MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

# BRIEFING

## Fuel security measures in view of Refining NZ's potential change from refinery to import terminal

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|---|---|---|---|
| **Date:** | 14 June 2021 | **Priority:** | Medium |
| **Security classification:** | In Confidence | **Tracking number:** | 2021-4061 |

| **Action sought** | | |
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| | **Action sought** | **Deadline** |
| Hon Dr Megan Woods<br>**Minister of Energy and Resources** | **Note** the consultant's reports on fuel security risks and mitigation measures.<br>**Agree** that the consultant's reports be published on MBIE's website.<br>**Indicate** whether you want to progress work on options to increase domestic fuel stockholding.<br>**Indicate** whether you want MBIE to prepare a draft Cabinet paper on the Government's actions relating to fuel security after Refining NZ's decision on its refinery operations.<br>**Agree** that the petroleum and engine fuel monitoring levy rate be reviewed in 2022.<br>**Agree** that a full review of the Engine Fuel Specification Regulations take place in 2022. | 21 June 2021 |

| **Contact for telephone discussion (if required)** | | | | |
|---|---|---|---|---|
| **Name** | **Position** | **Telephone** | | **1st contact** |
| Justine Cannon | Manager, Energy Markets Policy | 04 901 8597 | Privacy of natural persons | ✓ |
| Gareth Wilson | Principal Policy Advisor | 04 460 1375 | Privacy of natural persons | |
| Bertrand Ngai | Senior Policy Advisor | 04 901 1295 | | |

| **The following departments/agencies have been consulted** |
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| |

**Minister's office to complete:**

☐ Approved ☐ Declined
☐ Noted ☐ Needs change
☐ Seen ☐ Overtaken by Events
☐ See Minister's Notes ☐ Withdrawn

**Comments**

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## Purpose

This briefing summarises the findings and recommendations in Hale and Twomey's report on the options for mitigating fuel security risks in view of Refining NZ's potential conversion from a refinery to a fuel import terminal. The briefing also provides advice on the merits of the fuel security measures recommended by Hale and Twomey, and the next steps for proceeding with some of these measures.

## Executive summary

Refining NZ is actively considering the option of converting from a refinery to a fuel import terminal, and is expected to make final decision on its future business model in the third quarter of 2021. In light of this, MBIE commissioned Hale and Twomey[1] to prepare reports on the implications of Refining NZ's potential conversion for fuel security, and measures for mitigating fuel security risks.

Hale and Twomey considers that should Refining NZ's conversion take place, New Zealand's fuel security is unlikely to change materially, although New Zealand's in-country inventories of crude oil and finished fuel products is expected to drop by more than 30 per cent. As a result, assuming no change to New Zealand's fuel security policy settings, the Government will need to purchase more oil tickets to meet our obligations under International Energy Agreement (IEA) at a cost of NZ$5-13 million per year.

Hale and Twomey considers that the current strategy of purchasing oil tickets to meet IEA obligations remains appropriate for New Zealand's contribution to managing the risk of global fuel supply disruptions. Nevertheless, Hale and Twomey suggests that the Government considers a minor adjustment to the strategy to require a minimum amount of white product tickets (i.e. the rights to buy finished fuel products). We support that adjustment.

The Government's costs of procuring oil tickets are recovered through the Petroleum and Engine Monitoring Levy (PEFML). We recommend reviewing the PEFML rate next year when we have more certainty about the future of the refinery and its impact on the level of reserve stock required to maintain IEA compliance. We would also like to explore the possibility of using some of the PEFML funding for strengthening operational arrangements for managing fuel disruptions.

Hale and Twomey also suggests that MBIE should monitor the fuel stock levels in New Zealand and the Government should consider imposing minimum stockholding obligations on fuel companies if stock levels decline. Hale and Twomey suggests the minimum stock level be set at the current level, which is approximately 18 days of cover for the gross inventory of white products onshore.

Regarding the desirability of holding onshore reserve stocks beyond the current stock levels, Hale and Twomey notes that the reason for holding such stocks will likely need to be justified on a risk aversion basis. We agree that the decision on whether to hold domestic reserve stocks is a matter of judgement about risk, and tolerance to risk, rather than just a matter of economic analysis. Also, we note that most OECD countries hold domestic reserve stocks, and the Australian Government

[1] Hale and Twomey is a consultancy firm specialising in strategic issues affecting the energy sector. It prepared a number of reports for MBIE on fuel security issues over the past decade.

has introduced a bill that will place a minimum stockholding obligation on fuel refiners and importers.

