



BRIEFING

Report back on the findings and recommendations of the Fuel Market Financial Performance Study

Date:	23 November 2017	Priority:	Medium
Security classification:	In Confidence	Tracking number:	0736 17-18

Action sought		
	Action sought	Deadline
Hon Dr Megan Woods Minister of Energy & Resources	Agree to the recommendations	22 December 2017

Contact for telephone discussion (if required)				
Name	Position	Telephone		1st contact
Dr Marcos Pelenur	Manager, Resource Markets Policy	04 901 9887	s 9(2)(a)	✓
s 9(2)(a)	s 9(2)(a)	s 9(2)(a)	s 9(2)(a)	

The following departments/agencies have been consulted

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 Withdrawn |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



BRIEFING

Report back on the findings and recommendations of the Fuel Market Financial Performance Study

Date:	23 November 2017	Priority:	High
Security classification:	In Confidence	Tracking number:	0736 17-18

Purpose

This briefing responds to Cabinet's decision on 26 June 2017 that officials assess the findings and recommendations of the Fuel Market Financial Performance Study and report back to the Minister of Energy and Resources by 30 November 2017 (Cab-17-Min-0319 refers). At your request, this timeframe has been brought forward to 23 November 2017.

This briefing:

- Outlines the Government's interest in ensuring competitive fuel markets.
- Provides background and summarises the findings and recommendations of the Fuel Market Financial Performance Study.
- Summarises the responses of fuel suppliers to the Study's recommendations (with individual submissions provided as Annexes).
- Gives MBIE's assessment of the Study's recommendations.
- Presents MBIE's conclusions on next steps.
- Provides annexes that give a summary of past analysis of the sector, a review of the methods used by the International Energy Agency for calculating pre-tax premium petrol prices, fuel supplier submissions to the Study, and consultant reports on the national storage system and wholesale markets.

Executive summary

Conclusions

1. At a high level, there are three broad options available to government:
 - Option 1: let the market play itself out, with government limiting its role to a monitoring one. This is the status quo;
 - Option 2: pursue further analysis through a Commerce Commission led market study, which may lead to regulatory intervention (e.g. creating greater liquidity in the wholesale market) in the future. Until the Commerce Commission gets a market study power, this option could be accompanied by periodic updates from MBIE on how the market is continuing to develop and, potentially, further examination of the costs and benefits of potential regulatory interventions; and
 - Option 3: direct government intervention such as s 9(2)(f)(iv)

2. There are costs and risks associated with each of these broad options. On balance, MBIE sees Option 2, a market study undertaken by the Commerce Commission, accompanied by information gathering powers as the most appropriate next step.
3. MBIE considers it premature to provide any strong recommendations on potential regulatory intervention or direct government intervention until such time that a market study has been undertaken.
4. MBIE can continue its monitoring function of the market while the Commerce Act is being amended. Where improvements to our margin monitoring are possible (e.g. around the level of the quality premium¹) then we can do this. We can also provide periodic updates on how the market is continuing to develop and the extent to which independent distributors and Gull are continuing to expand their retail operations. Gull has been notable since its entry in 1998 as being a maverick low cost fuel supplier.
5. Subject to your direction, MBIE could also potentially undertake further examination of potential regulatory interventions, e.g. s 9(2)(f)(iv) ahead of a future examination of the sector. Although the specifics of any intervention would need to be informed by the results of any future market examination.

The Fuel Market Financial Performance Study concluded that there was “reason to believe” that fuel prices in New Zealand might not be reasonable

6. The Ministry of Business, Innovation and Employment (MBIE) has become increasingly concerned that consumers in the downstream oil market may not be getting the best outcomes. These concerns are based on rising levels of importer margins since 2008, New Zealand’s move in the space of nine years from being in the bottom third of OECD countries in terms of pre-tax premium petrol prices to being the most expensive, and a rising spread in retail prices between Wellington and the South Island, on the one hand, and the rest of the North Island, on the other.
7. Rising petrol and diesel margins amount to a wealth transfer from consumers to producers, increasing the effective living costs of motorists.
8. In February 2017, the Minister of Energy and Resources announced a study into fuel prices/returns to be undertaken by MBIE. The Fuel Market Financial Performance Study (the Study) sought to determine the reasonableness of fuel prices by benchmarking returns on average capital employed against an appropriate cost of capital. Due to a combination of data availability (not all fuel suppliers responded to requests for data) and data comparability (the data that was provided was not in a form that could be compared between fuel suppliers) the authors of the Study were unable to fulfil the initial Terms of Reference.
9. However, the Study was able to make a number of important findings, including that:
 - retail gross margins had increased by 13.0 cents per litre between FY2013 and 2017;
 - the increase in gross margins could not be explained by capital expenditure over the period;
 - increases in gross margins in the retail sector had not been matched by margin increases in other business units (e.g. aviation, marine, bitumen, commercial) where margins had been flat to declining over the same period;
 - since FY2015 retail gross margins had grown significantly faster in Wellington and the South Island, on the one hand, compared to the rest of the North Island, on the other; and

¹ The quality premium is an input into the importer cost and accounts for differences in specifications between what benchmark petrol and diesel prices in Singapore and the petrol and diesel that is prescribed by regulation for retail sale in New Zealand.

- the spread in retail gross margins between Wellington and the South Island, on the one hand, and the rest of the North Island, on the other, is not explained by differences in distribution costs or capital expenditure.

The Study made four recommendations

10. The Study recommended further examination of:
 - New Zealand's downstream fuel sector using different types of data and which are not subject to the limitations of an accounting type returns analysis (e.g. prices for each fuel type by station and station type on a weekly basis);
 - The removal of Z Energy's main port price from its website (which Z Energy removed on the day the report was published);
 - The creation of a registry for the borrow and loan system that limits the visibility of other participant's market shares; and
 - Giving consideration to the creation of a liquid wholesale market for retail fuels.

MBIE assessment of the Study's recommendations

MBIE recommends further examination of the sector

11. MBIE agrees that further examination of the downstream fuel sector is a worthwhile next step. Amending the Commerce Act to give the Commerce Commission powers to conduct market studies, supported by information gathering powers, would be the preferred vehicle for undertaking this task. The Commerce Commission would also be best placed to decide what type of data and methods are best suited to determine the reasonableness of prices and market competitiveness, should a fuel market study be agreed to under this new power.
12. There are costs and potential benefits from undertaking a market study. In terms of costs, a market study is likely to be lengthy and require substantial resources. The results are also likely to be challenged by industry and may not provide a definitive conclusion.
13. Although, these costs and risks are significant, they need to be weighed against the potential materiality of the current wealth transfer from consumers to fuel suppliers. The costs to consumers of doing nothing with pre-tax premium petrol prices now the highest in the OECD seems far more unsatisfactory. The potential wealth transfer from consumers to fuel suppliers since 2008 is likely measured in the hundreds of millions of dollars per annum. Therefore, MBIE consider that further examination is warranted.

MBIE does not support the creation of a registry for the borrow and loan system that limits the visibility of other participants' market shares

14. The authors of the Study recommended further assessment on how the borrow and loan (shared storage) system works to establish if an independent registry should be created to limit visibility of regional market share data. The authors suggested that the shared storage arrangements provided each fuel supplier with a high level of visibility and a way of monitoring market shares for other fuel suppliers.

The authors concluded that:

“Such information sharing is often a cause for concern to competition authorities because it might help to support coordination among firms leading to higher prices.”

15. MBIE commissioned Hale & Twomey, an energy consultancy specialising in New Zealand's downstream fuel sector, to provide supplementary advice on how the national storage

system and borrow and loan arrangements work and also to provide their views on the Study's recommendation of an independent registry.

16. Hale & Twomey's report into the shared storage system is comprehensive and provided in Annex Seven. Their central conclusion was that this recommendation seems to offer little in the way of benefits (as users can get market share data through a range of other sources) but many potential costs (increasing costs to fuel suppliers that would need to be passed on to consumers, increasing likelihood of disputes between fuel suppliers, potential implications around security of supply, and undermining what all parties agree is an efficient system for shipping product from the refinery and imports to coastal terminals).
17. MBIE concurs with Hale & Twomey's overall assessment and does not recommend pursuing this recommendation any further.

MBIE does not yet see an effective way of developing a liquid wholesale market

18. In principle, MBIE agrees that one way to reduce barriers to entry and lift levels of competition is to make access to refined product easier for third parties.
19. However, MBIE is cautious about the notion that a liquid wholesale market for petrol and diesel, similar to what is seen in the New Zealand electricity market, is feasible. Based on a review of six countries undertaken, Hale & Twomey was unable to identify any liquid wholesale markets for petrol and diesel where wholesale suppliers and buyers contract through a market or trading platform on a daily basis, in a similar way that major commodity markets operate, or local markets such as the New Zealand electricity market. Hale & Twomey's review of wholesale fuel markets is provided in Annex Eight.
20. There may be other regulatory interventions in the wholesale sector that might have the effect of reducing barriers to entry and enhancing competition. However, MBIE is not currently in a position to provide any strong recommendations as to the desirability of such regulatory interventions until there is a stronger case that retail fuel prices and margins are unreasonable and an assessment has been made that the benefits of any regulatory intervention outweigh the costs. This would need to involve further analysis of these options, as the unique characteristics of the national storage system and borrow and loan arrangements complicate potential regulatory interventions.

Recommended action

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

- a **Note** that on 26 June 2017 Cabinet directed officials to assess the findings and recommendations of the Fuel Market Financial Performance Study (the Study) and report back to the Minister of Energy and Resources by 30 November 2017 (Cab-17-Min-0319 refers)

Noted

- b **Note** that the Study found that:

- a. retail gross margins had increased by 13.0 cents per litre between FY2013 and FY2017;
- b. the increase in retail gross margins could not be explained by capital expenditure over the period;
- c. Increases in gross margins in the retail sector had not been matched by margin increases in other business units (e.g. aviation, marine, bitumen, commercial) where margins had been flat to declining over the period;
- d. since FY2015 retail gross margins had grown significantly faster in Wellington and the South Island, on the one hand, compared to the rest of the North Island, on the other;
- e. the spread in retail gross margins between Wellington and South Island, on the one hand, and the rest of the North Island, on the other, is not explained by distribution costs of capital expenditure.

Noted

c **Note** that Study recommended:

- a. further examination of New Zealand's downstream fuel sector but based on different types of data and which are not subject to the limitations of an accounting type returns analysis;
- b. the removal of Z Energy's main port price from its website (which Z Energy removed on the day the report was published);
- c. the creation of a registry for the borrow and loan system that limits the visibility of other participant's market shares; and
- d. giving consideration to the creation of a liquid wholesale market for retail fuels.

Noted

d **Agree** that further examination of New Zealand's downstream fuel sector is warranted and that a market study led by the Commerce Commission, alongside supporting information gathering powers, would be the most appropriate vehicle to undertake this examination

Agree / Disagree

e **Note** that on 6 June 2017, Cabinet agreed that Part 1 of the Commerce Act be amended so that the Minister of Commerce and Consumer Affairs can direct the Commerce Commission to undertake market studies (Cab-17-Min-0320 refers).

Noted

f **Note** that officials are currently proposing a timeframe for the Commerce Amendment Bill that would see an exposure draft released in February 2018, and introduction occurring by the end of June 2018, with enactment by June 2019.

Noted

g **Agree** not to pursue the Study's recommendation to create a registry for the borrow and loan system on the basis that it has little in the way of potential benefit but very significant costs.

Agree / Disagree

h **Agree** not to pursue the creation of a liquid wholesale market, either via regulatory intervention or direct government intervention, until such time that a market study has been undertaken

h **Agree** not to pursue the creation of a liquid wholesale market, either via regulatory intervention or direct government intervention, until such time that a market study has been undertaken

Agree / Disagree

i **Agree** to discuss with MBIE your preferences for further work you would like MBIE to undertake up until the Commerce Commission is in a position to undertake a market study.

Agree / Disagree

j **Agree** to forward this briefing to the Minister of Commerce and Consumer Affairs, Hon. Kris Faafoi.

