storage facilities) of the fuel type concerned in New Zealand (measured in thousands of litres per day).

68. B in the equation has already been set. This RIS will explore options for the compliance time period for A, and how this will be measured and reported. During targeted consultation with the obligated parties, this was the most contentious and impactful decision regarding the translation of days of cover to a minimum volume.

69. Expected daily consumption C, will be estimated based on the historical average daily fuel consumption in the most recent 12-month period preceding the compliance period. This provides a stable and predictable basis for fuel consumption as the long-term average should flatten out seasonal variations and effects of fuel disruptions on consumption. This approach was widely supported by industry during targeted consultation as it allows them to plan imports with more certainty. It is our preferred approach. Different options for calculating C are not considered in this RIS.

70. The compliance period for variable A, however, is not agreed and there are a range of options that could be considered.

71. If an average approach is considered, the compliance period could have a material impact over how fuel stocks are managed and the fluctuations in stock levels over a period. In theory, a shorter compliance period will require more active management of stocks, as stock level will be measured over a shorter period, leaving less opportunities for obligated parties to hold stock levels significantly below the agreed days of cover. This will reduce the volatility of stock levels; however, it may result in additional compliance costs due to the need to develop more infrastructure or result in changes to import models (i.e. more frequent shipments but with lower volume). In contrast, a longer compliance period would allow obligated parties more flexibility to meet the

MSO, allowing them to reduce compliance costs, however this would also allow more significant fluctuations in stock levels.

72. An alternative to an average stockholding level, an absolute minimum stockholding level, could also be considered. This would mean stocks would not be allowed to drop below the agreed days of cover (variable B) at any point. This is equivalent to having an average stock level measured daily.

Option One Average of three months must meet the agreed days cover

73. Average of three months—the average is calculated and reported every quarter, based on an estimate of daily stock for the quarter. The statistical method for estimating daily stock would reflect that of option one.

Option Two – Average of the month must meet the agreed days cover

74. Average of the month—the average is calculated and reported every month based on estimate of daily stock. Fuel importers do not necessarily have to dip the tanks every day. For example, statistical method can be applied to estimate daily stock level, based on weekly data.

Option Three – Minimum stock levels – i.e stocks cannot drop below the agreed days of cover at any point

75. This option would specify the required minimum in terms of an absolute minimum stock level rather than an average stock level. A minimum represents a significant tightening of the MSO, as stock levels would not be allowed to drop below the agreed days of cover. This is equivalent to having an average stock level measured on a daily basis.

76. This option may require the minimum days of cover (variable B) to be revisited because the minimum days of cover Cabinet agreed to were based on estimates of average stockholding level after the Refinery's closure, rather than estimates of the minimum level the industry reaches in its normal inventory cycle. This approach would result in significantly higher agreed days of cover, on and average basis, to what Cabinet agreed.

Part Two – calculation method for stockholding level

	Counterfactual – regulation is not introduced	Option One – Average of three months must meet the agreed days cover	Option Two – Average of each month must meet the agreed days cover	Option Three – Minimum, stock levels cannot drop below the agreed days of cover at any point
Fuel resilience (New Zealand's ability to respond to supply disruptions, double weighting has been applied to this criterion)	0 *Fuel resilience may or may not improve based on commercial decisions*	++ *This option provides greater resilience than the counterfactual by ensuring a minimum level of stock is held. Fuel stocks over this period could be volatile and drop to low levels at any given point in the three months.*	+++ *This option represents a marginal tightening of the MSO compared to option one as fuel companies have less ability to smooth out volatility of stock levels over a longer period. We wouldn't expect stock levels to drop as low as in option one.*	++++ *This option provides the most resilience as it ensures a minimum level of stock across the country at any one point (that is equivalent to the average of option 1 & 2). Fuel wholesalers would need to hold significantly more stock to ensure compliance.*
Economic impact	0 NA	- *This option could increase costs compared to the counterfactual, however it is expected that these will be minimal, as the average is taken over a quarter, regulated parties will be able to minimise costs, additional storage infrastructure is highly unlikely to be required.*	- *This option could increase costs compared to the counterfactual and option 1, however it is expected that these will be minimal as it is unlikely addition storage infrastructure will need to be built under this option to achieve compliance.*	- - *Re-specifying the required minimum in terms of an absolute minimum stock level rather than an average stock level could require a significant increase in stockholding. This option could increase costs compared to the counterfactual, option 1 & 2, as it is likely additional storage infrastructure would be needed to achieve compliance with this. These costs would be passed onto fuel consumers.*
Difficulty of implementation	0 *The MSO is not implemented*	0 *This option is likely to be straight-forward to implement as fuel importers should have readily available data for the calculation.*	0 *Same as option 1.*	- - *This option may be difficult to implement smoothly, as it is likely additional storage will need to be for companies to achieve compliance. To collect accurate levels and the lowest stock level of the month*