Domestic stock levels could be increased in the form of Government-held stocks procured via MBIE's existing annual reserve stock ticket tender. The cost of domestic reserve stock is expected to be significantly greater than stock tickets held offshore. We could also develop a discussion paper on other mechanisms for maintaining or increasing stockholding, such as a minimum fuel stockholding obligation, subject to your direction.

Besides advice on stockholding, Hale and Twomey also suggests that:

- MBIE should continue engaging with the fuel industry to establish a replacement emergency response option to restore the level of fuel resilience in Auckland that was previously provided by the Wynyard Wharf terminal.
- The Government should review the New Zealand fuel specifications to align with fuels available in the region as much as possible, as the absence of a domestic refinery would limit New Zealand's ability to fix off-specification fuel products.

In light of these findings, MBIE recommends the following steps:

- MBIE prepares a Cabinet paper to provide an update on government actions in response to the Auckland Fuel Supply Disruption Inquiry and Refining NZ's final decision on its future business model, soon after that decision.
- MBIE undertakes a full review of the Engine Fuel Specification Regulations in 2022.
- If you wish to progress an investigation into a minimum fuel stockholding obligation or other stockholding mechanisms, MBIE will prepare a discussion paper for consultation in 2022.
- MBIE engages with fuel companies to improve reporting and monitoring of information on fuel stock, fuel supply resilience and fuel supply diversity.
- As part of the annual oil ticket tender process, MBIE will invite fuel companies and Refining NZ to submit ticket tenders for fuel stock to be held in New Zealand, and will aim to hold a minimum proportion of white product tickets (i.e. rights to buy finished fuel products) depending on the costs of those tickets.

## Recommended action

The Ministry of Business, Innovation and Employment (MBIE) recommends that you:

a **Note** that, following a strategic review of its business, Refining NZ is planning to convert its refinery to an import terminal, subject to approvals from its customers, shareholders and lenders.

*Noted*

b **Note** that, in view of Refining NZ's strategic review, MBIE commissioned Hale and Twomey to prepare the following reports:

i. *Refining NZ Impact of Conversion to Fuels Terminal*, which is attached as Annex One

ii. *Fuel Security and Fuel Stockholding Costs and Benefits 2020*, which is attached as Annex Two.

*Noted*

c **Agree** that MBIE publishes the reports prepared by Hale and Twomey (attached as Annex One and Annex Two) on MBIE's website by the end of June.

*Agree / Disagree*

d **Note** Hale and Twomey's findings that, if Refining NZ is converted to a fuel import terminal, fuel stockholding will fall, and fuel supply risks will not be materially different under most disruption scenarios except rare global disruptions that prevent or limit the importation of fuels.

*Noted*

e **Note** that Hale and Twomey recommended a number of measures for mitigating fuel security risks, which mainly relate to how New Zealand could manage domestic fuel stocks and oil tickets in the future.

*Noted*

f **Note** that Cabinet directed MBIE to review the fixed rate component of the petroleum and engine fuel monitoring levy (PEFML), which is used to cover the costs of maintaining compliance with IEA obligations among other things, after the review of fuel security policy settings, and no later than March 2022 [DEV-21-MIN-0040 refers].

*Noted*

g **Note** that oil ticket prices are expected to rise again to pre-COVID-19 levels over time and the volume of reserve stock required to maintain IEA compliance will increase if or when the refinery closes.

*Noted*

h **Agree** that the PEFML rate be reviewed in 2022, when more is known about the costs of maintaining compliance with IEA obligations in light of Refining NZ's final decision on whether it will close its refinery.

*Agree / Disagree*

i **Agree** that MBIE explore the opportunities to use some of the PEFML funding for strengthening the operational arrangements for managing fuel disruptions.

*Agree / Disagree*

j **Indicate** whether you want MBIE to prepare a draft Cabinet paper providing an update on the Government actions in response to the Auckland Fuel Supply Disruption Inquiry and Refining NZ's final decision on whether it will convert to a fuel import terminal, including responses to Hale & Twomey's recommendations on fuel security measures.

