

# **OPERATION GOOD OIL**

# Summary report on the closure of Marsden Point Oil Refinery

Prepared by the Operation Good Oil Committee

For the People of New Zealand

#### Saturday, 1 October 2022

From:

The Committee Members

And

David Trotter, lead researcher and author Levi Wulf, sub researcher and editor. Karl Barkley, nautical tracking and sub research

Operation Good Oil is an information and awareness campaign which is made up of a dedicated team of concerned individuals who seek to bring the truth of New Zealand's current looming energy crises into the light of day.

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This report does not constitute financial or legal advice nor is it intended to substitute sound financial and or legal advice.

# Foreword

(Written by Levi Wulf)

David Trotter is experienced in data analysis through database design and construction. David is also a qualified engineer, diesel mechanic, and has extensive teaching experience in diesel mechanics, database construction and design.

David has been an invaluable member of the team and has spent endless hours poring over every government report, business document, news story and consultants report, that we could lay our hands on.

David is an extremely intelligent man who has the ability to absorb information and categorize it into the relevant data streams for analysis. Karl Barkley is an accomplished engineer who is now retired, but remains deeply invested in the ongoing safety and security of New Zealand. He has been following the Marsden point issue for a number of years and since the closure of the refinery in April 2022 and has been tracking fuel tanker movements.

Karl is an invaluable member of the team whose studious nature has been a big part of collating the required data to make an informed conclusion in the report.

In a perfect world we would have had much more time to analyse the data and to prepare an exhaustive and more thorough in depth report, but considering the urgency of the current state of affairs we have decided that a summary report should be drafted and produced immediately without further delay.

The purpose of this report is to summarize the information and data we have been collecting over the last four months and to sound a warning to the people of New Zealand.

"And as for the watchman, if he sees the sword coming and he does not blow the horn, and the people are not warned, and the sword comes and it takes away a man, he will be taken through his guilt, but his blood from the hand of the watchman I will seek.' Ezekiel

#### To the people of New Zealand:

### **1.0** A Brief Introduction to Marsden Point.

Marsden point oil refinery was originally constructed in 1962 as a public/private partnership. It was opened in 1964 with the major oil companies owning about two thirds of the shares and private investors the remainder.

Over the decades the taxpayer of New Zealand has invested billions of dollars into the refinery and pipeline. Much of the investment was not required to be paid back by the company and the installed equipment was essentially gifted. One such notable injection of plant was the hydrocracker/pipeline and Wiri terminal upgrades at a cost of 1.84 billion dollars in 1980 -86.

The refinery was New Zealand's only Large Scale Refinery and was officially closed on the 1<sup>st</sup> of April 2022.

The refinery was run by a limited liability company that was publically listed on the NZX: 'Refining New Zealand Limited'.

In April 2022 immediately following the closure the company changed its name to: Channel Infrastructure Limited.

As of the 1<sup>st</sup> of April 2022 the largest shareholders were BP, Z Energy and Exxon Mobil. The shareholdings have subsequently changed under the new structure but the majority of the shares are currently held by multinational interests.

The refinery supplied around 70% of New Zealand's refined fuel needs, along with petrochemical for industry, carbon dioxide for the food industry, sulphur for the agricultural industry and products for the nation's roads such as bitumen and emulsions.

**1.1** 2021.

- Bitumen production was halted at the refinery at the end of January 2021. The New Zealand Transport Agency (Waka Kotahi) put out a tender through the government tender website; getz.govt.nz for suppliers in any field who could assist. <sup>i</sup>
- Supply and quality of the product could not be assured; "These risks relate to security of supply of quality bitumen ... cost-reflective price of bitumen at points in the supply chain, and downstream competitive effects within our contracting markets." (NZTA spokesman as quoted on Radio New Zealand)
- The risks related to security of supply for quality bitumen."

**1.2 Reports** commissioned by the MBIE revealed concerns involving imported finished fuel supplies:

- Between a quarter and a third less overall fuel stock in the country.
- No ability to correct imports that are not up to standard
- No ability to process crude in a global emergency.

#### (Hale and Toomey, refining NZ conversion to fuels terminal 2020)

#### **1.3** The Hale and Toomey advisory report summed this up:

"The change of the Marsden Point facility to a fuels terminal would have a significant impact on New Zealand's fuel security".<sup>iv</sup>

On 2<sup>nd</sup> June 2021 spokesman for the Energy Minister, Megan Woods, stated to Radio New Zealand that the conversion:

#### "is not expected to have a significant impact on fuel security".\*

#### **1.4** Z Energy "Our future fuel supply" states:

"There will also be more frequent deliveries of finished product to New Zealand, with Z estimating around 175 tankers arriving annually. Put that another way, a tanker will be discharging into our domestic supply chain every two days." <sup>vi</sup>

However the reports and the data we have been collating give an entirely different story to that of the official narrative.