				fuel importers will need to dip the tanks every day. This will add to the compliance burden of fuel importers which usually dip tanks once a week.
Administration costs	0 *There is no regime*	- *The regulator will face some increases in costs to record reported information and measure compliance, additional costs will be required for auditing.*	- *Same as option 1.*	- *Same as option 1.*
Overall assessment	0	0 *This option would allow obligated parties to minimise their compliance costs and costs passed onto fuel consumers, as they have more flexibility in meeting the MSO. This however could result in more volatility in stock levels which lessens its ability to significantly improve resilience.*	+ *This option provides better fuel resilience than option one as stock levels would be less volatile. It is unlikely this option will result in the need to build additional storage infrastructure, keeping the economic impacts to a minimum.*	- *This option provides the highest levels of fuel resilience, however new storage infrastructure will need to be built to achieve this. The costs are expected to be passed onto fuel consumers. It also creates the risk of new assets becoming stranded in the future. It is our view the benefits of this option do not outweigh the potential adverse economic impacts.*

What options are likely to best address the problem, meet the policy objectives, and deliver the highest net benefits?

77. The preferred options should ensure that fuel resilience in New Zealand is maintained or improved and there is confidence reserve stocks would be available in the event of a fuel supply disruption.

78. This will need to be balanced against the economic impacts of the obligation. Given the expected decline in ground fuels in the coming decades there is risk that a too stringent MSO would require wholesale fuel companies to invest in additional storage assets that risk becoming stranded. Fuel storage facilities will need to be built to a level that ensures that compliance with the MSO can be achieved at peak oil. As demand for ground fuels shrinks, so too will fuel wholesalers required stockholding levels under the MSO. This creates the risk of stranded assets (such as storage facilities). In addition, as fuel consumers decline (i.e. more vehicles switch to electric, or there is more mode-shift) the fixed costs of fuel infrastructure may be spread across a declining number of consumers, increasing the cost of fuel per consumer.

79. For *part one – stocks to be counted for compliance with the obligation*, option two – stocks in bulk storage facilities and on-water within the EEZ is our preferred option. The multi-criteria analysis for this is outlined on pages 17 to 18.

80. For *part two – calculation method for stockholding level,* option two – the average of each month must meet the agreed days cover is our preferred option. The multi-criteria analysis for this is outlined above.

81. The preferred options collectively provide a balance that ensures fuel resilience in New Zealand is maintained, while economic impacts are balanced.

82. Stocks on-water can add around one to two days' worth of coverage for each fuel type. This combined with the approach of calculating the MSO on monthly average stocks provides an option that is unlikely to require additional bulk storage infrastructure to be developed. This is important for managing the impacts of the obligation of fuel costs and the wider economy, especially in the context of declining fuel demand in the 2020s. Costs of additional infrastructure would be recovered through raising fuel prices, any increases of which would have flow on impacts on the economy. There is also the risk that additional infrastructure could become stranded within a decade, because as fuel demand declines, so will the fuel stock levels needed to meet the agreed national average days of cover.