Agree / Disagree

s 9(2)(a)



Dr Marcos Pelenur
Manager, Resource Markets Policy
Building, Resources Markets Group, MBIE

23 / 11 / 2017

Hon Dr Megan Wood
Minister of Energy & Resources

..... / /

The Government has an interest in ensuring competitive fuel markets

MBIE monitors importer margins for retail petrol and diesel

21. Since deregulation of the downstream fuel sector in 1988, the Government's role has largely been to monitor petrol and diesel prices and importer margins, and to monitor security of supply.
22. The Ministry of Business, Innovation and Employment (MBIE) estimates importer margins (also referred to as gross distribution margins) as the difference between the landed cost of fuel and the retail price. The "landed cost" comprises an international benchmark price of fuel, adjusted for quality differences, and freight, insurance and wharf handling fees.
23. Importer margins are a broad indicator of gross profit made on retail sales of petrol and diesel, out of which the suppliers must meet a range of costs (e.g. trucking and service station overheads) as well as a portion of corporate overheads, depreciation, interest, and income tax. Full details of MBIE's method for calculating importer margins were provided to you in an aide memoire on 15 November.²
24. The premise behind the regular reporting of importer margins is that public disclosure will limit the scope for any excessive pricing on the part of fuel suppliers and provide consumers with reassurance that they are getting a fair deal. Although margins have risen significantly despite the presence of this disclosure, MBIE continues to see benefit in this margin monitoring to maintain some public pressure on fuel suppliers and to inform MBIE's regulatory role.

Rising petrol and diesel margins increases costs and reduces productivity across the economy

25. Petrol and diesel is important as the direct and indirect costs flow through to all parts of economy. In 2016, New Zealanders spent between \$8 billion to \$9 billion on petrol and diesel. Petrol has the second highest weighting in the calculation of inflation (behind housing costs), which in turn has flow on impacts to short-term interest rate levels and the exchange rate.
26. Rising petrol and diesel margins amount to an effective wealth transfer from consumers to producers, increasing the effective living costs of motorists.
27. In 2016, New Zealanders spent on average approximately \$1,500 on petrol.³ An additional one cent per litre in petrol equates to an additional \$8 per annum per motorist. Based on MBIE data, retail petrol margins have increased by over 18 cents per litre between 2008 and 2017, equating to an additional cost per motorist of close to \$150 per annum over that period.⁴
28. At a macro level, an additional one cent per litre on petrol equates to an additional cost to consumers of approximately \$32 million per annum. This means that the potential wealth transfer from consumers to fuel suppliers since 2008 is likely measured in the hundreds of millions of dollars per annum.

² *Drivers behind petrol price increases in November.* Tracking number 0993 17-18.

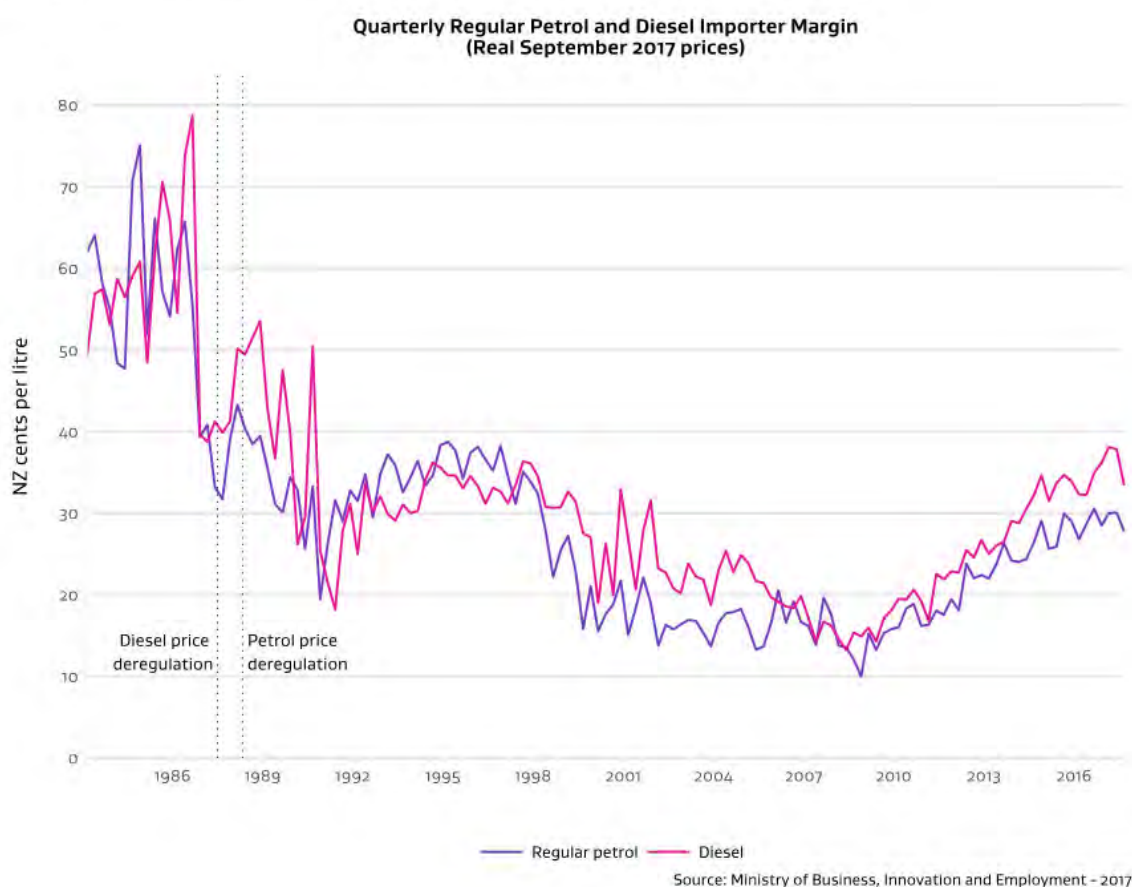
³ Calculated using vehicle fleet statistics collected by the Ministry of Transport and available here (<http://www.transport.govt.nz/research/newzealandvehiclefleetsstatistics/#annual>). Key input assumptions include a weighted average fuel consumption of 7.64 litres per 100 km, a weighted average distance travelled per passenger vehicle of 10,556 km, and an average retail petrol price of 179.56 cents per litre.

⁴ The combined increase in taxes, levies, Goods and Services Tax and Emissions Trading Costs is 21.98 cents per litre between 2008 and 2017 (up until 10 November 2017).

Margins fell after deregulation, and again after the entry of Gull and Challenge, but have been rising since 2008

29. Deregulation saw a significant drop in importer margins, although margins rose during the 1990s raising concerns by the then Ministry of Commerce about barriers to entry in wholesale and retail markets. A 1996 report by NZIER supported the Ministry's concerns about barriers to entry, but a subsequent detailed report in 1997, by ACIL Economics and Policy, found no evidence of entry barriers.
30. Challenge and Gull entered the market in 1998, a year after the ACIL report. Real importer margins then generally followed a downward trend for the next decade, and reached a low in 2008. Importer margins have been trending upward since December 2008.

Long-term trends in real Importer Margins (updated quarterly)



31. The last major public review of the downstream fuel sector before the Study was conducted by Hale & Twomey in 2008 on behalf of the then Ministry of Economic Development.⁵ This review was done in the context of rapidly rising crude oil prices which resulted in petrol prices reaching a then historic high of \$2.19 per litre.
32. Importer margins were at historic lows in 2008 and Hale & Twomey concluded that the market was fundamentally competitive. The main outcome of the report was that the Ministry moved from a weekly reporting of importer margins to also including daily margin monitoring but reported on a weekly basis, thereby providing a greater level of granularity.
33. A summary of the major reviews of the downstream oil sector, including significant briefings provided to former Minister's of Energy and Resources, is provided in Annex 1.

⁵ 2007 ACCC report into Australian petrol prices: Review of applicability to the New Zealand petrol market, Hale & Twomey, July 2008, available at <http://www.mbie.govt.nz/info-services/sectors-industries/energy/liquid-fuel-market/documents-image-library/2007-acc-report-australian-petrol-prices.pdf>.

Fuel suppliers considered the margin levels in 2008 to be unsustainable...

34. There was a general view across industry in 2008 that margins had fallen to unsustainable levels. As evidence of this, fuel suppliers point to:
- the number of service stations more than halved between 1988 and 2008 as participants sought improved returns by consolidating volume to fewer sites and channels;
 - all companies deferred significant capital investment across all sectors of the supply chain. This underinvestment reduced the total domestic fuel storage capacity, as measured in days of fuel cover, to under four weeks for all products, and in the case of jet fuel, two weeks;
 - the returns achieved within the New Zealand fuels industry during this period were, in the view of fuel suppliers, low in absolute terms and low relative to alternative investment options for multinational oil companies. This situation precipitated the exit of Shell from this market in 2010, Chevron in 2016, with Mobil unsuccessfully marketed for sale at least twice since 2008; and
 - in addition to market exit, participants also reduced their capital employed in New Zealand. For example, Caltex sold the majority of its retail service stations to independent business operators, in exchange for wholesale supply contracts. Caltex also exited supplying a number of commercial markets directly.
35. MBIE is cautious about assertions that the reason some fuel suppliers have left New Zealand, or sought to leave New Zealand, is because returns were unsustainably low. MBIE considers the reason for exit to be more likely tied to the broader corporate strategy of the international oil companies, with each company exiting many smaller markets (Shell exited 21 countries in the years leading up to its divestment from New Zealand), investing more in large emerging markets (e.g. China, India, Indonesia) and prioritising investment spending in the upstream exploration and production sector. By comparison, New Zealand is considered a relatively small and mature market with little in the way of growth prospects.

...with at least some of the increase in importer margins since 2008 due to increased costs

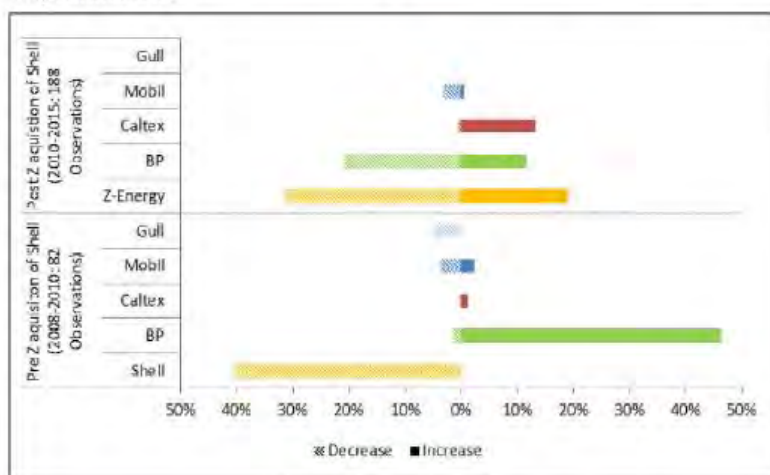
36. At least some of the increase in importer margins since 2008 is due to an increase in capital and operating expenses, such as:
- Increases in costs, such as;
 - i. increased commissions and rebates provided to independent dealers. As examples of these;
s 9(2)(b)(ii)
 - ii. minimum wage increases;
 - iii. increased health and safety costs (particularly around firefighting);
 - iv. other sundry items (such as rates increases, Kiwi saver obligations, credit card fees, and insurance).

- Increased investment in infrastructure that has increased the cost base, including:
 - i. the refurbishment and expansions storage terminal capacity Timaru, Lytelton, Seaview, Mount Maunganui, Bluff, Dunedin and New Plymouth; and
 - ii. the upgrading of service station infrastructure by several fuel suppliers, including purchasing or remediating retail sites and upgrading storage tanks located under service stations.

Sustained rise in importer margins has become a source of concern to officials

37. As part of its monitoring function, officials at the then Ministry of Economic Development (MED) and at MBIE have noted with increasing levels of concern the rise in importer margins since 2008, and more specifically since 2011 when Z Energy advised officials that it had changed its pricing strategy to favour margins over volumes. MED/MBIE initially accepted the views of fuel suppliers that importer margin levels in 2008 were unsustainably low but we have become concerned at how a sustained rise in importer margins is possible if the market is truly competitive. There is the clear impression that margins have been managed upwards, with no major fuel supplier replacing the role that Shell used to play in bringing prices down.

Percentage of price decreases and increases initiated by each firm before (2008-10) and after (2010-15) acquisition of Shell



Source: NERA analysis of Z data.

Note: Greenstone entries have been coded as Z. Entries attributed to more than one firm have been counted as an entry for each firm.

