



AIDE MEMOIRE

Implications of Refinery's closure for fuel security

Date:	28 February 2022	Priority:	Urgent
Security classification:	In Confidence	Tracking number:	2122-2872

Information for Minister(s)

Hon Dr Megan Woods
Minister of Energy and Resources

Contact for telephone discussion (if required)

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The following departments/agencies have been consulted

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Minister's office to complete:

- | | |
|---|--|
| <input type="checkbox"/> Approved | <input type="checkbox"/> Declined |
| <input type="checkbox"/> Noted | <input type="checkbox"/> Needs change |
| <input type="checkbox"/> Seen | <input type="checkbox"/> Overtaken by Events |
| <input type="checkbox"/> See Minister's Notes | <input type="checkbox"/> Withdrawn |

Comments



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Purpose

To provide advice on the implications of the closure of Marsden Point Oil Refinery for fuel security in New Zealand, particularly in scenarios where international geopolitical conflicts impact import supply chains, such as the geopolitical conflict between Russia and Ukraine.

Sharon Corbett
Policy Director
Building, Resources and Markets, MBIE

28/02/2022

Background

Context

1. Refining NZ will start shutting down its Marsden Point Oil Refinery (the Refinery) in mid-March and is expected to complete the shutdown by 1 April 2022. After the shutdown, only a small number of refinery assets will be preserved, and it will not be possible to restart the refinery again. Refining NZ will be renamed Channel Infrastructure, as it becomes a fuel import terminal focusing on receiving, storing, testing and distributing transport fuels to the Northland and Auckland markets.
2. In September and December 2021, you briefed Cabinet on the implications of the Refinery's closure for New Zealand's fuel security. Cabinet noted that closure of the refinery is expected to have little impact on fuel supply resilience under most disruption scenarios but agreed to investigate the option of increasing minimum levels of fuel stock held in New Zealand. MBIE is currently consulting on options to increase onshore fuel stockholding.
3. In light of the current conflict between Russia and Ukraine, with impacts on international supply chains, this briefing provides further updated advice on the closure of the Refinery and any implications for fuel security, including:
 - an assessment of any difference in expected ability to import refined product versus crude oil, and
 - further information on the ability to use Taranaki crude at the Refinery.

Update on the closure of the Refinery

4. In light of the plan to shut down the refinery by 1 April 2022, it is likely that most of the crude oil used for refining at Marsden Point has already arrived or is on the water. As crude oil is normally ordered two to three months in advance, even if Refining NZ and its customer shareholders (Z Energy, Mobil and BP) hypothetically reverse their decision to close the Refinery, the Refinery will have to shut down for at least one to two months after 1 April before it can start production again. Furthermore, the ability to restart the refinery would depend on availability of the refinery's staff, many of whom might have secured other jobs since being given the redundancy notice.
5. Once the Refinery is closed, New Zealand will fully rely on imports of refined fuel products for the foreseeable future. In the years immediately before 2020, Refining NZ supplied about 65 to 70 per cent of New Zealand's total demand for refined fuels, and 100 per cent of its jet fuel. The balance was imported mainly from refineries in Singapore and South Korea.

Further advice on implications of the refinery's closure for fuel security

The Refinery's closure increases New Zealand's resilience to domestic disruption scenarios

6. The fuel industry and independent expert advice is that a 100 per cent fuel import model will be more resilient to domestic disruption scenarios than retaining a domestic refinery, as there will no longer be a 'single point of failure risk' associated with refining.
7. Also, import shipments of refined fuels can provide more flexibility to respond to local disruptions, as shipments can be redirected to ports where they will be most useful for fuel distribution by road. Under the existing cabotage regime¹, international fuel tankers have historically been allowed to operate on the coast if there are no New Zealand vessels available. International fuel tankers, which arrive in New Zealand with full load of refined fuel and do not pick up any domestic fuel for distribution, are allowed to deliver fuels to the New Zealand ports they are scheduled to visit.
8. Generally speaking, internationally flagged vessels are not allowed to primarily pick up domestic cargo for distribution between regional ports in New Zealand. However, an exemption to this rule can be granted if there are no New Zealand flagged ships that can undertake this task. During a local fuel emergency, the Secretary of Transport can grant an exemption to international tankers quickly to allow international fuel tankers to pick up fuel stocks stored at one regional port and deliver them to another.
9. Fuel companies can also redirect international tankers on different international shipping routes to deliver fuels to New Zealand during a fuel emergency.

The Refinery's closure is not expected to have any material impact on fuel security during the current Russia/Ukraine conflict

10. New Zealand currently imports neither refined fuels nor crude oil from Russia or Ukraine. As such, New Zealand's fuel supplies would not be directly affected if Russian crude oil supply is curtailed. Refineries in Singapore, South Korea and Japan (the major sources of our fuel imports) do use some crude oil from Russia as feedstock, albeit in relatively small quantities.

¹ The cabotage regime provides for and restricts where appropriate the rights of foreign vessels to participate in the transport of goods and passengers between seaports in the same country. Section 198 of the Maritime Transport Act 1994 sets out New Zealand's cabotage rules.

The proportion of crude oil imports that are sourced from Russia is about three per cent, six per cent and four per cent for Singapore, South Korea and Japan respectively.