83. Counting only fuel stocks in bulk storage facilities and stocks on-water is easily measured and reported, keeping compliance costs low. Including stock on water within the EEZ is a pragmatic way to avoid complexities around counting stock on ships that are in port and discharging, or awaiting a berth to commence discharging, or after discharging cargo at one port and steaming to another. Most import vessels coming to New Zealand arrive at the first port of call (usually Marsden Point) within less than a day of entering the EEZ.

84. While calculating and reporting on monthly average stock levels provides a transparent, consistent, and robust methodology that ensures national stock levels are close to the agreed days of cover. Administration and compliance costs are expected to be small and will have a negligible impact.

85. A monthly average approach would see less volatility in national stock levels than one that was averaged over a longer period (i.e. option one). This is an important consideration from a fuel resilience perspective as it is unknown when a fuel disruption could occur. A shorter time requires more active management of stock levels to maintain compliance. This would reduce the likelihood of a fuel disruption occurring in a

trough in the inventory cycle that is significantly lower than the national average stock level.

86. Option three – monthly minimum where stocks could not drop below the agreed days of cover would provide the best resilience, however, it is likely additional storage infrastructure would need to be developed to achieve this. This would incur economic impacts as the cost of additional infrastructure would be passed on to fuel consumers. There is also a risk that these assets would become stranded as fuel demand declines.

87. One consequence of our preferred approach could be that fuel suppliers may need to increase the frequency of fuel supplies to New Zealand, as storage tanks will need to remain topped up, and because stocks within the EEZ can be counted towards the obligation. This has the added resilience benefit that if an internal disruption was to occur (such as an outage at a port terminal), stocks on water can easily be rerouted to discharge elsewhere in the fuel system but may come with increased demurrage fees.

88. With ongoing monitoring of the obligation and a review five years after its introduction, we will revisit whether our preferred option is the best approach.

What are the marginal costs and benefits of the option?

Affected groups *(identify)*	**Comment** *nature of cost or benefit (eg, ongoing, one-off), evidence and assumption (eg, compliance rates), risks.*	**Impact** *$m present value where appropriate, for monetised impacts; high, medium or low for non-monetised impacts.*	**Evidence Certainty** *High, medium, or low, and explain reasoning in comment column.*
Additional costs of the preferred option compared to taking no action			
Regulated groups	Management of the bulk storage utilisation could increase and incur ongoing costs. Continued maintenance of fuel storage infrastructure even as fuel demand decreases. Possibility for additional tankage to be built if fuel demand increases (counter to trends and expectations). It is possible for fuel importers to meet the required minimum stockholding obligation without increasing their fuel storage capacity. For those fuel importers currently keeping fuel stocks below the required minimum stockholding levels (which are based on estimates of the average expected commercial stockholding levels), they will need to arrange additional fuel shipments to meet the required minimum.	Low cost to the regulated parties, it is assumed they pass any costs of compliance on to fuel consumers. Less than $1 million per year of administrative costs (relating to compliance with reporting and auditing requirements) per obligated party.	Medium MBIE is not privy to granular information on fuel stocks, where these are held, the capacity and utilisation of storage tanks, and stock optimisation practices[4]. Such information is commercially confidential. Targeted consultation with regulated groups however has occurred on these options.

[4] It is unclear how many additional fuel import shipments some fuel importers may need to arrange, and how much more operational cost some of them have to incur from arranging more fuel import shipments. Some fuel importer provided some relevant estimates, but officials are not privy to all of their modelling assumptions

Regulators	MBIE will face ongoing costs of monitoring, enforcement, and administration. This also includes policy work in reviewing and offering exemptions and reviewing the efficacy of the regime. It will also include auditing of fuel stocks.	Up to $1.5 million a year for the Government's monitoring, compliance and enforcement activities. Could be higher if more frequent fuel supply disruptions occur	Medium
Others (eg, wider govt, consumers, etc.)	Ongoing costs to fuel consumers, as regulated parties pass the costs of complying with the obligation on. This includes the cost of holding reserve stocks, fuel infrastructure, and maintenance.	Low-medium In the short-term the obligation is expected to have negligible impacts on fuel costs, as minimum levels are set based on what average domestic fuel stock levels were around the time of the closure of the Marsden Point oil refinery. In the medium to long term, the costs of providing minimum stockholding levels per consumer could increase as fuel users transition to low emissions alternatives such as EVs. Some would be offset by the reduction in the obligations volume as it is pegged to historical demand (i.e. the last 12 months). The cost of additional storage infrastructure, however, may be spread over a smaller number of consumers if obligated parties are still recovering its cost.	Low – medium MBIE is not privy to granular information on fuel stocks, where these are held, the capacity and utilisation of storage tanks, and stock optimisation practices[5]. Such information is commercially confidential. Targeted consultation with regulated groups however has occurred on these options.