*Agree / Disagree*

k **Note** that, as part of the annual NZ oil ticket tender, MBIE will invite interested parties (including fuel companies and Refining NZ) to submit ticket tenders for fuel stock to be held in New Zealand, and will aim to hold a minimum proportion of white product tickets (i.e. rights to buy finished fuel products) depending on the costs of those tickets.

*Noted*

l **Note** that MBIE will engage with the fuel sector to improve the reporting and monitoring of information on fuel stocks, fuel supply resilience and fuel supply diversity, and will advise you on options to maintain supply security if stock levels deteriorate materially.

*Noted*

m **Agree** that MBIE undertake a full review of the Engine Fuel Specification Regulations in 2022, taking into consideration fuel standards in major fuel exporting countries and the settings of the biofuels mandate that the Government agrees in principle to introduce.

*Agree / Disagree*

n **Indicate** whether you want MBIE to develop a discussion paper on options to maintain or increase fuel stockholding in NZ, for consultation in 2022.

*Yes / No*

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|---|---|
| Justine Cannon<br>**Manager, Energy Markets Policy**<br>Building, Resources and Markets, MBIE | Hon Dr Megan Woods<br>**Minister of Energy and Resources** |
| ..... / ...... / ...... | ..... / ...... / ...... |

## Background

1. Refining NZ, which operates New Zealand's only oil refinery, has been undertaking a strategic review since April 2020, as it faces low refining margins, which has been exacerbated by the negative impacts of COVID-19 on fuel demand. After completing the first stage of its review, Refining NZ has adopted a simplified refinery business model since January. This business model is intended to be an interim arrangement, giving Refining NZ time to progress further business planning work on the potential future conversion to a fuel import terminal in consultation with its three customer-shareholders, BP, Z Energy and Mobil.

2. Refining NZ has recently reached in-principle agreement with BP and Z Energy on the key commercial terms for its potential fuel import terminal operation at Marsden Point, while its negotiation with Mobil is still ongoing. Refining NZ's final decision on its conversion to a fuel import terminal will be subject to shareholders' vote and lender's approval to finance the conversion. Refining NZ expects that should a final decision be made in the third quarter of 2021, the conversion would take place by mid-2022.

3. In light of Refining NZ's strategic review, we commissioned Hale and Twomey to deliver two reports:

   a. *Refining NZ Impact of Conversion to Fuels Terminal*, which is attached as Annex One

   b. *Fuel Security and Fuel Stockholding Costs and Benefits 2020*, which is attached as Annex Two.

4. We provided you with a copy of the report, *Refining NZ Impact of Conversion to Fuels Terminal*, as part of our advice on the potential implications of the Refinery's conversion to a fuel import terminal [briefing 3034 19-20 refers]. One of the key findings of that report was that closure of the refinery could result in net reduction in physical inventories of crude oil and fuel products. New Zealand could therefore face a higher cost of compliance with its obligation under the International Energy Agreement (IEA) to maintain oil stocks equivalent to 90 days of import demand net of oil exports.

5. Subsequent to that report, we commissioned Hale and Twomey to prepare another report, *Fuel Security and Fuel Stockholding Costs and Benefits 2020*. This report further examines the potential fuel supply disruption risks in a scenario where there is no refinery in New Zealand, and the measures for mitigating these risks. In this report, Hale and Twomey made some references to the Government Inquiry into the Auckland Fuel Supply Disruption (the Inquiry).

6. The Inquiry was completed in August 2019, but the Government has yet to make decisions on its response to the Inquiry's recommendations. A draft Cabinet paper on the proposed Government response to the Inquiry's recommendations was prepared in the first half of 2020 but was never lodged for Cabinet consideration [2649 19-20 and 3305 19-20 refer]. The Inquiry's recommendations are relevant to managing fuel security risks, although those relating to jet fuel infrastructure supplying Auckland Airport are now less pressing in view of the impact of COVID-19 on jet fuel demand.

## Key findings of Hale and Twomey's second report

### Refining NZ's conversion to a terminal, if implemented, would not have significant impact on fuel security

7. Hale and Twomey considers that if Refinery NZ is converted to a fuel import terminal and New Zealand fully relies on imports of finished fuel products, New Zealand's fuel security situation is unlikely to change materially.

8. Fully relying on imports of finished fuel products (commonly known as white products), which are ready for transport use, allows for a flexible response to fuel supply disruptions. On the other hand, crude oil stocks required to operate the refinery need to be processed further before they can be used for responding to disruptions.