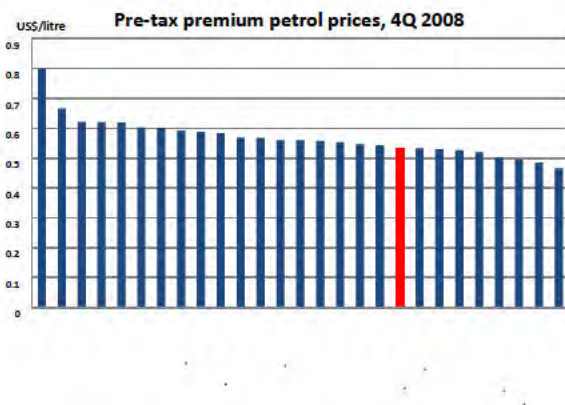
Source: Z Energy (used with permission)

38. The concern of officials has risen as the price of fuel in New Zealand now appears expensive when compared to overseas jurisdictions. Officials note that pre-tax premium petrol prices in New Zealand have moved from being in the bottom third of OECD countries to the most expensive as at end-2016, and that for regular petrol, New Zealand's pre-tax prices are more expensive than some Pacific Island countries such as Tonga, Fiji and Samoa.⁶
39. In response to concerns expressed by Z Energy in its submission to MBIE that the OECD data was misleading, MBIE has reviewed the method by which the International Energy Agency (IEA) collects data for pre-tax premium petrol prices across the OECD. The collection methods differ substantially across markets, with some countries using a volume weighted retail price and others an arithmetic average, while some factor in discounts and others do not. There are also significant differences in the reporting frequencies from which average quarterly prices are calculated, with some countries using an average weekly retail

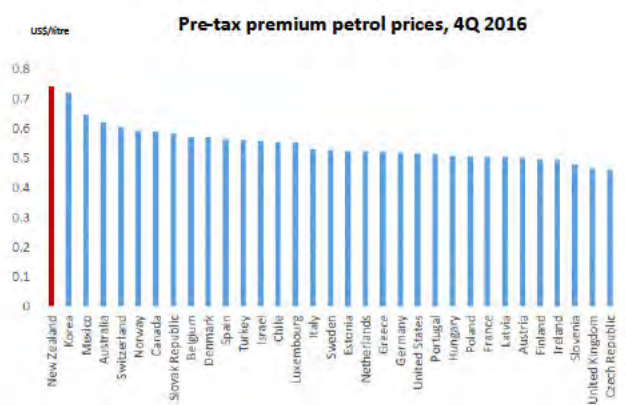
⁶ Most Pacific Islands (except Australia, New Zealand and Fiji) have a price lag of 1.5 months, while Fiji changes prices every three months. Each Pacific Island regulates margin levels to allow companies to obtain a certain level of return on capital employed. This is typically between 12 per cent and 15 per cent. Tonga regulates margins at a 12 per cent return on capital employed while Fiji sets it at 15 per cent.

price and others using an average daily retail price over the period of a month. In the case of New Zealand, MBIE provides the IEA a quarterly average of retail prices sourced from Statistics New Zealand which is net of discounts. An explanation of each method used is provided in Annex Two.

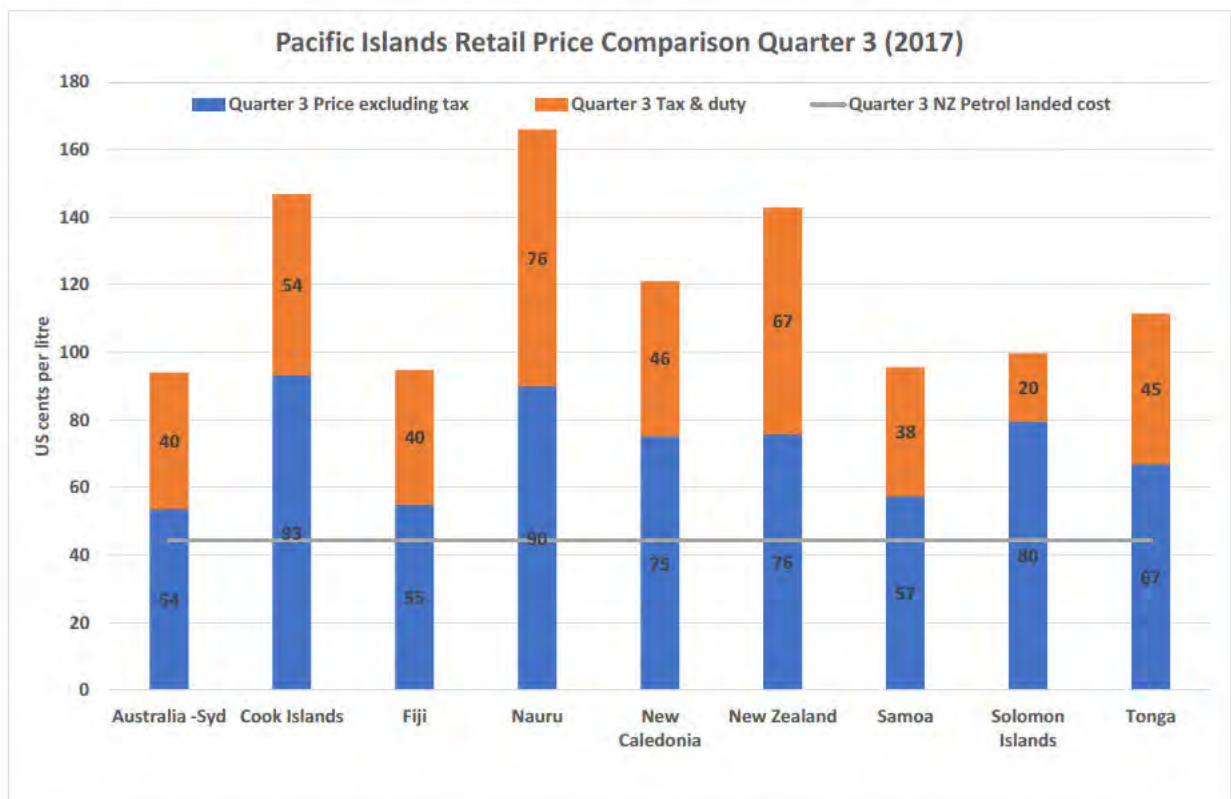
40. The main takeaway from this review of IEA data is that the only explanation for New Zealand's shift to the top of the OECD is due to margin increases. There have been no significant changes in the way that countries in the OECD collect and report premium pre-tax petrol prices since 2008. This suggests that New Zealand's shift from being in the bottom third of OECD countries to the most expensive has been due to changes within the New Zealand market. There is no reason why the underlying cost of premium petrol supplied to New Zealand relative to other markets would have changed significantly over the period. This leaves importer margin increases as the only explanation.



Source: International Energy Agency



Source: International Energy Agency



41. As importer margins are an imperfect proxy for profitability and returns, officials have been unable to say whether oil company returns are unreasonable. And even when deeper analysis has been possible, notably in the case of Z Energy which is a publicly listed company, MBIE cannot draw any strong conclusions as to whether the returns achieved by Z Energy are typical of the rest of the industry or simply amount to good performance by Z Energy.

Fuel market financial performance study

42. In February 2017, the Minister of Energy and Resources announced a study into fuel prices/returns to be undertaken by MBIE. The Fuel Market Financial Performance Study sought to answer two questions:
- Are retail consumers in New Zealand paying reasonable prices for petrol and diesel and why? At what level might prices be considered unreasonable?; and
 - What conclusions can be drawn about retail fuel price differences at a regional level?
43. In answering these questions the Study was intended to focus on the returns on average capital employed against an appropriate cost of capital, across different parts of each business.⁷
44. The Study was reliant on the voluntary provision of data by the fuel companies. While most of the companies cooperated with most of MBIE's requests, not all the data provided was comparable across companies or provided in sufficient time to be incorporated into the Study. This meant that the initial approach to the Study - answering whether prices were reasonable through market-level analysis of ROACE - could not be achieved. However, the Study was able to reach a number of meaningful findings.
45. MBIE's position to the findings of the Study, as expressed in the report back to Cabinet in July 2017, remains broadly unchanged.⁸

Findings as to whether prices are reasonable

46. The Study concluded that "we cannot definitely say that fuel prices in New Zealand are reasonable, and we have reason to believe that they might not be." This is consistent with concerns expressed by officials in numerous briefings to previous Ministers of Energy and Resources about the continued rise in importer margins from 2008.
47. Key findings regarding whether prices are reasonable are summarised below:
- retail gross margins⁹ have increased significantly between FY2013 and FY2017 which is consistent with MBIE's published importer margin monitoring; and
 - increases in retail gross margins do not appear to be due to capital expenditure made by the majors over the period under review.
48. The report identifies three possible reasons for rising margins:
- a weakening of competitive intensity (e.g. a change in Z Energy's pricing strategy after it acquired Shell in 2010 – prior to this Shell had tended to be slow to follow competitors' price increases and quick to lower the price);

⁷ The terms of reference for the study can be found here: <http://www.mbie.govt.nz/info-services/sectors-industries/energy/liquid-fuel-market/documents-image-library/tor-fuel-market-financial-performance-study.pdf>.

⁸ A copy of the Cabinet paper can be found here: <http://www.mbie.govt.nz/publications-research/publications/energy/cabinet-paper-report-back-on-the-fuel-market-financial-performance-study.pdf>.

⁹ "Gross margins" are defined by the Study's authors as being profit after discounts, dealer commissions, transfer price, storage and handling, and logistics costs. Some of these costs (e.g. dealer commissions) are not included in MBIE's monitoring of importer margins as these costs will differ significantly from one fuel supplier to the next.

- a shift towards greater product differentiation and price discrimination – offering increasingly differentiated product offerings (e.g. better quality forecourts) segments the retail fuel market and enables companies to discriminate between customer types; and
 - a rise in independent retailers, with possible inefficiencies in how they set prices.
49. In regard to the third possible explanation, MBIE notes that competition from independents appears to restrain prices in the North Island, rather than serving to increase them.
50. The Study also identifies features of the market that the authors argue may allow margins to rise more or for longer than they should:
- Vertically integrated companies (i.e. the same company owning operations at refining, wholesaling and retailing) giving firms the opportunity to limit competition.
 - Refinery arrangements (Part 1) – the refinery is run to tight capacity, its output is fully committed to the majors (meaning that there is no spare capacity for potential new entrants), and even if it were not any firm wishing to gain access to its output would need to commit to a full bundle of products (i.e. jet fuel and not just petrol and diesel).
 - The independents' limited sources of product – New Zealand lacks liquid regional wholesale markets through which independent suppliers can reliably access fuels. This reliance potentially limits their ability to compete head-to-head with the majors, dampening the downward pressure they can exert on margins.
51. MBIE notes there may be features of the market that inhibit retail competition, but is mindful that the report also states that these features must be assessed against a viable counterfactual. MBIE considers that a counterfactual may not be possible for all of the aspects of the refinery arrangements mentioned above. For example, running the refinery with excess capacity is unlikely to be either efficient or profitable, making it an unsuitable counterfactual.
52. MBIE is cautious about the notion that a liquid wholesale market for petrol and diesel, similar to what is seen in the New Zealand electricity market, is feasible. Based on a review of six countries undertaken, Hale & Twomey was unable to identify any liquid wholesale markets for petrol and diesel where wholesale suppliers and buyers contract through a market or trading platform on a daily basis, in a similar way that major commodity markets operate, or local markets such as the New Zealand electricity market. Hale & Twomey review of wholesale fuel markets is provided in Annex Eight.
53. Finally, the Study tentatively identifies three possible reasons for why fuel margins are simply higher than they need to be (i.e. higher than they might be in a market where certain features were not present):
- Z Energy's publication of its MPP – this potentially serves as a retail pricing signal that can dampen competition;
 - Information exchange between the majors – the majors share terminal facilities under a 'borrow and loan' arrangement, through which the authors of the Study understand that the majors share information, allowing them to monitor each other's market shares. Such information sharing is often a cause for concern to competition authorities because it might help to support coordination among firms, leading to higher prices;
 - Refinery arrangements (Part 2) – the ownership arrangements of the refinery may be affecting how the majors price across various industry levels (although the impact of this is unknown).
54. The information exchange between majors was closely examined as part of this report back and is discussed in more detail below.