[5] It is unclear how many additional fuel import shipments some fuel importers may need to arrange, and how much more operational cost some of them have to incur from arranging more fuel import shipments. Some fuel importer provided some relevant estimates, but officials are not privy to all of their modelling assumptions.

Total monetised costs		Less than $5.5m a year if we assume that fuel importers neither need to invest in extra fuel storage tanks, nor significantly change their stock management practices. Some fuel companies may need to order more fuel import shipments to meet the required minimum stockholding level. However, officials do not have reliable data on the additional fuel shipment costs. If the proposed options increase the need for obligated parties to hold stock levels that are significantly greater than expected the costs could be a magnitude higher than indicated.	Low - medium MBIE is not privy to granular information on fuel stocks, where these are held, the capacity and utilisation of storage tanks, and stock optimisation practices. Such information is commercially confidential. As a result, it is difficult to assess whether the proposed settings will result in the need to build additional infrastructure. Nor do we have reliable data on potential additional fuel shipment costs.
Non-monetised costs		*Low-medium*	*Medium*
Additional benefits of the preferred option compared to taking no action			
Regulated groups	The benefits of this policy are materialised if a fuel supply disruption occurs. Holding a minimum level of stock will increase the response time for wholesale fuel suppliers to reorganise supply chains and more smoothly manage the impacts of a disruption on their downstream consumers.	High if a disruption occurs. Low if one does not.	Medium

	Stocks on water can easily be rerouted if the disruption is due to a pipeline or terminal fault.		
Regulators	Increased time to respond will allow regulators more time to gather good information and develop well targeted policy interventions if a disruption occurs (as the country is not imminently at risk of running out of fuel).	High – in the event of a fuel supply disruption	High – based on the National Fuel Plan https://www.civildefence.govt.nz/assets/Uploads/publications/National-fuel-plan/National-Fuel-Plan-Final-March2020.pdf
Others (eg, wider govt, consumers, etc.)	Increased assurance that if a fuel supply disruption occurs, supply will be available for the supply of essential goods and services.	High – in the event of a fuel supply disruption While the risk of fuel supply disruptions occurring are low, the potential impacts on the fuel consumers and the economy if one occurs is very high. For example, in a long-term disruption to the Marsden Point to Auckland Pipeline affecting fuel supply for up to four months, Market Economics Ltd.'s modelling indicates that Gross National Disposable Income (GNDI) would be $1 billion or 0.4 percent lower over a year (or $250 million per month of outage). Significant international fuel supply disruptions lasting for months are likely to cost the economy billions of dollars.	High – based on studies and historical examples on the impact of fuels supply disruptions on the economy. https://www.mbie.govt.nz/assets/economics-of-fuel-supply-disruptions-and-mitigations.pdf https://www.mbie.govt.nz/assets/7cad526263/information-for-nzier-report-on-oil-security.pdf
Total monetised benefits	NA	NA	NA

Non-monetised benefits	The benefits of this policy occur if a disruption occurs to fuel supply chains or if a wholesale fuel supplier exits from the New Zealand market.	*High*	*High - based on studies and analysis of historic fuel supply disruptions – all can be found here https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-generation-and-markets/liquid-fuel-market/fuel-security-in-new-zealand/*

Section 3: Delivering an option

How will the new arrangements be implemented?