9. Where the loss of refining capacity could impact New Zealand is if there was a failure in normal global trading activity, such as international conflicts affecting key shipping routes to New Zealand for an extended period.

10. National security or defence [redacted]

11. National security or defence [redacted] Hale & Twomey assessed the impact of a major disruption in the supply of refined fuels from North Asia, which contains about 65 per cent of the refining capacity in Asia. Hale & Twomey concluded such an event would result in a minor local fuel disruption, because replacement imports could be sourced from elsewhere in Asia (e.g. Singapore) and from India, North America, Middle East and Europe.

### Refining NZ's conversion would reduce stockholding and more tickets are needed if no change to policy settings

12. Refining NZ's conversion to a terminal would lead to a more than 30 per cent decrease in New Zealand's in-country inventories of crude oil and finished fuel products. Days cover would drop from 53 days to about 36 days. Should there be no changes to New Zealand's fuel security policy settings, the Government will need to purchase more oil stock tickets to remain compliant with the IEA requirements. This is expected to result in an additional cost of NZ$5-13 million per year.

### No major change to the oil tickets strategy is needed

13. The current Government's strategy for compliance with New Zealand's IEA obligations is to purchase oil stock tickets, which are held offshore. At present, crude oil tickets, which are available in large volumes and cheaper than tickets for white products, make up the majority of New Zealand's oil ticket holding. If New Zealand was to place a tight limit on crude oil tickets or not allow them because we would no longer have a refinery to process crude oil, this would severely limit New Zealand's oil ticket options; there might not be sufficient product tickets available to fulfil New Zealand's requirements, and the average cost of ticket holding would go up.

14. The current oil ticket strategy is intended to enable New Zealand to play a role in responding to a global fuel disruption rather than providing domestic fuel security. Regardless of whether Refining NZ retains its refinery operations, the current oil ticket strategy remains appropriate for our contribution to managing global fuel disruptions, and therefore does not have to be changed.

15. Nevertheless, Hale and Twomey suggests that the Government could consider a minor adjustment to the oil ticket strategy by requiring a minimum amount of white product tickets (approximately 100,000 tonnes or 25 per cent of the oil tickets). This would ensure that at least some of the products covered by New Zealand's oil tickets could be directly useable, even though it would still take time to deliver them from overseas.

*Oil ticket costs are recovered by a levy on ground fuels*

16. The Government's costs of procuring oil tickets are recovered through the Petroleum and Engine Fuel monitoring Levy (PEFML). The PEFML is currently bringing in more revenue than the annual cost of tickets, largely because ticket costs have fallen significantly in the last year or two. Cabinet directed MBIE to review the PEFM levy rate after the review of fuel security policy settings, and no later than March 2022 [DEV-21-MIN-0040 refers].

17. Although the PEFML account is currently in surplus (as at June 2021), we do not recommend reducing the levy rate at this time. Oil ticket prices are expected to rise to pre-COVID-19 levels over time and, as noted above, the volume of reserve stock required to maintain IEA compliance will increase if or when the refinery closes.

18. Furthermore, subject to your agreement, we would like to explore opportunities to use some of the PEFML funding for strengthening the operational arrangements for managing fuel disruptions. At present, MBIE does not have a dedicated team for managing fuel disruptions, and sets up incident management teams on an ad hoc basis when we are aware of any actual or potential fuel disruptions, such as the Refinery-Auckland Pipeline outage in 2017 Confidentiality There would be benefits in having more structured operational arrangements for managing fuel disruptions, but setting up such arrangements will require extra funding.

19. Given the potential rise in costs associated with managing oil tickets and operational needs for managing fuel supply disruptions, we recommend leaving the current PEFML rate unchanged at this stage despite the current PEFML surplus. We will review the levy rate again next year when the future of the refinery is likely to be more certain, and its impact on reserve stock requirements.

## Risk from off-specification product is handled by companies

20. We asked Hale and Twomey to evaluate the risk associated with importing fuel that is 'off-specification'. In general such issues are corrected by blending the affected cargo with on-specification fuel in a terminal, such that the blended product remains within specification. If the off-specification problem is too severe to be remedied at a terminal, the affected product can currently be taken to the refinery for re-blending or re-processing. This option would be lost when the refinery closes, which represents a slight increase in supply risk.