55. MBIE notes that the ownership arrangements of the refinery could affect how the majors price across various industry levels, but notes that the Study was unable to find supporting evidence that this was occurring. The report itself is cautious about concluding that this is a cause of higher margins.
56. The Study also concluded that MBIE's method for calculating its weekly importer margins is robust and noted that New Zealand has the highest pre-tax premium petrol prices in the OECD in 4Q 2016.

Findings regarding regional pricing and cross-subsidies

57. The Study concluded that there is enough evidence to suggest that cross-subsidies are occurring between regions and business units. However, the authors of the Study were not able to confirm this beyond all doubt. The authors of the Study note that further data and analysis would be required to be definitive.
58. Specifically:
 - retail gross margins in Wellington and the South Island have increased at a faster rate than margins in the North Island (excluding Wellington);
 - North Island/South Island differences are not explained by capital expenditure; and
 - gross margins for retail have been increasing while margins from other business units on average have been flat or declining.
59. The anecdotal evidence available to the authors of the Study includes the following:
 - they understand, but have not been able to independently verify, that a small number of locations are operated by at least some of the majors at negative margin – suggesting those sites are indeed cross-subsidised by others;
 - the way in which shipping costs are allocated by the majors under their joint venture in coastal shipping may be favouring the South Island (though the impact of this is small, likely to be less than one cent per litre); and
 - the price-setting process of at least some majors involves attempting to recover margin lost in areas facing more intense competition by increasing margin in other areas.
60. While they have not been able to access specific data to confirm this, margin shifting makes sense if firms are simultaneously coordinating in less-intensive competitive areas. That way lost volumes from increasing prices are possibly more than offset by softer price competition.
61. Margins in the South Island and Wellington are able to rise relative to the rest of New Zealand due to the inability of truly-independent rivals (i.e. those with their own product supply) to access terminals owned by the majors.
62. The reason for the margin differential between retail and other customers is most likely due to buying power combined with capital investment. It is likely that large wholesale customers are provided with higher discounts than retail customers given that long-term contracts are in place and significantly higher volumes are acquired. In addition, some wholesale customers have their own storage facilities or lower quality requirements in respect of distribution (for instance more unmanned sites) and therefore this means the operators have invested less in distribution assets.

Recommendations from the Study

63. The Study recommended further examination of:
- New Zealand's downstream fuel sector but based on different types of data and which are not subject to the limitations of an accounting type returns analysis.
 - The removal of Z Energy's main port price from its website (which was undertaken the same day that the Study was publicly released).
 - The creation of a registry for the borrow and loan system that limits the visibility of other participant's market shares; and
 - Giving consideration to the creation of a liquid wholesale market for retail fuels.

Another study into fuel markets but using different data types

64. One finding of the Study was the difficulty in undertaking any returns type analysis as fuel suppliers measure their returns in different ways and in varying levels of detail. One way of getting around this is prescribing a set of accounting rules for each fuel supplier to follow. This is the approach undertaken by the Commerce Commission in its regulation of price/quality paths for regulated industries such as electricity lines businesses and gas pipeline businesses.
65. The authors of the Study recommended an alternative approach using data that fuel suppliers should be able to provide on a consistent basis and at a level of detail fine enough that analysis can be undertaken in specific markets (e.g. cities or regions). The following data, the authors of the Study argue, should be used:
- prices for each fuel type and/or sales (which include discounts implicitly), as well as sales volumes (i.e. prices and volumes);
 - at least on a weekly basis, ideally for the whole period under study;
 - ideally by station, for all stations in the country (although studies could instead be made of specific cities and regions of particular interest); and
 - details of station characteristics (e.g. number of pumps, payment methods, type of store, other services such as car washes, cafes, etc).
66. The authors of the Study argue that this alternative approach should give:
- a clearer indication of the nature and extent of any problems in the fuel sector;
 - an ability to gauge the impact on retail fuel margins in those markets of possible remedial changes to industry arrangements (i.e. through policy simulations); and
 - a better idea of whether the benefits of any possible remedial changes outweigh their costs.
67. A full description of the type of analysis being advocated by the authors is provided in Chapter 6 of the Study.

The national shared storage system and borrow and loan arrangements

68. In order to avoid each fuel supplier having to build its own storage terminal in each part of the country to have a national presence, the major fuel suppliers (Z Energy, BP, Mobil and Z Energy 2015¹⁰) have developed a shared storage system and borrow and loan arrangements. This provides the fuel suppliers with an efficient way of managing shipping of petroleum product from the Marsden Point refinery and imports to coast ports around the country. The shared storage arrangement is administered for the fuel suppliers by a joint

¹⁰ Z Energy 2015 is the old Chevron NZ which Z Energy purchased in 2016.

venture company Coastal Oil Logistics Limited (COLL) that is owned in equal shares by the fuel suppliers. For the system to work COLL requires information on each fuel supplier's supply and demand situation, as well as tankage they have provided to the system.

69. A key feature of this shared storage system is each fuel supplier's storage is pooled, with product deemed to be held in "one big tank"; effectively each fuel supplier's product is commingled with the other fuel suppliers' product. The arrangements see COLL directing where product (either refinery produced or imported cargoes) is discharged to ensure product is available at each port to meet projected aggregated demand. Each fuel supplier is entitled to lift product from any port, with the terms of access for using another fuel supplier's facility (including throughput and hosting fees) governed by an individual bilateral borrow and loan arrangement with that fuel supplier for that terminal.
70. The authors of the Fuel Market Financial Performance Study recommended further assessment on how the borrow and loan (shared storage) system works to establish if an independent registry should be created to limit visibility of regional market share data. The authors suggested that the shared storage arrangements provided each fuel supplier with a high level of visibility and a way of monitoring regional market shares for other fuel suppliers. The authors concluded that:

"Such information sharing is often a cause to competition authorities because it might help to support coordination among firms leading to higher prices."

Creation of a liquid wholesale market

71. The authors of the Study noted that:
- *"New Zealand lacks liquid regional wholesale markets through which independent suppliers can reliably access fuels – instead they are reliant on being able to secure long-term supply contracts from the majors";* and that
 - *"this reliance potentially limits their ability to compete head to head with the Majors" in parts of New Zealand.*
72. The authors of the Study put forward three options to increase liquidity in the wholesale market. These are:
- Requiring terminal owners to make some part of their terminal capacity (either at each terminal, or just for selected terminals) available to others at regulated access prices.
 - Requiring terminal owners to post wholesale prices at terminal gates – although they can decline to supply if capacity is needed for their own requirements. This is the approach adopted in Australia; and
 - Require the major fuel suppliers to post wholesale prices for forward delivery at each terminal (i.e. delivery at a later date). In the view of the authors, abundant literature exists showing that creating such forward trading opportunities can induce firms to trade, even if they privately prefer not to. The reason, the authors argue, is that the opportunity for forward trade creates a "prisoner's dilemma" – if a firm does not sell forward then its rivals might, leaving them worse off in later wholesale trade. This induces firms to trade in the forward market to minimise their fall in profits from later trade.

Fuel supplier responses to the Study's recommendations

73. Fuel suppliers were asked to respond specifically to the recommendations in the Study that related to the borrow and loan and wholesale market. Responses from Z Energy, BP, Mobil and Gull are provided in Annexes three to six. Their responses are summarised below.

Fuel supplier views on the recommendation to create a registry for the borrow and loan system

74. All of the major fuel suppliers opposed the idea of creating a registry for the borrow and loan system arguing that it:

- could result in additional costs, complexity and unintended consequences, including in the area of supply chain security,
- is unnecessary because;
 - i. the shared storage system is working well to deliver efficiencies;
 - ii. the Commerce Commission, in its review for clearance by Z Energy to acquire Chevron New Zealand, did not identify any competition issues with the system that would substantially lessen competition in any market;
 - iii. the information that fuel suppliers have visibility of through the national storage system has no impact on how fuel suppliers set their wholesale or retail prices other than through application of the direct costs incurred by each fuel supplier through the process itself; and
 - iv. market share information is readily available from a number of other sources; and
- is likely to raise disputes around issues such as product allocations during supply shortages.

75. Gull did not comment on the merits or otherwise of creating a registry for the borrow and loan system but argued that Gull's inclusion into this scheme would enhance the benefits for New Zealand motorists.

Fuel supplier views on the creation of a liquid wholesale market

76. All of the major fuel suppliers argued that the wholesale fuel market was highly competitive and that the establishment of a liquid wholesale market was unnecessary, or in the case of Z Energy, at least fraught with risk. In support of this position, the major fuel suppliers argue that:

- Barriers to entry are low, with increased competition already visible. There are a growing number of independents with different operating models acting very effectively as competitors in New Zealand, including Gull and distributors like Allied Petroleum, Waitomo Petroleum and Nelson Petroleum Distributors. This growing number of independents has resulted in increasing price spreads, even in the South Island.
- The liquidity of the wholesale market will always be limited by the relatively few purchasers of fuel products at the wholesale level who can then retail those products due to health and safety, resource management and other regulatory requirements.
- Establishing a liquid wholesale market along the lines of the electricity industry is a time consuming and costly process that has required significant government intervention. It is far from clear whether these significant costs would be outweighed by any perceived benefits. Unlike the electricity sector, the fuel sector consists of multiple product lines (e.g. petrol, diesel, jet fuel) and grades (91, 95 and 98), meaning that multiple wholesale fuel markets would be required;

- Commercial imperatives should be preserved otherwise there is a risk that further investment could be discouraged. As a general principle, companies should be prepared to invest in their own growth and expansion; and
 - There are a very large number of commercial arrangements that would need to be re-negotiated with the risk of unintended consequences very large;
 - i. If a terminal gate price was required then under the current arrangements this would limit wholesale transactions at a particular terminal to only being made by the terminal owner. This would have the effect of halting the present practice of contracted wholesale participants, like a Mobil supplied regional distributor (Nelson Petroleum Distributors), accessing a BP or Z Energy terminal where Mobil does not have a terminal in that location. This is because fuel that is “borrowed” from a competitor’s terminal does not belong to the company until it is loaded on to trucks at the gantry. The complication that arises is how do you sell a product that you don’t own?
 - ii. How would spot pricing work in times of “coordination” where fuel is rationed between major fuel suppliers? At least one or more terminals in the South Island are on coordination up to approximately half of the time. Given the contractual requirement to supply (and therefore prioritise) existing contracted customers, there would be issues of security of supply and cost for any potential third-party entrant;
77. Gull is supportive of arrangements that would provide it with access to fuel at import parity pricing plus a market based terminal margin. In its view, it is simply not economic to build a standalone terminal in the South Island given the significant capital costs required and lower value proposition of the South Island relative to the North Island.
78. MBIE agrees that some of these issues require further analysis to avoid unintended consequences. However, some of the concerns expressed may be overstated. For example, it is not clear to MBIE why terminal gate pricing would preclude an independent distributor lifting product from a terminal not owned by its wholesale supplier if the obligation for posting a terminal gate price was placed on each major fuel supplier for each terminal. The terminal gate price would be one thing and long-term contracted volumes between major fuel suppliers and independent distributors something else. Under this option, a tanker could lift product from whoever posted the lowest terminal gate price at a particular terminal, assuming spare capacity was available and they met all the other minimum requirements (e.g. creditworthiness).

MBIE assessment of the Study’s recommendations

Further study using different data types

79. MBIE considers there will always be significant uncertainty as to whether fuel prices in New Zealand are reasonable or unreasonable no matter what type of study is undertaken. The best that can be achieved is a range of corroborating evidence using different data and methods. This might include the type of price-cost margin analysis advocated by the authors of the study, further analysis of company returns against an appropriate cost of capital (as was envisaged in the initial Terms of Reference for the Fuel Market Financial Performance Study), or benchmarking against other sectors or retail fuel markets internationally.
80. Any further study should, in MBIE’s view, be accompanied by information gathering powers to ensure full compliance by fuel suppliers. The proposed market study power for the Commerce Commission would be the most appropriate vehicle for this. The Commerce Commission would also be best placed to decide what type of data and methods are best suited to determine the reasonableness of prices and market competitiveness.

81. The key trade-off that would need to be weighed by the Commerce Commission is whether the potential insights that could be gained from the type of price-cost margin analysis being advocated by the Study's authors outweighs the very significant burden on fuel suppliers to provide a very large data set and the ongoing resources required to respond to the inevitable queries that arise.