89. The minimum fuel stockholding obligation will be introduced through regulation.

90. The regulations will come into effect three months after royal assent. This could be longer if the obligated party (fuel wholesaler) can provide evidence that demonstrates it is unreasonable to comply with the obligation due to lack of existing storage capacity. It is our current view that this is unlikely to be the case.

91. The Ministry of Business, Innovation and Employment will be responsible for the implementation, administration, and enforcement of the MSO. This will include:

    - Providing advice to the Minister of Energy and Resources on whether an exemption from or suspension of the MSO is warranted for a limited time for a fuel wholesaler.
    - Developing the information system to record stock levels and monitor compliance of fuel wholesalers.
    - Providing guidance to fuel wholesalers on the format, frequency, and granularity of information to be reported under the regulations.
    - Ensuring compliance and the accuracy of reported information via audits and other enforcement action.

92. In addition, the regulator MBIE will continue to assess whether the MSO is set at appropriate levels to provide adequate levels of fuel supply resilience.

Exemption from or suspension of the obligation for a limited time

93. The Act will provide regulated parties the ability to apply for a temporary exemption from the MSO. This would be granted by the Minister (who can delegate this power to MBIE) on a case-by-case basis, using a number of criteria. The criteria could include:

    - The impact of an event on fuel imports and fuel storage capacity.
    - The duration of the event.
    - The level of control of the fuel importer over the event.
    - Time required to achieve compliance with the obligation.
    - The impact on fuel resilience in regions.

94. Enforceable terms and conditions could be included in any exemption provided (i.e. the exemption is provided so long as additional investment in storage facilities are undertaken).

What are the implementation risks? Have any issues been raised through consultation? How will these risks be mitigated?

95. The implementation risks and how they will be mitigated are as follows.

Investment and development of storage infrastructure is slow and obligated parties are non-compliant when the regulations come into effect

96. If the MSO is set at a level that requires fuel wholesalers to build additional tankage, there is a risk that the development of this infrastructure is too slow to allow compliance when the regulations come into effect.

97. This risk could be mitigated by extending the enactment period and setting a temporarily lower stockholding obligation if the fuel wholesaler can provide evidence

that demonstrates it will be unreasonable for it to comply due to lack of existing storage capacity. This would be achieved using written undertakings in which the regulator would agree with fuel wholesalers' on pathway back to compliance.

98. However, this is unlikely to be the case. In our assessment it is unlikely that additional tankage will need to be built to meet the MSO. The preferred option includes stocks on water within the Exclusive Economic Zone, and minimum stock levels close to what was maintained prior to the closure of the Marsden Point Refinery. Ensuring compliance by the enactment date is instead likely to involve fuel wholesalers increasing the frequency of fuel deliveries to New Zealand in the period before and just after enactment.

Risk of higher than anticipated compliance costs

99. There is a risk that the cost of complying with the MSO could be higher than anticipated. This could occur if parties are required to build additional tankage or implement new systems to monitor stock levels and manage reporting requirements.

100. Higher than anticipated compliance costs will mean that companies will pass these costs onto fuel consumers. It they are significantly higher than anticipated, the Minister of Energy and Resources could consider a temporary exemption to the MOS or review the agreed days of cover (see discussion on both below).

Enforcement

101. There is a risk that obligated parties do not comply with meeting the stockholding obligation. This will be mitigated by the penalties and enforcement clauses in the legislation.

102. In October 2022 Cabinet agreed maximum pecuniary penalties for failure to comply with stockholding obligations and information reporting requirements.

103. The regulations will also include an offence provision for failure to provide information without reasonable excuse or knowingly providing information that is misleading or deceptive. A person who fails to provide required information without reasonable excuse or knowingly attempts to deceive or mislead, commits an offence and is liable on conviction to a fine not exceeding $100,000 in the case of an individual and a fine not exceeding $300,000 in any other case. This proposal is consistent with the existing offence provision in other fuel sector legislation – i.e. section 42 of the Fuel Industry Act 2020.

How will the new arrangements be monitored, evaluated, and reviewed?