# 2.0 Shipping Background

While Marsden Point was in Operation, the crude oil came from Saudi Arabia via the Indian Ocean and small amounts from the Taranaki oil fields, the refined fuel supply chain had two New Zealand flagged coastal fuel ships, the *Matuku and the Kokako*.

"Over the past three years, the Matuku and Kokako have averaged a total of 230 port calls per year and together have delivered circa 1,800,000 Metric Tonnes of fuel products per year around the New Zealand coast. The two New Zealand coastal tanker vessels visit a New Zealand port every 2-3 days." <sup>vii</sup>

The coastal supply line also employed and trained junior Maritime Pilot's and trainees who would then graduate onto larger vessels and move on towards their careers.

Maritime New Zealand also lamented that:

"A valuable training floating college will be gone".

# 3.0 Crude verses refined oil importation.

While talking to Radio New Zealand spokesman for energy minister Megan Woods summed up the government's position with these words;

"Current crude oil imports were "not immune anyway to import supply chain risks"."

**3.1** Brief outline of supply chain interruptions

The 1973 oil crisis (or first oil crisis) began in October 1973 when the members of the Organization of Arab Petroleum Exporting Countries, led by Saudi Arabia, proclaimed an oil embargo. The embargo caused the price of a barrel of crude oil to rise rapidly from USD \$2.90 a barrel before the embargo to \$11.65 a barrel in January 1974

**3.2** New Zealand retained reasonable security of supply

However, even with the security of a refinery New Zealand still had to cut back on a limited amount of fuel: "In 1979, the National Government run by Robert Muldoon introduced legislation which required New Zealanders to choose one day of the week when they wouldn't use their vehicle".  $^{ix}$ 

**3.2a** Subsequent legislation: 'The Petroleum Demand Restraint Act 1981' remains in force until this day. **The act was updated and amended in 2021** 

#### 3.3 Refinery upgraded

The development of another War and embargoes pushed for the Govt of the time to think Big and this lead to further development

"The project proceeded in the 1980s with a Badger-Chiyoda joint venture as the main design build contractor. The physical works were undertaken by a group of New Zealand contractors: Fletcher, Downer, Wilkins and Davies, McConnell-Dowell and Robert Stone. Badger-Chiyoda was also involved in this joint venture. The works were plagued by industrial disruption and the challenge of working in and adjacent to an operational refinery. It was necessary to close it for almost five months in mid-1985 while tie-ins and modifications were made to the original plant.

In 1981 the Government gave approval for the \$55 million Wiri Oil Terminal and the Wiri to Marsden Point Pipeline. Works started in January 1982 and were complete 25 months later. The 170 kilometre pipeline carried product to Wiri for storage and road transport distribution, with the balance being distributed by coastal tanker.

The expansion project was officially completed on 30 May 1986 at a final cost of **\$1.84 billion**. Components came online progressively throughout 1986: the crude distiller in March, the hydrogen manufacturing unit in August, and finally the hydrocracker in November. The expansion meant a 100 per cent increase in refined oil production, while only increasing the crude intake by some 25 per cent." <sup>×</sup>

**3.3a** the \$1.84 billion dollar investment was tax payer money and was never required to be paid back by the company<sup>xi</sup>

#### 4.0 Recent shortage

#### 2022

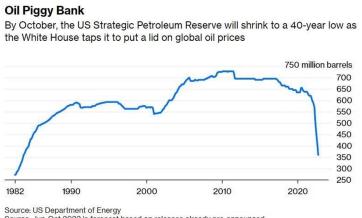
Trouble in Eastern Europe has caused embargoes and a spike in energy prices throughout the rest of Europe.

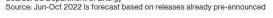
Demand for oil and restricted supply routes caused a significant increase in prices.

USA oil holdings have been dropping significantly in the second half of 2022, as the Biden administration has been releasing large amounts of oil to artificially

keep the price down. This will eventually come to an end and the true cost of production and supply will come back on, possibly quite suddenly and with extreme price spikes.

New Zealand has participated in market manipulation by releasing reserve stocks as well; these stocks will need to be replaced at a later date most likely at increased costs.