Creation of a registry for the borrow and loan system

82. MBIE commissioned Hale & Twomey, an energy consultancy specialising in New Zealand's downstream fuel sector, to provide supplementary advice on how the national storage system and borrow and loan arrangements work and also to provide their views on the Study's recommendation of an independent registry. Hale & Twomey's report, titled *New Zealand Fuel Market Study, Supplementary Information on Shared Data*, is provided in Annex Seven.
83. The report provided by Hale & Twomey is comprehensive and highlights the inter-related nature of the refinery processing, shared storage, system wide supply and demand planning, stock holding and borrow and loan arrangements.
84. Having assessed these arrangements and how COLL aggregates data to limit visibility of each fuel supplier's forward market share, Hale & Twomey concluded the joint venture company is already providing an independent way for data to be collected and aggregated, albeit COLL is owned by the fuel suppliers. If there was concern about COLL's independence and protection of fuel supplier data (particularly forward-looking data) this could be managed via periodic audit or an annual assurance process to Government.
85. In conclusion, Hale & Twomey found the shared storage arrangement provides an efficient solution for shipping of product from Marsden Point refinery to the coastal ports and for imports and that fuel suppliers are using COLL to collect detailed data. This conclusion is consistent with previous economists' findings on how the system works. This data is then used by COLL to manage supply of products to the ports, with COLL aggregating data to limit the visibility of individual fuel supplier information provided back to fuel suppliers. Hale & Twomey found that generally the level of data sharing is appropriate, including for Wiri.
86. Hale & Twomey also corroborated the position put forward in submissions by fuel suppliers that market share information is available to them through other sources.
87. Hale & Twomey also identified three potential options to restrict data in certain circumstances, although in each case the option was couched with a caveat that the option was likely to be unnecessary.
88. If the main point of creating a registry is to limit the visibility of the respective market shares of each user, then this measure, on its own would not achieve the desired outcome. Each fuel supplier and Hale & Twomey argued that the existing arrangements provided New Zealand with an efficient way of managing shipping of petroleum product from Marsden Point refinery and imports to coastal ports around New Zealand.
89. In short, this recommendation seems to offer little in the way of benefits (users can get market share data through other sources) but many potential costs (increasing costs, increasing the likelihood of disputes between fuel suppliers, potential implications around security of supply, undermining what all parties agree is an efficient system for shipping product from the refinery and imports to coastal terminals).
90. MBIE does not recommend pursuing this recommendation.

Creation of a liquid wholesale market

91. MBIE also commissioned Hale & Twomey to undertake a literature review of wholesale market interventions in other markets. A copy of their report titled: *New Zealand Fuel Market Study, Supplementary Information on Wholesale Markets*, is provided in Annex Eight.

92. Some of the main findings from this report are that:

- Hale & Twomey was unable to identify any liquid wholesale markets where wholesale suppliers and buyers contract through a market or trading platform on a daily basis, in a similar way that major commodity markets operate, or local markets such as the New Zealand electricity sector;
- In most cases regulatory interventions in wholesale markets have occurred as a result of merger and acquisition activity where the regulator has imposed interventions to minimise the impacts of the transaction on competition at the wholesale level;
- Australia is probably the market of most interest to New Zealand. The Australian Oilcode entitles a party to purchase a minimum quantity of fuel (30,000 litres) at the Terminal Gate Price (TGP) set by the terminal owner/wholesaler. Provided the party meets certain criteria (including creditworthiness), the supplier cannot unreasonably refuse to supply. The TGP is the published price at which an independent purchaser can expect to buy a minimum quantity of fuel in a road tanker at each terminal facility. The TGP operates effectively as a spot price for small volumes. In case of dispute, the Minister must appoint a dispute resolution adviser to advise the Minister on dispute resolution. There is an obligation on both the complainant and the wholesale supplier to provide the dispute resolution adviser with information. However, the dispute resolution adviser can only make a non-binding determination. Actual sales volumes at TGP prices are minimal but it does serve as a reference price for long-term wholesale volumes.
- The Australian Competition and Consumer Commission also requires that wholesale market participants are required to provide on a monthly basis the price at which they conclude wholesale sales. The ACCC tracks and publishes TGP's against month average wholesale prices as well as the notional cost to landed product at the relevant location.

93. Hale & Twomey was equivocal as to the effectiveness of the Australian Oilcode. The applicability and practicability of such a regime to New Zealand would require significant more work in light of New Zealand's shared storage arrangements. Questions about the ability to delineate a wholesale facility at a given location (who is the wholesaler?) as well as how obligations (e.g. posted prices) would be placed on wholesalers remained unanswered and would need to be considered in more depth.

MBIE assessment

94. In principle, MBIE agrees that one way to reduce barriers to entry and lift levels of competition is to make access to refined product easier for third parties.

95. However, MBIE is not in a current position to provide any strong recommendations as to the desirability of regulatory intervention in the wholesale market until there is a stronger case that retail fuel prices are unreasonable and the benefits of any regulatory intervention in the wholesale market outweighs the costs.

96. As well as the technical issues that would need to be carefully worked through in light of the shared storage arrangements, there are other criticisms of regulatory access regimes. These include:

- administrative complexity and uncertainty created by the long periods of time that are usually required to achieve final access decisions. This administrative complexity and the detailed economic analysis typically required in access issues means that access regimes are usually administered and overseen by a specialist competition regulator (as is the case for New Zealand's telecommunications access regime under the Telecommunications Act 2001); and
- access regimes tend to apply a very high threshold for access seekers to meet prior to access being granted. This often reflects the impact that access regimes can have on

private property rights. It also reflects a desire that these rights should not be disturbed lightly so as to not inappropriately undermine the incentives for infrastructure investment.

Possible next steps

97. MBIE considers that raising the level of competition would deliver better outcomes for consumers. The most significant and sustained drop in industry margins since the deregulation of the oil market in 1988 occurred in 1998 following the entry of Challenge and Gull into the market.
98. The two principal ways to increase competition are increasing the level of market transparency and reducing barriers to entry, both at the wholesale level and at the retail level. MBIE considers the options to increase market transparency to be helpful, but ultimately ineffectual because it will not change the market structure. It is also unlikely to change the incentives sufficiently to alter market conduct and performance based on the experience in recent years. Options to reduce barriers to entry are potentially more effective, but involve significantly greater risk
99. In this context, MBIE considers there to be three broad options, each of which is discussed in more detail below. The first is for the Government to continue its high level monitoring function and let the market continue in its current deregulated form. The second involves further scrutiny of the sector, backed up by information gathering powers, with the clear threat of potential regulatory intervention in the future. The third option would be for some form of direct Government intervention, such as s 9(2)(f)(iv)

Option 1: Let the market play itself out

100. The argument put forward by fuel suppliers is that the downstream fuel sector is a well-functioning market, with competition more intense in some regions than others. Levels of competition have increased over the past five years as the number of independent and distributor retail sites has increased, while the number of branded sites of the major fuel suppliers has decreased.
101. Many of these independent distributors have access to these shared storage arrangements through long-term contracts with one of the major fuel suppliers (e.g. Waitomo Petroleum and Allied Petroleum with Mobil). In principle, there is nothing preventing these independent distributors from continuing to expand their retail footprint nationwide, thereby offering a lower cost, low frills option for consumers. The exception to date has been Gull who has been unable to obtain long-term access to the shared storage system on commercially acceptable terms.
102. With a greater range of retail offerings, there is a wider spread in retail prices, particularly north of Wellington. This has led to the emergence of crowd-sourced apps like Gaspy¹¹ which allow consumers to find the lowest cost fuel in their vicinity.
103. As a result of this changing market dynamic, the growth in fuel margins has flattened since 2015 after rising at a much faster rate between 2010 and 2015. It is possible that margins may even decline should the recent trend of independent distributors growing their retail footprint continue and spread out over the rest of the country, while that of the major fuel suppliers continues to decline.

¹¹ <https://gaspy.nz/>.

MBIE margin monitoring has been a long-standing non-regulatory intervention but is not effective at providing a check on retail margins

104. The Government's role since the market was deregulated in 1988 has been to provide increasing levels of transparency and granularity around importer margins, alongside periodic reviews of the sector, as a way of providing a light-handed check on industry behaviour. MBIE recommends continuing with its current importer margin monitoring but questions its effectiveness at providing a check on industry margins (margins have risen steadily since 2008 since the last major public review was undertaken).
105. There is also little scope to improve the accuracy of MBIE's margin monitoring without legislative change to require companies to provide their in-house data on a weekly basis. This is because fuel suppliers only provide the volume and level of discounts to Statistics NZ at the end of each quarter. Once Statistics NZ has made adjustments to the price board data they collect from a broad sample of service stations on a weekly basis, this data is published on the Stats NZ website. MBIE relies on this data to adjust its provisional estimates of discounts.
106. This means that the existing criticisms of the accuracy of MBIE's margin monitoring will remain. Specifically:
 - Differences between provisional and final discounts. Typically these are in the order of one to two cents per litre but there have been three quarters since September 2015 where there has been a difference of more than three cents per litre between the estimated and final discounts; and
 - any significant intra quarter swings in the level of discounting will not be picked up as MBIE will apply the average level of discount for that quarter on a weekly basis.
107. MBIE's current margin monitoring is robust over time but needs to be treated with a degree of caution when comparing margins from one week to the next.
108. MBIE does not recommend legislating to obtain more accurate margin monitoring as it considers margin monitoring, on its own, to be relatively ineffective at providing a check on industry returns. We do not consider that relying on industry participants to voluntarily provide data is feasible given the need for all fuel suppliers to cooperate.
109. Although margins have risen significantly despite the presence of this disclosure, MBIE continues to see benefit in this margin monitoring to maintain some public pressure on fuel suppliers and to inform MBIE's regulatory role.

Overall assessment of the option of letting the market play itself out

110. This option is the least disruptive to industry and offers no downside risk in terms of upsetting current industry arrangements. Furthermore, there are no risks of disincentivising future investment, creating additional costs that would need to be passed on to consumers or potential risks around security of supply.
111. The downside to this option is that it may simply allow margins to stabilise at what is by international standards a high level. Some of the independent distributors spoken to during the course of the Fuel Market Financial Performance Study commented that they may discount steeply for a short period when new sites are opened to gain custom. However, they typically see themselves as price takers rather than price setters and will look to one of the major brands as an indication of where the market is going. This suggests a stabilisation of margin levels, rather than any significant decline, is the more likely scenario.
112. There is also the additional risk that the new owners of Gull will adopt a different pricing approach to the maverick roll that Gull has historically played.

Option 2: pursue further analysis which may lead to regulatory intervention in future

A market study led by the Commerce Commission is the preferred next step but is not a quick fix

113. Prior to the former Minister of Energy & Resources initiating the MBIE-led Fuel Market Financial Study, MBIE's position was that a formal market study, backed up by information gathering powers and led by the Commerce Commission would be a worthwhile first step.
114. On 6 June 2017, Cabinet agreed that Part 1 of the Commerce Act be amended so that the Minister of Commerce and Consumer Affairs can direct the Commerce Commission to undertake market studies (Cab-17-Min-0320 refers). Officials are currently proposing a timeframe for the Commerce Amendment Bill that would see an exposure draft released in 1Q2018, and introduction occurring by the end of June 2018, with enactment by June 2019. This timeframe has not yet been discussed with the Minister of Commerce and Consumer Affairs.
115. The Bill has been substantively drafted, and the timeframe could potentially be brought forward if the Bill was given a higher priority on the Government's legislative programme. The Commerce Amendment Bill currently has a category 6 priority on the 2017 Legislation Programme.
116. Assuming enactment by June 2019, the earliest a potential market study into the downstream fuel sector could be completed is likely to be mid-2020.

An inquiry under the Inquiries Act 2013 is a feasible option

117. A market study could also potentially be undertaken as an inquiry under the Inquiries Act 2013. The Inquiries Act 2013 provides for public or ministerial inquiries for the purpose of investigating and reporting on any matter of public importance. The Act allows for ad hoc taskforces to be set up to look into market competition and related issues. Section 20 of the Act provides for information gathering powers for inquiries.
118. The estimated costs of a government inquiry are in the order of \$1.5 million to \$2 million, and could be met either through existing MBIE baselines or a dedicated budget appropriation. MBIE advises that funding a government inquiry under existing baselines would remove a significant amount of flexibility and capability to respond to any other energy policy issues that may arise through to 2020/21. It is likely that MBIE will be called upon to respond to other energy policy issues in this period.
119. MBIE's strong preference is therefore that any inquiry into fuel markets, should this be the government's preferred option, be funded through a dedicated budget appropriation.