21. We do not consider the risk of off-specification fuel to be material, and we note that fuel importers have strong incentives and the ability to manage their own product quality and to hold sufficient stock to maintain supply, if necessary, while an off-specification cargo is being dealt with.

## Monitoring fuel supply diversity would be desirable

22. Recently, New Zealand's white product supplies have come primarily from Singapore and South Korea, while some have come from the US, Australia and Japan.

23. Hale and Twomey considers that supply diversity is critical for fuel security but a forced supply diversity outcome is likely to increase costs well beyond any benefit provided. In light of this, Hale and Twomey suggests that rather than a forced supply diversity, the Government should have a formal process for monitoring supply diversity.

## Minimum stockholding obligations could be a means to ensure reasonable stock level

24. Hale and Twomey notes that, if there is a concern that commercial stock levels are deteriorating or if there is a desire to increase the current level of fuel security, the Government could consider a deliberate strategy of holding strategic stocks, i.e. holding more stocks than fuel companies consider necessary for normal commercial operation.

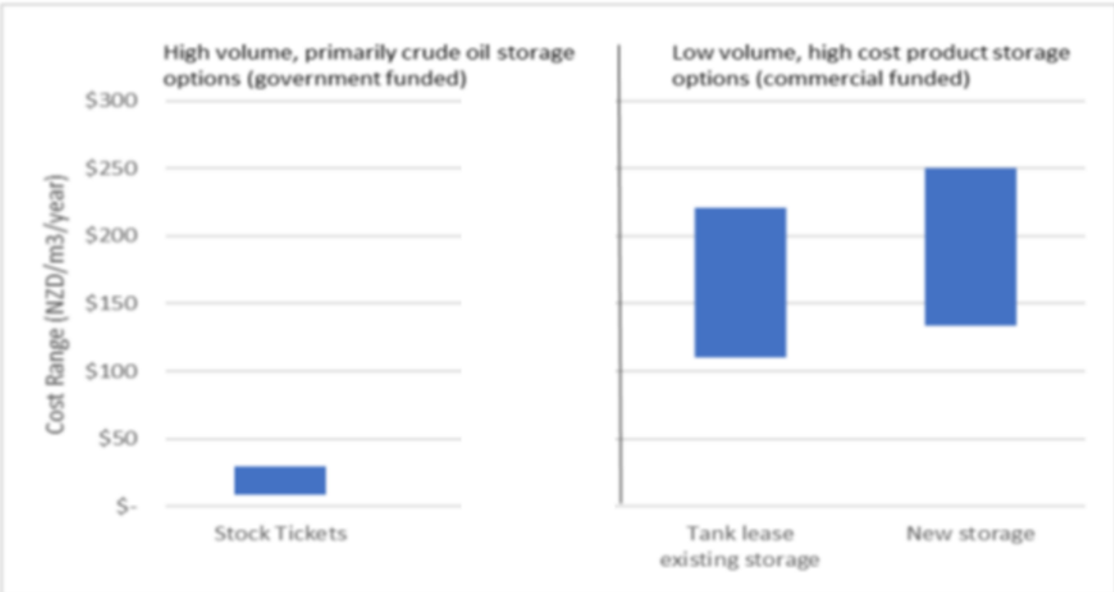
Strategic stocks held onshore would be more useful than such stocks held offshore for managing domestic fuel disruption.

25. Strategic stockholding regimes vary between countries. Most countries impose some obligations on fuel industry participants to hold minimum levels of stock relative to their domestic sales/consumption and/or imports. Other countries' stockholding regimes are discussed in the table on pages 38-42 of the report attached as Annex Two.

26. In New Zealand, there are no such obligations. The fuel companies determine the stock level based on their commercial decisions. The Government does not hold physical oil or fuel stocks onshore. Rather, the Government buys oil tickets, which allow the Government the right to purchase oil and fuel stocks at market prices in the event of an IEA-declared oil supply emergency.

27. Should there be concern that stock levels are deteriorating relative to demand, thereby causing a reduction in supply security, a minimum stockholding obligation on fuel importers could be implemented to ensure stocks are maintained at a reasonable level. If the minimum stock level were set at the level currently maintained by these companies, the costs incurred by the companies would not increase materially. Current commercial stock levels are approximately 18 days of gross inventory of white products or 15 days of net inventory[2] onshore in New Zealand (excluding cargoes in New Zealand coastal waters).