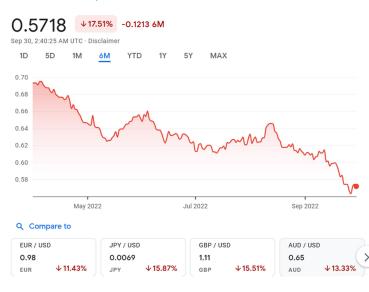




#### Extreme refined fuel price rises imminent in 2023

Since the closure of the refinery the NZD has dropped over 12 cents on the USD. The government has also put 20 cents of excise tax on hold which has been extended to Feb 2023.

Once the price manipulation runs out the true cost of fuel will most likely result in 91 prices > \$4.00 NZD/ litre.



# Had the refinery still been operating it would have been making record margins and profits in the current climate, it would also have been able to stockpile artificially deflated oil at bottom of the dip prices.

**4.1** Due to the 'decreased demand' for refined oil caused by government pandemic policies in 2020/21, the major oil companies closed down a significant amount of refineries globally.

According to the IEA (International Energy Association) there is sustained forecast of continued global diesel shortages:

**4.2.A** Such losses would still leave the market oversupplied in 2H22, by close to 1 mb/d, and roughly balanced in 2023. But product markets, especially diesel, are expected to remain in deficit due to downstream capacity constraints outside of China. Global diesel markets have tightened this year, with demand robust and as lower Chinese export quotas have sharply reduced its sales abroad. More recently, newly introduced taxes in India have discouraged exports from Asia's largest supplier<sup>xii</sup>

#### Diesel is New Zealand's main source of energy for agriculture and transport

**4.2** Without Marsden Point refinery, New Zealand does not have the capacity to produce the energy required for current existing primary industries.

4.3 The refining crisis was known in 2021

The IEA has been reporting since November 2021 that there is a shortage in global refineries.<sup>xiii</sup>

4.4 New Zealand could produce at minimum 15% of its energy requirements

Paragraph 30 under 'Implications for fuel supply resilience' of the MBIE proactively released document "Fuel supply resilience without a domestic oil refinery" dated Sept 2021 states:

"Domestic crude production is currently equivalent to about 20 per cent of New Zealand's total fuel demand, and is declining. While the refinery is configured to refine overseas crude oil, in an emergency the refinery could potentially refine domestic crude oil (from Taranaki) at some level, provided the "closed border" event does not also restrict other essential refining inputs.1 Meeting even a fraction of normal fuel demand could enable at least some critical functions to be maintained (e.g. food distribution) even though most fuel use would be severely constrained"<sup>\*\*iv</sup>

**4.5** When queried on this by Radio NZ on nine to noon 11 march 2022, Megan Woods stated:

"So one of the things that I think it's really important to realize, in order to supply 20% of our fuel needs that needs to mixed with heavier crudes that would have to be here also that 20%

is contingent on having heavier crudes, we simply don't produce that in New Zealand, so um we simply couldn't provide that 20% by only refining what comes out of the Taranaki fields and I think that's really important to understand. There would have to be a reconfiguration of the refinery which would take 2 to 3 years in order to be doing the lighter crude"

When asked "could we even get 3-5% without heavier crude"

"Not without the presence of heavier crudes, being able to refine that is dependent on us being able to blend it with heavier crudes" "Not from our domestic production, from what we domestically produce"

Minister Megan Woods<sup>xv</sup>

**4.6** Further investigation by Radio New Zealand's nine till noon program on 31 March 2022 uncovered information from Simon Terry from the sustainability council of New Zealand, that Minister Megan Woods was entirely incorrect in her assertions:

"Marsden point um contrary to the ministers assurances the other week on your program, can actually process Taranaki crude by itself, ah it can be processed more efficiency [sic] you can get more petrol and diesel out of a barrel of crude if its mixed with heavier crude but in fact um information obtained from the refinery by ah government officials allowed them to calculate that 3 - 5% of annual demand could be produced by the refinery in its current configuration and if you change the physical plant further you can get something close to that 20% of um annual demand that we produce from Taranaki crude"

*"I can't account for why the minister got it wrong, but that is the basis on which um it is understood from the information obtained retained from the refinery by government"* 

Simon Terry<sup>xvi</sup>

Editorial note: We believe it is disingenuous and insulting to the public for an elected politician, with no background in engineering or fuel production, to make an assertion that the New Zealand light crude which is sold to Australia for diesel production cannot be refined at Marsden Point under emergency situations. Operation Good Oil has approached a number of industry qualified people, who wish to remain off record but have stated quite clearly that such a thing is not only entirely possible but could be carried out far easier than the minister's claims.