A market study might lead to regulatory intervention in the future

120. The outcomes from a market study are unlikely to be definitive. The best that can be hoped for is a range of supporting evidence as to what has driven recent margin increases, a range of comparator metrics against which margins and returns can be compared (which will provide a point of comparison to help make a judgement as to the reasonableness of margins and returns) and a better insight into the costs and benefits of any potential remedial action.
121. Should a market study find sufficient supporting evidence that retail fuel prices are unreasonable then possible regulatory interventions could be considered at that point. At the request of the former Minister of Energy and Resources, Hon. Simon Bridges, MBIE has put forward, without recommending, a number of possible regulatory interventions¹².

¹² *Options to increase competition in downstream oil markets*, 27 October 2016.

These include:

s 9(2)(f)(iv)



122. Each of these options would require legislative change and result in varying degrees of disruption, and associated risks, to current industry practices.

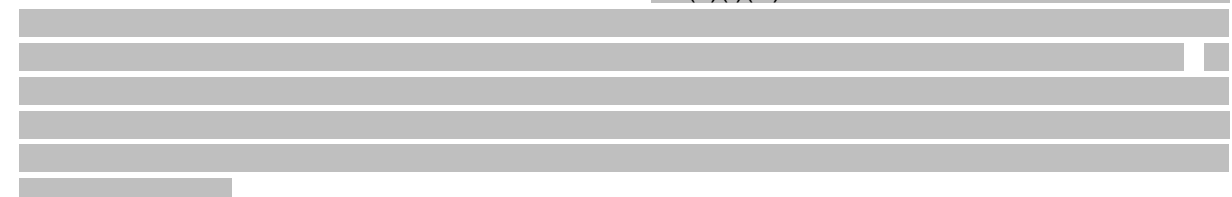
Overall assessment of further analysis

123. A market study led by the Commerce Commission, with the potential for further regulatory intervention down the track, is likely to be lengthy, costly, litigious, very burdensome both in terms of internal resourcing requirements and costs to fuel suppliers, and for a result that is highly uncertain. Were the market study to result in the government deciding on some form of legislative intervention to promote greater levels of competition in the sector, then this would push the timeframes out to the early 2020s at the earliest before any structural change occurred.


124. These costs (not the least of which are the extended timeframes) and risks need to be weighed against the potential materiality of the wealth transfer from consumers to fuel suppliers. The risks of doing nothing with pre-tax premium petrol prices now the highest in the OECD seems far more unsatisfactory. As noted, the potential wealth transfer from consumers to fuel suppliers since 2008 is likely measured in the hundreds of millions of dollars per annum.

Option 3: direct government intervention


125. Another option for the government to consider is some form of direct market intervention. In the downstream fuel sector, this could involve s 9(2)(f)(iv)



126. s 9(2)(f)(iv)



127. s 9(2)(f)(iv)



128. s 9(2)(f)(iv)

[Redacted]

MBIE assessment of direct government intervention

129. s 9(2)(f)(iv)

[Redacted]

130. s 9(2)(f)(iv)

[Redacted]

Conclusions

131. MBIE agrees with the central conclusion of the authors of the Study that they cannot say with any certainty that fuel prices in New Zealand are reasonable, but we have reason to believe that they might not be. Evidence to support this view includes:

- New Zealand’s move to becoming the most expensive country in the OECD for premium petrol on a pre-tax basis over the last nine years;
- the substantial growth in retail petrol and diesel margins;
- margin growth has only occurred in the retail business, while margins in other business units (aviation, bitumen, commercial, marine) have either been flat or declining;
- margin growth has occurred faster in Wellington and the South Island than compared in the rest of the North Island (raising questions over the intensity of competition in Wellington and the South Island);
- the growth in retail margins is not explained by capital expenditure.

132. MBIE notes that the rise in margins has been accompanied by changes in the market. The retail footprint of independent distributors is expanding both in terms of absolute number of sites and geographical spread, offering consumers in those areas where they operate a no frills, low cost option. This has seen the growth in retail margins flatten since 2015 after a much sharper rise in margins from 2010 to 2015.

133. Notwithstanding these market changes, retail margins remain high, certainly when compared to international benchmarks.

134. MBIE remains of the view that a market study led by the Commerce Commission and accompanied by information gathering powers remains the appropriate next step. MBIE considers it premature to provide any strong recommendations on potential regulatory intervention or direct government intervention until such time that a market study has been undertaken.

135. MBIE can continue its monitoring function of the market while the Commerce Act is being amended to give the Commerce Commission a market studies power. Where improvements to our margin monitoring are possible (e.g. around the quantum of the quality premium that is one of the inputs into the importer cost) then we can do this. We can also provide periodic updates on how the market is continuing to develop and the extent to which independent distributors and Gull are continuing to expand their retail operations.

136. MBIE could also potentially undertake further examination of potential regulatory interventions, e.g. s 9(2)(f)(iv) ahead of a future examination of the sector. Although the specifics of any intervention would need to be informed by the results of any future market examination, MBIE could reduce the lead time needed for this policy analysis and development by undertaking some work now into the requirements and limitations of any intervention.

Annexes

Annex One: Previous fuel sector studies

Annex Two: Methods for calculating pre-tax premium petrol prices in the OECD

Annex Three: Submission from BP Oil New Zealand Limited

Annex Four: Submission from Gull New Zealand Limited

Annex Five: Submission from Mobil Oil New Zealand Limited

Annex Six: Submission from Z Energy

Annex Seven: Hale & Twomey report: *Supplementary Information on Shared Data*

Annex Eight: Hale & Twomey report: *Supplementary Information on Wholesale Markets*

Annex 1: Previous fuel sector studies

Study	Date	Conclusions
NZIER: Issues in Oil Sector Deregulation	1989	<p>New Zealand has relatively low petrol prices compared to other OECD countries. The margin between landed price and pump price in New Zealand is, however, one of the largest in the OECD and has increased in the ten years to 1987. Without access to data, the authors could not identify the cause of this increase. Changes expected to occur due to deregulation were:</p> <ul style="list-style-type: none"> • Intensified competition and periodic “price wars” in urban areas • Differences in regional prices, reflecting transport costs • Fewer, larger retail outlets, selling groceries and other goods • Relocation of sites away from high cost inner city sites • Wholesalers acquiring retail operations to secure market share • Continued niche markets for smaller urban and rural outlets. <p>The threat of new entrants was important to restrain excessive profits. The chief obstacle to new entrants was securing sufficient market share to make imports of refined products economic. Allowing new entrants access to existing facilities on a common carrier basis would reduce the risks new entrants face.</p>
NZIER: Petrol Prices	1996	<p>After deregulation, petrol prices in New Zealand fell relative to other OECD countries. However, since 1993, they have risen. Oil companies are shielded by import barriers, including port facilities and access to infrastructure. Imposing open access at bottlenecks is one way to reduce these barriers.</p>
ACIL: Barriers to entry to the New Zealand Downstream Oil Market	1997	<p>Entry is never costless and takes time and resources. The costs of entry are not a barrier to entry. A true barrier to entry is a persistent or long-run cost advantage that incumbents have over potential new entrants.</p> <p>In New Zealand, there are no regulatory or institutional barriers to entry. Regulations like the RMA and health and safety apply equally to new entrants and incumbents.</p> <p>ACIL could not identify any long-run cost barriers to entry. “The only limiting issue is whether entry is commercially viable”, which is not a barrier to entry as ACIL have defined it.</p> <p>Strategic pricing behaviour to deter new entrants can only be sustained if other barriers to entry are present (i.e. incumbents must have an underlying cost advantage).</p> <p>Any attempt by the government to break-down horizontal arrangements would be expected to increase costs to motorists.</p>
Hale & Twomey Report to MBIE: Review into the 2007 ACCC report into Australian petrol prices and applicability to the New Zealand petrol market.	2008	<p>In 2008 the then Ministry of Economic Development conducted a review into the factors impacting on the competitiveness of the New Zealand petrol market. This included an assessment by Hale & Twomey of the applicability of an Australian market review to the New Zealand market.</p> <p>Hale and Twomey concluded that:</p> <ul style="list-style-type: none"> • The New Zealand petrol market is fundamentally competitive • Retail petrol prices are not fast to rise and slow to fall • Price rises during 2008 were mainly due to increases in the international crude oil price • A Fuel watch scheme like Australia’s would not benefit consumers, because our market works differently • More transparency about the makeup of importer margins and a move to report daily margin movements would be useful for consumers.

Study	Date	Conclusions
MBIE Report to Minister of Energy and Resources	2013	<p>Recent increases in margin are explainable by increases in costs, investment and shareholders seeking higher returns.</p> <p>The market is competitive. There is no evidence of coordination between oil companies.</p> <p>Z has changed its pricing strategy and is seeking higher returns.</p>
MBIE Report to Minister of Energy and Resources	2015	<p>Petrol and diesel importer margins have increased since 2008 and are now at levels last seen before Challenge and Gull entered the market in 1998.</p> <p>Despite the increase in margins, profits do not appear to be excessive.</p> <p>Report discussed, but did not recommend, intervention options.</p> <p>Suggest that the Minister write to suppliers indicating his intention to undertake a financial performance study.</p>
Commerce Commission Clearance of Z Energy's acquisition of Chevron's New Zealand business	2016	<p>The clearance was undertaken with the context of specific provisions of the Commerce Act. The Commission was not required to assess whether prices were too high or whether profits were excessive. Rather, it was required to determine whether the proposed transaction would "substantially lessen competition", compared to the counterfactual of the transaction not proceeding.</p> <p>The Commission concluded that provided Z Energy divested 19 retail sites and a truck stop, it would approve the transaction.</p> <p>One Commissioner considered that there was evidence of coordination between the major oil companies. She noted that Z Energy had changed the pricing strategy that Shell had operated under about a year after acquiring Shell's business. This had the effect of increasing retail prices and returns.</p> <p>All the Commissioners acknowledged that the possibility of coordination existing in the lower North Island and the South. However, the majority of the Commissioners decided that the sale of Chevron's business was unlikely to remove an important obstacle to coordination.</p>
MBIE Report to the Minister of Energy and Resources	2016	<p>MBIE observes that margins in New Zealand have been steadily increasing and that industry returns appear to be well above normal levels. In the absence of the ability to require oil companies to provide data on a consistent basis, no definitive conclusions can be reached.</p> <p>A market study is recommended.</p> <p>The report addresses, but does not recommend, a number of regulatory interventions that could increase competition and reduce prices.</p>

Source: New Zealand Fuel Market Financial Performance Study, pp 24-25

Annex 2: Methods for calculating pre-tax premium petrol prices in the OECD

Country	Summary	Detailed description	Discounts to pump prices factored in (e.g. loyalty cards etc)?	Volume weighted
Australia	Volume weighted average based on 8 State/Territory capitals	Prices are derived by the Department of the Environment and Energy based on a quarterly report commissioned to the Australian Institute of Petroleum (who in turn obtain it from Motormouth), which contains monthly average retail end-use fuel prices in the eight Australian state/territory capital cities. These cities accounted for 66% of Australia's total population, according to the Australian Bureau of Statistics (ABS) 2014 publication. A national weighted average price for each product is calculated using the monthly state prices from the AIP report and monthly state-level sales data from the DEE's petroleum statistics.	No	Yes
Austria	Volume weighted average	Prices are derived from a weekly survey of pump prices, conducted in filling stations throughout the country every Monday by the Austrian Petroleum Industry Association. The prices collected in this survey are then consumption weighted to produce a weekly national average, which is then used to produce quarterly prices as the simple arithmetical average of the weekly prices.	No	Yes
Belgium	Maximum price average	Oil product prices in Belgium are subject to maximum pump prices, calculated by the Federal Public Service for Economy, Small and medium-sized enterprises, Self-Employed and Energy (FPS Economy) on a daily basis. Actual price levels in the country are close to these maxima. In 2015, retail prices for transport fuels were, on average, 0.07 Euro/litre below the maxima.	No	No
Canada	Arithmetical average of of the monthly average national prices.	Calculated as the simple arithmetical average of the monthly average national prices as reported on the Natural Resources Canada website. NRCan gets its data in the Daily Pump Price Survey in Canada, commissioned by the Government of Canada to the Kent Group	No	No
Chile	Only metropolitan areas. Based on average end-use prices at filling stations	Prices calculated by the Ministry of Energy based on average end-use prices at filling stations published in the National Energy Commission's monthly Precio Mensual Regional de Combustibles report.	No	No
Czech Republic	Volume weighted average	Oil product prices are collected based on prices and quantities sold by a network of respondents throughout the Czech Republic.	No	Yes
Denmark	Volume weighted average. Discounts removed. Prices provided by main companies.	Average of the daily prices. Monthly ex-tax prices for oil products are collected by the Danish Competition and Consumer Authority (KFST) every quarter from the five largest companies in the retail and wholesale markets. For petrol, companies report their sales volumes and their effective average ex-tax prices, and the effective discounts from their list prices. The average ex-tax prices are calculated as volume-weighted averages of the data submitted by the companies. End-use prices are calculated by adding the applicable taxes to the ex-tax prices.	Yes	Yes
Estonia	Arithmetical average of a weekly average price.	Derived from data published in the European Commission's <i>Weekly Oil Bulletin</i> , which reports weekly ex-tax and ex-use prices for a series of oil products in all EU countries. Quarterly and annual figures are calculated as arithmetical averages of the weekly data.	No	No