11. The International Energy Agency (IEA) expects that if Russia is unable to maintain normal crude oil export levels to its key customers, some countries, mainly in the Middle East region, can step up, although other than Iran, their spare production capacity is limited.
12. The change in oil trade flows will result in increased sailing times for oil to reach customers. Due to the lag in sourcing oil from further afield, demand may have to be met by existing stocks during the initial period. Both oil prices and tanker rates will likely increase significantly, affecting not only customers normally sourcing Russian products. Crude oil prices have reached an eight-year high of above \$105 per barrel.
13. Our independent expert, Hale and Twomey, advise that oil refineries in Singapore, South Korea and Japan (the major sources of our fuel imports) would be expected to continue to supply existing customers as a priority. However, they note there could be some delays in filling orders, particularly if New Zealand stock levels could handle some delays (this is what was seen in 2005 following the impact of Hurricane Katrina). As such, fuel supplies to New Zealand should remain secure during the conflict, regardless of whether New Zealand has a domestic oil refinery or not.
14. New Zealand could face increased competition for finished fuel products and higher fuel prices though, as key buyers in Europe could decide to source products from further afield, including refineries in Asia, due to the Russia-Ukraine conflict. The fuel price increase can be mitigated by governments' release of strategic oil and fuel stocks. New Zealand as a member of IEA would expect to take part in any collective action called by the IEA to release strategic stocks.
15. We also asked Hale and Twomey, whether supply chains for refined products would be less resilient than those for crude oil. The advice was that there is no reason why full reliance on refined fuel import supply would be riskier than relying on a mix of imports of crude oil and refined fuels.

Supplementing imported crude with domestic crude for refining during a closed border scenario

16. The Ministry of Foreign Affairs and Trade has expressed an interest in whether the refinery would add to fuel security in a closed border scenario, particularly whether the refinery could continue operating using a mix of domestic crude and imported crude and allow New Zealand to be self-sufficient to some extent.
17. Keeping the Refinery operating at Marsden Point is not expected to make a significant difference to fuel security in New Zealand during the Russia-Ukraine conflict or in other scenarios where New Zealand's import supply chains are heavily disrupted. The Refinery is designed to refine heavier crude oil from overseas, rather than crude oil produced domestically in Taranaki. Where necessary, the Refinery can supplement imported crude with Taranaki crude to a limited extent for refining, but it will be forced to shut down once imported crude is no longer available.
18. We commissioned Hale and Twomey to provide independent advice on the amount of fuels the Refinery can produce during a prolonged closed border scenario, where crude oil cannot be imported from overseas. A key assumption for the estimates is that oil companies would repudiate their existing supply contracts for Taranaki crude oil during the closed border event, should it be used for refining at Marsden Point.

Table 1: The Refinery’s maximum production in a closed border event, based on the assumption that we have five days of imported crude stocks on the water

Crude oil stocks used for refining during a closed border scenario	Fuel production from the refinery (million litres)	Days of cover (in terms of normal fuel demand in 2019)
<ul style="list-style-type: none"> • The Refinery’s own stocks at Marsden Point, and • five days of imported stocks on the water 	244	9.2 days
<ul style="list-style-type: none"> • The Refinery’s own stocks at Marsden Point • five days of imported stocks on the water, and • Crude oil and condensates from Taranaki (which can supplement imported heavier crude oil to a limited extent for refining at Marsden Point) 	278	10.5 days

19. This shows that, if the Refinery supplements imported crude with domestic crude for refining, it will only add an extra 1.3 days of cover to meet New Zealand’s normal fuel demand, assuming that we have five days of imported crude stocks on the water.

Table 2: The Refinery’s maximum production in a closed border event, based on the assumption that we have 15 days of imported crude stocks on the water

Crude oil stocks used for refining during a closed border scenario	Fuel production from the refinery (million litres)	Days of cover (in terms of normal fuel demand in 2019)
<ul style="list-style-type: none"> • Refinery’s own stocks at Marsden Point, and • 15 days of imported stocks on the water 	388	14.6 days
<ul style="list-style-type: none"> • Refinery’s own stocks at Marsden Point • 15 days of imported stocks on the water, and • Taranaki crude and condensate 	457	17.2 days

20. This shows that, if the Refinery supplement imported crude with domestic crude for refining, it will only add an extra 2.6 days of cover to meet New Zealand’s normal fuel demand, assuming that we have 15 days of imported crude stocks on the water.

Experience suggests that full reliance on international tankers for fuel deliveries after Refinery's closure should not affect fuel security

21. Following the Refinery's closure, fuel companies will stop using coastal tankers and switch to fully relying on international tankers to deliver fuels across the country from April. Maritime Union New Zealand is of the view that this change would put New Zealand's fuel security at risk.
22. However, we note that New Zealand is already effectively fully dependent on international shipping for its petroleum supply and has been for at least 30 years. The decision to stop using coastal tankers simply reflects a shift to solely use international fuel product tankers rather than a mix of both international crude and fuel product tankers.
23. Furthermore, since Refining NZ's production largely feeds the Northland and Auckland fuel markets even before it simplified its refinery operations in early 2021, the majority of the fuel supplies to the South Island has likely been delivered by international tankers for many years. To date, fuel companies have not had issues supplying the South Island. This suggests that New Zealand's fuel security should not be affected by the switch to full reliance on international tankers for fuel deliveries. We will continue to monitor the situation closely.

We are consulting on options to increase domestic stockholding, noting closure of the Refinery will reduce commercial stocks held in New Zealand

24. While the ability to refine oil in New Zealand does not add to our fuel security, as discussed above, the closure of the Refinery is expected to reduce the commercial stocks held in New Zealand. This is because stocks of crude oil and intermediate products will no longer be held in New Zealand (though the loss of these stocks will be partly offset by a small increase in stocks of finished fuel products).
25. This is one of the reasons why we are currently consulting on options to increase domestic stockholding. However, the results of that work will take time since significant stockholding will require investment in new tankage. The most cost-effective investment options are likely to involve conversion of crude oil tanks at Marsden Point, with a lead time of 6 to 12 months or more, depending on the number of tanks converted and the availability of resources to undertake the necessary works.

Next steps

26. We are available to discuss this advice with you including whether you would like us to investigate options to increase commercial stocks in the short term.