5.0 Auckland and the RAP (refinery to Auckland pipeline)

The balance of New Zealand's refined fuels are stored at Marsden Point, the fuels including Jet Fuel distributed through the RAP (Refinery to Auckland Pipeline) to the WIRI storage facility. The fuel is then distributed throughout

the Auckland region via tanker truck and a smaller section of pipeline to the airport, however the question of storage still arises.

Channel Infrastructure reports that Marsden Point holding capacity is 180 million Litres and a further 100 million litres that are held in private storage (2022). <sup>xvii</sup>

#### 5.1 Southern Distribution

Some tankers stop off at Marsden Point; they then sail further south to ports like Napier, and Wellington, which is the major port for storage and distribution for the southern part of the North Island.

In the south island tankers come directly to ports, they sail to where the ticket is bought at the price they need. As the oil companies now run the direct supply route and have prior data of average consumption, they will have a fairly accurate estimation of how much fuel remains at each facility.

The ticket purchase market opens New Zealand up to the possibility of racketeering and price gouging without heavy government regulation.

Such regulation is now no longer under the jurisdiction of the New Zealand government, as the fuel is manufactured in offshore markets and as such can only be subject to agreements that affect imported goods.

**5.2** Private oil companies have no obligation to operate in New Zealand.



Old shipping routes, Marsden is now storage.

# 6.0 There are 11 storage points throughout the country

Is the capacity enough for emergencies and disruptions?

Under the International Energy Agreement, New Zealand is by agreement supposed to have a secure capacity to hold a 90 day supply;

- Earlier this year, according to Radio New Zealand, the government sold its offshore stockholdings under the IEA to other countries.
- New Zealand does not have the capacity to hold 90 days' supply. Fuel on route or "on water" can be treated as a stock holding under the current rules.
- The contract for supply between suppliers and wholesalers is run by a ticket market; **the product on water is not secured**.

# 7.0 Operation Good Oil stock holding investigation

Over the past few months operation good oil committee members and researchers have been tracking the progress of tanker ships and using official data to draw an estimation of the current state of New Zealand's fuel supply levels.

**7.1** Bassam Maghzal of Buddle Findlay, prior to the refinery closure, released an article stating that is was their belief that New Zealand needed significantly more storage than it currently has or what had been proposed to date.<sup>xviii</sup>

**7.2** Minister Megan Woods was supplied with 2 briefings from MBIE on the amount of fuel storage New Zealand currently has, and how much they recommend New Zealand should have. The minister is refusing to release the reports or the information to the public.<sup>xix</sup>

**7.3** The data Operation Good Oil has collected is large, analytical and complex. This will be published in further release that deals solely with New Zealand's Fuel supply.

# 8.0 Carbon Neutral agenda

Members of the New Zealand parliament have signed the country's government up to the United Nations Framework Convention on Climate

Change (UNFCCC)<sup>xx</sup>, initially with the Kyoto Protocol in 1997<sup>xxi</sup> and then with the 'Paris agreement' <sup>xxii</sup>

"The Paris Agreement is a **legally binding international treaty on climate change**. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016. Its goal is to **limit global warming** to well below 2, **preferably to 1.5 degrees Celsius**, compared to pre-industrial levels. To achieve this long-term temperature goal, countries aim to **reach global peaking of greenhouse gas emissions as soon as possible** to achieve a climate neutral world by mid-century. The Paris Agreement is **a landmark** in the multilateral climate change process because, for the first time, a binding agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects."

**8.1** New Zealand's contribution to pollution and carbon emissions on a worldwide scale are statistically insignificant:

*"New Zealand's gross emissions contributed approximately 0.17 per cent of the world's gross emissions" xxiii* (environment.govt.nz)

**8.2** Even if New Zealand was to reduce its emissions to zero it would have no measurable impact on global pollution or gas emissions. There is currently no viable alternative to oil for agriculture, horticulture and transport. New Zealand's electricity grid is aging and at peak demand in most centres during winter months. New construction of electricity generators poses a myriad of environmental challenges including that of New Zealand's antinuclear stance.

Electric heavy vehicles are incredibly expensive and environmentally destructive, there are numerous studies available online that point to electric vehicles being pollution intensive and carbon positive to manufacture and run.

This report will not venture into those issues as we believe the logic is selfevident and the facts require little study.

The same self-evidences are clear for bio fuels being carbon positive and energy waste intensive through manufacturing processes.