Finland	Volume weighted average	End use prices are based on retail prices in six Finnish cities (Helsinki, Mikkeli, Oulu, Rovaniemi, Seinäjoki, Turku), surveyed by the Finnish Petroleum and Biofuels Association on the 15th of each month. National average prices are produced as consumption weighted averages of the prices in each of these cities. Prices are weighted by the annual sales volumes in each city and the market shares of oil product sales.	No	Yes
France	Arithmetical average of a weekly average price.	Oil product prices are derived from the European Commission's <i>Weekly Oil Bulletin</i> , which reports weekly ex-tax and end-use prices. Quarterly and annual figures are calculated as arithmetical averages of the weekly data.	No	No
Germany	Average pump price calculated as weighted average of full-service and self-service pump prices.	Prices refer to the monthly average of the quarter. Prices are the average pump price for premium gasoline marketed by all German refiners and is the weighted average of full-service and self-service pump prices.	No	No
Greece	Arithmetical average of the three months in the quarter	End-use prices are based on weekly reports of the National Observatory for Prices, which are averaged by the Ministry of Environment and Energy.	No	No
Hungary	Volume weighted average.	Oil product prices are based on periodical surveys covering the largest fuel providers in the country. In the surveys, companies report revenues related to fuel sales and total sales volumes. Ex-tax prices are calculated as the ratio of the sum of revenues from fuel sales and the total volumes sold. The company surveys used to calculate the data are estimated to cover around 82-85% of gasoline sales.	Yes	Yes
Ireland	Mid-month prices averaged over a quarter.	End-use prices refer to the retail pump prices displayed at the filling stations, including all taxes. They are calculated as arithmetic averages of the weekly prices published at www.pumps.ie , a website where customers input prices seen at fuel stations around Ireland. It is updated by consumers on a continuous basis.	No	No
Italy	Volume weighted average	End-use and ex-tax prices are collected by the Ministry of Economic Development through a weekly survey of the ten largest oil companies in the country and a selection of fuel traders, independent operators and around thirty supermarkets with fuel selling facilities. Companies report their weekly weighted average prices based on sales volumes recorded for different modes of self-service.	Yes	Yes
Japan	Arithmetical average of a weekly average price.	Prices are derived from a weekly Ministry of Economy, Trade and Industry survey of approximately 2,000 filling stations throughout Japan. Quarterly and annual prices are calculated as arithmetical averages of the weekly data.	No	No
South Korea	Arithmetical average of actual daily prices paid.	End use prices are collected using an electronic reporting system known as VAN (value added network). Around 94% of the country's filling stations report their credit card transaction data through this system. After sorting and validation, the data are transmitted to the Korea National Oil Company's servers. The rest of the country's filling stations use other data transmission methods such as the Automatic Response System and a direct input to the KNOC's website. Price data transmission to the KNOC, a public company, is an obligation for all oil product sellers under Korea's Oil Act. There, average end-use prices include all oil product sellers in the country and are highly representative. Ex-tax prices are subsequently derived by KNOC.	Yes	No
Latvia	Arithmetical average of a weekly average price.	Derived from data published in the European Commission's <i>Weekly Oil Bulletin</i> , which reports weekly ex-tax and ex-use prices for a series of oil products in all EU countries. Quarterly and annual figures are calculated as arithmetical averages of the weekly data.	No	No

Luxembourg	Arithmetical average of monthly average price	Luxembourg maintains a maximum price-setting mechanism for oil products. In compliance with an agreement between the Luxembourgish State and the oil-importing companies, a maximum price is set for oil products sold to final consumers. The formula is based on the spot price of oil products, to which are added a standard cost of transport from Antwerp to Luxembourg, a standard distribution margin for the market actors, and the cost of compulsory storage. Companies are free to set prices below the maximum daily levels set by the Ministry of the Economy. End-use prices for oil products are collected through monthly consumer price surveys.	Yes	Effectively yes
Mexico	Arithmetical average of monthly average price	Maximum end-use prices are set every month by the Ministry of Finance and public credit. Differential prices are set for the area close to the border with the United States. The Secretariat of Energy receives monthly end-use prices from the Energy Regulatory Commission and computes quarterly and annual data as arithmetical averages of the monthly data.	Yes (n/a)	Effectively yes
Netherlands	Arithmetical average of daily prices gathered from most self-service pumps.	End-use prices are the average of prices gathered from most filling stations in the country. Prices refer to self-service pumps.	No	No
New Zealand	Arithmetical average of weekly prices collected by Statistics NZ and which are reported quarterly	Quarterly prices are collected by Statistics NZ. Prices are net of discounts obtained through supermarkets and loyalty schemes.	Yes	No
Norway	Arithmetical average of (daily?) prices received on a monthly basis	End-use prices are based on electronic data received on a monthly basis from a representative population of distributors and producers.	Yes	No
Poland	Arithmetical average of prices	Ex-tax prices are derived from regular statistical surveys by the Energy Market Agency (ARE) covering practically 100% of consumption. Prices refer to pump prices at filling stations owned by the major distributors.	No	No
Portugal	Volume weighted average	End-use prices are based on retail prices reported by about 3,000 filling stations throughout Portugal, available at www.precombustibles.dgeg.pt . Filling stations are required to report changes in prices to the Directorate General for Energy and Geology before implementation. Prices are automatically calculated on a daily basis by DGEG using sales data for the previous year, as well as information on discounts applied to fuel sales, to produce a national average price.	Yes	Yes (one year lag)
Slovak Repub	Arithmetic average of daily prices reported on a monthly basis and covering approximately 69% of the market.	End-use prices are computed by the Ministry of Economy of the Slovak Republic based on monthly data submitted by Slovnaft, estimated to have a 69% petrol market share as of March 2017.	Yes	No (but covers 69% of demand)
Slovenia	Arithmetic average of regulated and non-regulated prices	Price formation mechanisms are a combination of market prices and regulated prices. Petrol sold at filling stations on motorways are subject to market pricing, while sales on all other roads are still regulated through decrees which establish maximum prices for fourteen days after publication	No	No
Spain	Arithmetic average of weekly prices.	Derived from data published in the European Commission's <i>Weekly Oil Bulletin</i> , which reports weekly ex-tax and ex-use prices for a series of oil products in all EU countries. Quarterly and annual figures are calculated as arithmetical averages of the weekly data.	No	No
Sweden	Volume weighted average	Prices are derived from a survey of companies that report ex-tax prices, prices including energy taxes and sales volumes. Average prices are then calculated as volume-weighted averages of the reported prices.	Yes	Yes
Switzerland	Arithmetic average of monthly prices	Ex-tax prices are collected by the Swiss Federal Statistical Office through monthly surveys to the only refinery in Switzerland and a sample of the most important fuel importers. Respondents report the prices charged to final consumers, excluding VAT and Excise taxes.	Yes	No

Turkey	Arithmetic average of monthly prices	Prices are calculated by the the reporting institution based on data from the Energy Market Regulatory Authority. Data refer to prices in Ankara. Filling stations report changes in end-use prices for oil products to EMRA through an internet portal. Ex-tax prices are calculated by subtracting the applicable tax components from the end-use prices. Due to its central location in the country, prices in Ankara are considered to be similar to prices found in other cities and therefore representative of the whole country.	Yes	No
United Kingdom	Volume weigtghted average of the three mid-month prices and annual demand data.	Prices are based on monthly surveys carried out among major oil product suppliers. In these surveys, compnaies report their average selling prices. Reported prices are weighted by annual sales volumes to produce average end-use prices.	Yes	Yes
United States	Arithmetic average of prices.	Prices refer to the city retail price, average of full, mini and self service stations. Data are collected by the DOE/EIAusing Form EIA-878, <i>Motor Gasoline Price Survey</i> among 1200 sample units. Data are published in the DOE/EIA's <i>Monthly Energy Review</i> , table "Motor Gasoline Retail Prices, US City Average", and <i>Weekly Petroleum Status Report</i> , table "US Retail Motor Gasoline and On-Highway Diesel Fuel Prices".	No	No

Source: International Energy Agency, *Energy Prices and Taxes: Country Notes (3rd Quarter 2017)*.

Annex 3: Submission from BP Oil New Zealand Limited

CONFIDENTIAL



Friday 13 October 2017

Office of Hon Judith Collins
Minister for Energy and Resources
Private Bag 18041
Wellington 6160

BP Oil New Zealand Limited
73 Remuera Road
Remuera
Auckland 1050
PO Box 99873
Newmarket
Auckland 1149

c/o s 9(2)(a)

Via email: s 9(2)(a) @mbie.govt.nz
s 9(2)(a) @parliament.govt.nz

Dear Minister Collins,

BP appreciates the opportunity to respond to the tentative conclusions of the Fuel Market Financial Performance Study by Cognitus, Grant Thornton and NZIER to MBIE dated 29 May 2017 (Report), and in particular to clarify and provide a view on the two "recommendations" identified:

1. The creation of a registry for the Borrow and Loan system that limits the visibility of other participant's market shares; and
2. The creation of a liquid wholesale market.

BP has confined its response to the matters set out in David Buckrell's request dated 20 July 2017 and reserves its position on the balance of the Report.

BP does not believe it is necessary to create a registry for the Borrow and Loan system or to create a liquid wholesale market. In any event, BP does not believe that either of the recommendations posed, if implemented, would have any impact on retail pricing and may in fact increase costs and complexity which could result in increased costs having to be passed on to end customers.

1.0 The creation of a registry for the Borrow and Loan system that limits the visibility of other participant's market shares

The authors of the Report acknowledge that they only had a limited ability to inquire into the specifics of the B&L arrangements¹ however BP is aware of a subsequent request made by MBIE of Hale & Twomey to further assess how the Borrow and Loan system works and to review and assess corresponding use of data.

¹ Pages vi and 74 of the Report

Against that background, the Report states that the “majors share terminal facilities under their Borrow and Loan (B&L) arrangement, through which we understand that they share information allowing them to monitor each other’s market shares” and “such information sharing is often a cause for concern ... because it might help to support coordination among firms leading to higher prices”.² The Report suggests that through the B&L system the majors gain visibility regarding regional market shares of their fellow majors and independents.

The Report further suggests that it would be simple to set up a registry where participants exchange volume data through an external party to ensure they only receive the information they require and not full visibility of competitor market shares.

Contrary to the assumptions in the Report referred to above, the B&L system has not been established as a means for the majors to share information allowing them to monitor each other’s market shares.

Under the Borrow and Loan system, participants’ product may be discharged into another participant’s tanks and, at that time, product custody and risk transfer but not title. **s 9(2)(b)(ii)**

[Redacted]

[Redacted] Coastal Oil Logistics Limited (“COLL”), an incorporated joint venture, independently accounts for the “Borrowing” and “Lending” transactions and balances.

s 9(2)(b)(ii)
[Redacted]

Moreover, the information BP has visibility of through the B&L system has no impact on how BP sets its wholesale prices or its retail pricing for its company-owned, company-operated sites other than through application of the direct costs BP incurs through the process itself. BP’s independent pricing decisions are primarily cost-based. Additional inputs include information obtained from

² Pages vi and 74 of the Report

publicly available sources and observation-based monitoring, balanced with the need to be trade-competitive.