28. Regarding the desirability of holding onshore reserve stocks beyond the current stock level, Hale and Twomey notes that any reason for holding such stocks will likely need to be justified on a risk aversion basis, as there is not a strong economic case for holding such reserve stocks[3]. As illustrated in the figure below, the cost of holding onshore reserve stocks are substantially higher than the cost of oil tickets.




Source: Hale and Twomey (2020)

[2] Net inventory is gross inventory less tank heels, which is the bottom portion of the stock in tank not available in normal operation.

[3] An 'economic case' in this context means a cost-benefit assessment based on discounted expected costs and benefits calculated for a range of credible disruption scenarios. This kind of assessment is challenging when considering high impact and very low probability disruption events.

29. We agree that, based on previous economic assessments in 2005 and 2012, there does not appear to be a compelling reason to increase the level of domestic stockholding. However, we consider that the decision whether to hold domestic reserve stocks is a matter of judgement about risk, and tolerance to risk, rather than just a matter of economic analysis.

30. If the Government wishes to set a minimum stock level higher than current levels, Hale & Twomey suggest two options that could be more efficient (lower overall cost) than simply increasing minimum stockholding obligations on importers. They are:

    a. allowing fuel companies (possibly in partnership with the Government) to form a company to manage the reserve stock for meeting the minimum level

    b. using the existing oil ticket tender mechanism to seek tickets that will give the Government the option to buy fuels held domestically by fuel companies.

31. Most OECD countries hold domestic reserve stocks of finished products and/or crude oil that can be refined into fuels. Some countries hold very significant reserve stocks. In Australia, which is currently one of only a few OECD countries, like New Zealand, that does not hold domestic reserve stocks, a Bill was recently introduced that will place a minimum stockholding obligation on fuel refiners and importers. The Bill will implement a policy to increase domestic diesel stocks to 40 per cent above pre-COVID-19 level from mid-2024, and to maintain pre-COVID-19 levels of petrol and jet fuel stocks.

32. National security or defence, and confidential information entrusted to the Government [redacted] National security or defence [redacted]

33. If you wish us to undertake further work on domestic reserve fuel stocks or minimum stockholding requirements, we propose the next steps would be to:

    a. prepare a discussion paper on stockholding options and proposals, including the quantities of each fuel to be held, and the legal mechanisms needed to implement the preferred options

    b. seek Cabinet agreement to consult on the proposals in the discussion paper.

34. At this stage we consider that a minimum fuel stockholding obligation, similar to that being implemented in Australia, could be established under the International Energy Agreement Act 1976. However, a discussion paper would likely also consider whether new legislation would be necessary or desirable to implement any of the stockholding options.[4]

### Loss of Wynyard Wharf terminal means greater shortage during fuel disruptions in Auckland

35. Hale and Twomey commented in its report that infrastructure constraints are likely to be a more important factor to supply chain resilience than are supply chain routes. When modelling the impacts of various fuel disruption scenarios and comparing the results with those in the 2017 fuel security assessment, Hale and Twomey noted that, with the decommissioning of the Wynyard Wharf diesel terminal in the Auckland city centre, there are fewer disruption response options in Auckland and there will likely be greater fuel shortages during a disruption to the RAP and the Wiri terminal.

[4] Section 6 of the Act provides for the Minister to issue a direction to maintain reserve supplies of fuel. A person who fails to comply commits an offence and is liable to a fine not exceeding $10,000.

36. During such a disruption, fuels will need to be trucked into Auckland from Marsden Point and Mount Maunganui, and fuel deliveries will be subject to constraints on availability of trucks and drivers.

### Recommendations from Hale and Twomey

37. In light of the findings regarding the potential impacts of converting Refining NZ to a fuel terminal on stock levels, full reliance on fuel imports and the loss of the Wynyard Wharf terminal, Hale and Twomey made a number of recommendations. These recommendations and officials' response to these recommendations are discussed below