**8.3** Minister Megan Woods has summed up the government's position on the closing of Marsden Point refinery in regards to "climate change "in 'MBIE discussion document, accelerating renewable energy and energy efficiency':

"The coming years will see a complete re-wiring of global energy systems in response to the threat of climate change, and the economic and environmental opportunities low emissions energy sources are creating" <sup>xxiv</sup>

For more in depth documentation and analysis on the parliament's position toward oil and refining in New Zealand visit: <u>https://savemarsdenpoint.com</u>

# 9.0 Conclusion

The closure of Marsden point refinery has led to across board security threats that directly affect the safety and wellbeing of every New Zealander. There is no logical economic or environmental case for removing refining or oil production from New Zealand's energy supply chain. In fact, the reciprocal holds true in light and full knowledge of the facts.

The actions of those involved have created a very clear and present danger to the lives and property of New Zealanders, and if not rectified, will likely cause an immense amount of hardship and damage to New Zealand.

This is a serious situation.

#### Citations

<sup>i</sup> <u>https://www.gets.govt.nz/NZTAHNO/ExternalTenderDetails.htm?id=23803952</u>

https://www.rnz.co.nz/news/national/443869/marsden-point-closure-could-expose-nz-to-fuelsecurity-risks-report-says

<sup>iii</sup> <u>https://s3.documentcloud.org/documents/20793804/impacts-report-march-2020-ex-mbie-june-2021.pdf</u> <sup>iv</sup> H&T conversion to fuels terminal 23 March page 1 executive summary

<sup>\*</sup> <u>https://www.rnz.co.nz/news/national/443869/marsden-point-closure-could-expose-nz-to-fuel-</u> <u>security-risks-report-says</u>

<sup>vi</sup> <u>https://znz-webbackendassets-s3bucket-prod.s3.ap-southeast-2.amazonaws.com/public/zenergy/about-</u> z/documents/Z-Energy-Security-of-Fuel-Supply-091221.pdf

vii <u>https://www.mbie.govt.nz/dmsdocument/21354-retaining-or-redeploying-new-zealands-coastal-shipping-capability-proactiverelease-pdf</u>

viii https://www.rnz.co.nz/news/national/443869/marsden-point-closure-could-expose-nz-to-fuelsecurity-risks-report-says

<sup>ix</sup> <u>https://www.1news.co.nz/2019/07/29/back-in-the-day-petrol-shortages-see-nz-government-</u> introduce-car-less-days/

\* <u>https://www.engineeringnz.org/programmes/heritage/heritage-records/marsden-point-oil-</u> refinery/

<sup>xi</sup> <u>https://milfordasset.com/insights/briscoe-refining-nz-tale-two-agms</u>

<sup>xii</sup> IEA Sept 2022 report <u>https://www.iea.org/reports/oil-market-report-september-2022</u>

xiii <u>https://www.iea.org/search/analysis?q=global%20refining&page=1</u>

<sup>xiv</sup> <u>https://www.mbie.govt.nz/dmsdocument/17733-fuel-supply-resilience-without-a-domestic-oil-refinery-</u> proactiverelease-pdf

<sup>xv</sup> <u>https://www.rnz.co.nz/national/programmes/ninetonoon/audio/2018833819/energy-minister-megan-</u> woods-on-nz-s-fuel-security

<sup>xvi</sup> <u>https://www.rnz.co.nz/national/programmes/ninetonoon/audio/2018836436/how-much-could-new-fuel-storage-investments-cost-us</u>
<sup>xvii</sup> <u>https://www.rnz.co.nz/national/programmes/ninetonoon/audio/2018836436/how-much-could-new-fuel-storage-investments-cost-us</u>

<sup>xvii</sup> <u>https://www.newsroom.co.nz/pro/pro-talks-naomi-james-offers-marsden-point-oil-tanks-for-national-security-fuel-reserve</u>
<sup>xviii</sup> <u>https://www.buddlefindlay.com/insights/its-time-for-a-new-zealand-energy-security-strategy-why-the-</u>

\*\*\*\* <u>https://www.buddlefindlay.com/insights/its-time-for-a-new-zealand-energy-security-strategy-why-the-recent-global-petroleum-supply-concerns-matter/</u>

xix https://www.rnz.co.nz/news/national/474063/nz-fuel-security-status-kept-under-wraps

<sup>xx</sup> <u>https://unfccc.int/process-and-meetings/what-is-the-united-nations-framework-convention-on-climate-change</u>

<sup>xxi</sup> <u>https://unfccc.int/kyoto\_protocol</u>

xxii https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

xiii https://environment.govt.nz/publications/new-zealands-greenhouse-gas-inventory-1990-2019snapshot/how-new-zealand-compares-to-other-countries/

<sup>xxiv</sup> <u>https://www.mbie.govt.nz/assets/discussion-document-accelerating-renewable-energy-and-energy-</u> efficiency.pdf