Monitoring

104. The regulations will introduce a requirement for obligated parties to report monthly information on all fuel stocks that can be counted for compliance withing the minimum stockholding obligation only (our preferred option is all stocks in bulk storage facilities,

and stocks on water within New Zealand's Exclusive Economic Zone), as well as storage capacity.

105. This will include reporting the following information for all fuel stocks and more broadly fuel resilience:

- An obligated party's monthly average fuel stocks for diesel, petrol, and jet fuel at each of the bulk storage facilities in New Zealand and at the national level.
- Minimum and maximum levels during the month for diesel, petrol and jet fuel.
- Estimates of the volume of fuel stocks on tankers within the EEZ.
- Sources of fuel stocks.
- Reporting annually on contingency plans for fuel supplies, and any plans to withdraw from the New Zealand fuel market or significantly reduce market presence in particular regions in New Zealand in the coming year.

106. Obligated parties will need to report the following information for storage capacity:

- Average utilisation of storage tanks each month, by location, expressed as a percentage.
- Information on operational capacity at the end of the month, by tank.

107. MBIE will also continue to liaise with the fuel sector regarding fuel security issues periodically and when fuel supply issues arise.

108. MBIE will also continue to monitor fuel price movements regularly and the Commerce Commission may undertake fuel market studies should there be significant concern over fuel price increases following the introduction of the obligation.

109. Fuel wholesalers will also be required to provide independent assurance, from time to time, that the method used to measure or estimate average daily stock is fit for purpose, and that the reporting of their stock information is accurate. In addition to this, MBIE will have the power to undertake spot audits, including measuring stock levels in bulk storage facilities.

110. As noted in the analysis above, MBIE is not currently privy to granular information on fuel stocks, where these are held, the capacity and utilisation of storage tanks, and stock optimisation. This has made it challenging to provide a data-backed approach to setting the MSO levels and methodology. Information gathered under the MSOs reporting requirements will be a critical input into the evaluation of the policy after it has been implemented.

Evaluation

111. There is no objective measure for the "right" level of fuel resilience. Ultimately, it comes down to a balance of the risk of fuel disruption against the costs of the mitigation measures. Uncertainties in international oil and fuel markets, geopolitical uncertainties, increasing rates of natural disasters and infrastructure failures makes the 'right' level of fuel resilience difficult to achieve. The difficulty in estimating the probability of fuel disruption scenarios makes it challenging to assess the risk objectively, and how much should be invested in the relevant mitigation measures. Because of this, effective monitoring and evaluation of the MSO will be important for ensuring it achieves its policy objectives.

112. The MSO will be reviewed within five years after it comes into effect. The Minister of Energy and Resources would have the discretion to bring forward the review if there were substantial changes in the international context that would justify an earlier review, or if deemed necessary in light of continuing inter-agency work to identify

options to strengthen the resilience of New Zealand's supply chains for access to essential goods and services.

113. The review would assess the effectiveness of the MSO at achieving the intended objective of maintaining or improving fuel resilience, based on information collected from monthly returns and annual reports from fuel wholesalers. The fuel stocks data collected from the monthly returns and annual reports would allow officials to evaluate the compliance rate, diversity of fuel supply sources, distribution of fuel stocks across New Zealand and contingency supply arrangements.

114. The review would also involve evaluating the effectiveness of the administrative arrangements (i.e. the options considered in this paper). During the review and through MBIE's usual engagements with the fuel sector, MBIE would gather information from the fuel wholesalers about issues relating to the administration of the MSO, such as integrity of record-keeping and administrative complexity. To ensure that the MSO, particularly the minimum stockholding level, remains fit for purpose, the review would take into account the following factors:

- The Government's emissions budget and Emissions Reduction Plan.
- Fuel demand in New Zealand.
- Fuel mix for transport fleet.
- Any relevant data and findings on the resilience of New Zealand's supply chains, such as national and regional fuel stocks data and reports on resilience of international and domestic fuel supply chains.
- Any relevant results from ongoing work on the resilience of New Zealand's supply chains for access to essential goods and services.
- Domestic fuel production capacity—if it is developed to a significant scale, fuel storage capacity may not need to be as high as otherwise required.