| Recommendation | Officials' response |
|---|---|
| **Recommendation 1: better stock reporting**<br><br>Work to improve the stock reporting from fuel companies. There are questions about whether existing legislation that gives the Government power to obtain information from fuel companies is still fit for purpose, particularly whether the penalty for providing incorrect information is a sufficient deterrent. | Agree in part.<br><br>We consider this recommendation can be addressed at an operational level through better data quality assurance by fuel companies and MBIE. There may be some scope for strengthening the statutory requirements (penalties for non-compliance) for information reporting from the fuel industry, but the case for doing so is not clearly established. |
| **Recommendation 2: Monitor and implement recommendations from the Auckland Fuel Supply Disruption Inquiry**<br><br>Monitor and work with the fuel industry to implement the recommendations from the Auckland Fuel Supply Disruption Inquiry, particularly the provision of appropriate jet fuel storage in the Auckland region. | Agree in part.<br><br>MBIE receives quarterly reports from major fuel companies on their progress in improving the resilience of Auckland jet fuel supply.<br><br>We will continue to monitor the industry's progress, including days of cover at Auckland Airport relative to the Inquiry's recommended security standard. We note that jet fuel days of cover is currently in excess of the Inquiry's recommended standard due to the impact of COVID-related travel restrictions on jet fuel demand, but the industry is planning to increase jet fuel storage if or when demand returns to its pre-2020 trajectory.<br><br>If the industry makes unsatisfactory progress in relation to the Inquiry's recommendations, we will advise on intervention options such as regulating a minimum stock-holding obligation on fuel suppliers or Auckland Airport. |
| **Recommendation 3: Engage with industry to establish a replacement emergency response option**<br><br>Continue engaging with industry participants on getting them to establish a replacement | Agree.<br><br>MBIE will continue discussions with the industry about emergency options. |

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| emergency response option in light of the loss of the Wynyard Wharf terminal. | |
| **Recommendation 4: Monitor stock levels and consider minimum stock obligation**<br><br>Closely monitor stock levels on an ongoing basis particularly following any change in New Zealand's supply chain such as closure of the refinery. Should there be concern minimum stock levels are deteriorating over time, MBIE should consider implementing a minimum stock obligation at around the current minimum operating level for finished stocks. | Agree.<br><br>MBIE will continue to monitor the stock level and will consider publishing monthly stock data on MBIE's website and/or report stock data annually. See also the response to recommendation 8.<br><br>While current stock levels (days of cover) may provide acceptable reliability, any significant reduction in commercial stocks could be a cause for concern. We agree that an obligation to maintain minimum days of cover could provide greater assurance that supply security will not deteriorate.<br><br>See also the responses to recommendations 5 and 6. |
| **Recommendation 5: Investigate the value of additional stock beyond current level**<br><br>Investigate the value of holding additional stock within New Zealand above the current level of commercial stock, particularly where the Government may consider concerns beyond economics and the risk of any outage. | Agree to investigate the costs of additional stockholding.<br><br>This recommendation reflects the possibility of additional societal benefits from additional stockholding that are not measured in terms of an economic cost benefit analysis (CBA).<br><br>In a 2019 study of the economics of fuel supply disruptions, the consultant (Market Economics) noted various challenges with undertaking cost benefit analysis for mitigations to low probability and high impact disruption events, including accounting for societal risk aversion and the appropriate risk premium to apply. However, the implied societal risk premium would be significant for the benefits to exceed the costs of holding additional stock in New Zealand.<br><br>Another challenge noted by Market Economics is that the benefits estimated in a cost benefit analysis may only be realised many years in the future, and may be very different to those estimated or assumed. This seems particularly pertinent when considering storage capacity in the context of the transition away from liquid fossil fuels for transport.<br><br>On balance, MBIE considers there is merit in exploring opportunities to hold some reserve stock in New Zealand, if incremental costs are reasonable when compared to offshore stockholding. |

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| | Closure of the refinery would result in a number of crude oil tanks coming out of service. Refining NZ has informed us that some or all of these tanks could, with some investment, be converted to refined product tanks and used to hold reserve fuel stock. It is possible that other parties may also have redundant crude oil tanks, if domestic oil production declines over time.<br><br>MBIE could obtain information on the cost of holding reserve stocks domestically through the existing annual oil ticket tender process. MBIE can invite fuel companies, Refining NZ and other companies to submit ticket tenders for stock to be held in New Zealand.<br><br>The parameters of that tender (e.g. contract term) could be amended, if necessary, to enable stockholders to recover the cost of new tanks or the conversion of existing crude oil tanks. |
| **Recommendation 6: Further consider the options of holding additional stock beyond current level**<br><br>Further consider the options of holding additional stock if there is a clear case for doing so, e.g. ticket tender for domestically held reserve stocks or creating an agency for managing reserve stocks, in consultation with the fuel industry. | We agree that options for holding additional stocks should be considered, with input from the industry, if the Government establishes there is a case for holding additional stock.<br><br>The case for holding additional stock could be informed by the costs of stockholding identified via contestable tender as discussed in the responses to recommendations 5 and 10. |
| **Recommendation 7: Review fuel specifications**<br><br>Review the New Zealand fuel specifications to ensure that the specifications align with the fuels available in the region as much as possible without compromising New Zealand's environmental and operability requirements, should the refinery close. | Agree.<br><br>The Engine Fuel Specification Regulations (the Regulations) were last amended in 2016/17 and are now being reviewed for the purpose of implementing new marine fuel requirements in line with Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL).<br><br>The Regulations are expected to be reviewed again in 2022, should the Government proceed with developing a Bill and regulations for a biofuels mandate. As part of the 2022 review of the Regulations, MBIE can undertake a broad review of fuel specification requirements for all liquid fuels (i.e. fossil fuels, biofuels and biofuel blends), subject to your agreement. |

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| **Recommendation 8: Annual review of supply resilience**<br><br>MBIE implement an annual review of supply resilience (including the minimum stocks held over time) and diversity, and consider if fuel importers should provide an annual representation letter setting out their current supply diversity, their actual supply performance over the last 12 months and highlighting any concerns or improvements that can be made for the next year. | Agree.<br><br>MBIE will request the fuel sector to provide annual reports on their information on fuel supply resilience and diversity. |
| **Recommendation 9: Engage with other ministries regarding industry use of niche fuels**<br><br>MBIE engages with the relevant Ministries for industry use of niche fuels to consider undertaking supply security reviews should the refinery cease operation if these are not already being considered. | Noted.<br><br>We have engaged with the Ministry of Transport and with Maritime NZ regarding the supply of low sulphur marine fuels, in light of NZ adopting Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL). |
| **Recommendation 10: Keep oil ticket strategy with minor adjustment to hold a minimum of white products**<br><br>The ticket strategy should not change from the current approach should refining cease in New Zealand. A minor adjustment to hold a minimum quantity of white product tickets (approximately 100,000 tonnes) as part of the total holdings should be considered. | Agree the overall ticket strategy should not change, and agree to hold a minimum proportion of white product tickets (subject to cost). This can be addressed at an operational level without regulatory changes.<br><br>As noted in the response to recommendation 5, MBIE will continue to explore options to hold reserve stock in New Zealand via discussions with the fuel industry and the annual ticket tender process. Low-cost tickets for domestically held stocks may emerge if the refinery closes and crude oil tanks can be converted to store white products at reasonable cost.<br><br>If or when MBIE receives acceptable tenders for stock tickets held in NZ, these tenders can be assessed alongside offshore ticket tenders, and a proportion of total reserve stocks could be held in New Zealand, on a balanced portfolio basis, depending on costs. |

## Next steps

38. We intend to publish Hale and Twomey's reports in Annex One and Annex Two on MBIE's website by the end of June. We will develop communication materials for the release of these reports.

39. If you wish, we can prepare a draft Cabinet paper providing an update on the Government actions in response to the Auckland Fuel Supply Disruption Inquiry and Refining NZ's final

decision on whether it will convert to a fuel import terminal. We will send you a draft Cabinet paper soon after Refining NZ's decision, which is expected in the third quarter this year.

40. Subject to your agreement, MBIE will also undertake a full review of the Engine Fuel Specification Regulations in 2022. Fuel standards in major fuel exporting countries and the settings of the biofuels mandate that the Government agrees in principle to introduce will be considered as part of this review.

41. Should you wish to progress an investigation into a minimum fuel stockholding obligation or other mechanisms to maintain or increase domestic fuel stockholding, we will prepare a discussion paper for consultation in 2022.

## Annexes

Annex One: Hale and Twomey's report — *Refining NZ Impact of Conversion to Fuels Terminal*

Annex Two: Hale and Twomey's report — *Fuel Security and Fuel Stockholding Costs and Benefits 2020*

## Annex One: Hale and Twomey's report — *Refining NZ Impact of Conversion to Fuels Terminal*

## Annex Two: Hale and Twomey's report — *Fuel Security and Fuel Stockholding Costs and Benefits 2020*