The Report itself acknowledges that the B&L system creates certain logistical efficiencies for the operation of Refining NZ, coastal shipping, and terminaling (e.g. enabling Refining NZ and coastal distribution to be operated at high capacity utilisation, and avoiding each major firm needing to replicate the fixed costs of terminaling).³ The Report accepts that these benefits are real and substantial.⁴ BP endorses these findings.

It is worth noting that the Commerce Commission considered the dynamics of the B&L system as a whole as part of its review of the application for clearance by Z Energy Limited to acquire the shares of Chevron New Zealand. In its determination dated 29 April 2016, the Commission referred to the B&L system⁵, but did not identify any competition issues with that system that would substantially lessen competition in any market.

The Report seeks to argue that there is a link between information sharing under the B&L system and coordination among firms leading to higher prices, and refers to the Commission's determination in support of this proposition.⁶ However, the Commission in fact found that there was no clear evidence of coordination in local markets and that, even on the most "adverse" interpretation of the evidence before it, the evidence pointing towards coordination was not strong or unambiguous.⁷

For these reasons, BP does not see merit in setting up a B&L registry, as proposed. As contemplated in the Minister's Cabinet Paper, the high transaction costs involved in intervening in the B&L system would outweigh the benefits.⁸

2.0 The creation of a liquid wholesale market

The Report notes that New Zealand lacks "liquid regional wholesale markets through which independent suppliers can reliably access fuels", which potentially limits the ability of "independent" suppliers to compete as they are reliant on being able to secure long-term supply

³ Page 61 of the Report, para. 5.4.1.

⁴ Page 61 of the Report, para. 5.4.1.

⁵ Commerce Commission's determination, at pages 27, 31 and elsewhere.

⁶ Eg page vi of the Report, at footnote 5.

⁷ Commerce Commission's determination, at [233-234].

⁸ Cabinet Paper from the Minister of Energy and Resources, "Report Back on the Fuel Market Financial Performance Study", paras. 37 and 58.

contracts from majors.⁹ The Report goes on to state that the possible creation of a liquid wholesale market, at least in selected regions, would address this concern.¹⁰

However, this view that independent suppliers are limited in their ability to compete through the absence of liquid regional wholesale markets is not borne out by the evidence. There are a growing number of examples of independents with different operating models acting very effectively as competitors in New Zealand, including Gull. A number of the distributors have entered the retail market in recent years and are able to compete effectively. Consistent with this, we understand that none of the independents spoken to by MBIE during the course of its inquiry cited the absence of a liquid wholesale market as an impediment to competing with the majors that supply them.¹¹

A liquid wholesale market is by definition a market in which it is possible to buy or sell a desired commodity quickly without causing a significant change in its price and without incurring significant transaction costs.¹² BP would query whether these liquidity characteristics could be satisfied in any potential wholesale fuel market in New Zealand. The largest and most liquid market in the world is the Forex (foreign exchange) market. Market liquidity is a matter of degree. The defining characteristic of a liquid market is that there are a large number of buyers and sellers who are ready and willing to trade. In liquid markets there is negligible trade-off between the speed of sale and the price obtained. That is, in a highly liquid market, it should not be necessary to reduce the price to sell an item quickly. In contrast, selling an item quickly in a "thin" or illiquid market would require reducing the price.¹³

While as noted above there are a growing number of examples of independents acting effectively as competitors in New Zealand, there will only ever be a limited number of purchasers of fuel products at the wholesale level who can then retail those products due to health and safety, resource management and other regulatory requirements. As a result of these regulatory requirements, it is questionable whether a wholesale fuel market could ever be sufficiently liquid. This would especially be the case if wholesale markets were sought to be introduced on a regional basis as contemplated by the Report.

⁹ Page 73 of the Report.

¹⁰ Page vii of the Report.

¹¹ Cabinet Paper from the Minister of Energy and Resources, "Report Back on the Fuel Market Financial Performance Study", para 35.

¹² UK Office of Gas and Electricity Markets, *Liquidity in the GB wholesale energy markets*, 8 June 2009 at 8.

¹³ UK Office of Gas and Electricity Markets, *Liquidity in the GB wholesale energy markets*, 8 June 2009 at 8.

As regards the requirements for establishing a wholesale market, the Report refers primarily to the development of the wholesale electricity market in New Zealand, stating:¹⁴

"The electricity industry process shows that there are alternatives to reform that are not based exclusively on legislation driven by central government. Especially relevant for the fuel sector was the development of the wholesale electricity market, which was led by a joint industry-government body, the Wholesale Electricity Market Development Group and, at least initially, was based on a series of multi-party contracts and agreements, rather than legislative codes."

However this understates the difficulties that were encountered by the electricity industry and Government in establishing the wholesale electricity market.

The relevant background on the electricity wholesale market was set out by the Commerce Commission in its Electricity Investigation Report dated 21 May 2009.¹⁵ It took the industry significant time and effort to introduce a voluntary market with rules developed by the participants in the period prior to and during 1996-2003 (including a requirement to obtain multiple authorisations for industry arrangements from the Commerce Commission). In 1993, the Government still had to establish the Electricity Commission and formally introduce the Electricity Governance Regulations 2003 and the Electricity Governance Rules to regulate the market. As recognised in the Report, the Electricity Industry Act 2010 then needed to be enacted to provide for the operation of the wholesale electricity market and to establish the Electricity Authority as the major industry-specific regulator of the electricity sector.¹⁶

Based on this experience with the wholesale electricity market, it is clear that the development of a wholesale fuel market would require a significant amount of time and effort. Following the electricity experience, at the very least it would involve the establishment of:

- a central body in charge of managing the market;
- a group of service providers to facilitate efficient trading in the market;
- a group of service providers to ensure the market can still operate in adverse conditions;
- a set of rules for market participants to abide by;
- a set of policies and standards to manage supply into the market;
- a set of processes to minimise barriers to entry into the market;

¹⁴ Page x and footnote 9, and page 88, of the Report.

¹⁵ <http://www.comcom.govt.nz/business-competition/enforcement-response-register-commerce/investigation-reports/>, at paras. 101-104.

¹⁶ Page 88 of the Report.

- a central list of market participants;
- a set of processes to calculate, and prove, who sold and who bought what.

The high costs involved in establishing a wholesale market in the fuel sector should therefore not be downplayed. There is a question as to whether these costs would be outweighed by any perceived benefits. BP does not consider this would be the case.

These issues aside, anecdotal evidence suggests that the efforts at establishing a wholesale electricity market (both on a voluntary and regulated basis) have not led to reduced electricity retail prices for consumers.

In any event, there is obviously a major practical difference between the electricity (and gas) industry and the fuel industry. Electricity is of course a generic product that, once generated (or produced), can be sold by generators/producers and purchased by retailers on wholesale spot and hedge markets. In contrast, with the fuel industry there are multiple different types of refined fuel products such as petrol, diesel, aviation fuel, marine fuel and bitumen which are not substitutable with one another.¹⁷ In addition, even petrol is differentiated between 91, 95 and 98 octane products. Any wholesale fuel market would therefore require mechanisms to deal with trading in multiple products, and all the complexities this would involve, rather than a single generic product such as electricity. So the reality is that multiple wholesale fuel markets would be required, as opposed to any single wholesale market.

In the Minister's Cabinet Paper, the Minister has referred to the range of potential interventions required to create a liquid wholesale market, ranging from forced divestment of terminal assets to increased price transparency.¹⁸ However, as recognised by the Report, "Overseas experience suggests that even the well-intended regulations can lead to perverse outcomes and unintended consequences".¹⁹ BP would endorse those concerns, taking into account the findings in overseas studies that divorce laws and increased price transparency perversely can in fact lead to increased retail prices.²⁰

¹⁷ Commerce Commission determination at [39]

¹⁸ Cabinet Paper from the Minister of Energy and Resources, "Report Back on the Fuel Market Financial Performance Study", para 61

¹⁹ Pages vi and 90 of the Report.

²⁰ Cabinet Paper from the Minister of Energy and Resources, "Report Back on the Fuel Market Financial Performance Study", para 64

Summary

As we have previously stated, we believe that the New Zealand market is competitive and we view the number of different operating models positively.

We believe we receive a fair return for the level of investment we undertake in our infrastructure, our people and our offer, and for the level of complexity of our own business operations. BP operates a complex business and has made significant investment in our network over many years, with s 9(2)(b)(i) in capital currently held in New Zealand. BP's view is that there are no barriers to competitors also investing in assets.

We note that the original purpose of the Fuel Market Study was to understand whether or not retail fuel prices in New Zealand are reasonable. The Report did not conclusively answer that question. BP is of the view that retail fuel prices in New Zealand are reasonable.

BP does not believe it is necessary to create a registry for the Borrow and Loan system or to create a liquid wholesale market. In any event, BP does not believe that either of the recommendations posed, if implemented, would have any impact on retail pricing and may in fact increase costs and complexity which could result in increased costs having to be passed on to end customers.

If you would like to discuss this feedback in the first instance please contact s 9(2)(a)

[Redacted]

Yours sincerely,

s 9(2)(a)

[Redacted]

Debi Boffa
Managing Director
BP Oil New Zealand Ltd

Annex 4: Submission from Gull New Zealand Limited

Submission by:

Gull New Zealand Limited



On the

Fuel Market Financial Performance Study

October 2017

Introduction

This submission responds to the study from Gull New Zealand's point of view and our experience. We believe it is a valid observation as a significant competitor in the market. The same challenges, logistics and terminal access applies to any market participant in the New Zealand fuel market.

Gull's simple observations are:

- There are at times 20 to 30 cent per litre differences in the price charged for petrol and diesel in some regions of New Zealand when compared to others.
- This is despite the cost to land product in New Zealand, pay port fees, pay taxes and store the fuel in a terminal being virtually identical across New Zealand.
- The cost to operate a retail site is dependent on location and model of business. This differs by site, but does not justify regional price difference referenced above.
- Broadly the areas where prices are significantly higher are across most of the South Island, the Wellington Region, towns and suburbs where Gull does not operate.
- Gull's model of business give a competitive price alternative to Kiwi motorists. This could be expanded into other areas with efficient access to hosting/product within those areas.

Areas of Feedback on the Study

The study requested feedback in three specific areas:

- Z Energy posting their Main Port Price
- The Creation of a Borrow and Loan Registry
- The Creation of a Liquid Wholesale Market for Fuels

Z Energy posting their Main Port Price

Z has addressed the matter of posting their Main Port Price and Gull has no comment in this area.

Creation of a Borrow and Loan Registry

The Borrow and Loan system operates between:

- Z Energy
- BP
- Mobil

Gull is not a member of the Borrow and Loan scheme – we do not fully understand it, how it operates or the benefits it gives members.

To Gull's knowledge these same three parties also:

- Have shareholding in Refining New Zealand
- Hold the only processing agreements with Refining New Zealand
- Are the only customers of Refining New Zealand
- Have sole use of the Refinery to Auckland Pipeline
- Joint commercial arrangement for shipping, terminal co-mingling of coastal and inland infrastructure.
- Own all the significant oil terminal assets in New Zealand (outside of Gull's single terminal)
 - This includes coastal terminals in 12 centres around New Zealand

The inclusion of Gull within this scheme can only enhance the benefits for the Kiwi motorists.

Creation of a Liquid Wholesale Market for Fuels

As noted by Gull, in our submission to the Commerce Commission regarding the Z Chevron Merger; if greater competition is wanted to ensure the best value for Kiwi motorists then access to fuel at import parity pricing plus a market based terminal margin is required.

Gull has evaluated, several times in the last 10 years options to build a terminal in the South Island and replicate our successful business model. The value proposition in the South Island is not as attractive as the North Island. If we did open a high capital cost supply chain solution in the South Island those costs would need to be recovered from motorists. Hence Gull has not opened for business in the South Island and our furthest south site is in Masterton in the North Island.

However Gull will continue to look for capital efficient solutions for a new southern supply chain for the Kiwi motorists.

The balance of this section of the submission reviews access to existing terminals and terminal charging.

Gull Fuel Supply and Hosting

Gull has issued multiple Fuels Supply and Hosting proposals to the Borrow and Loan members. The most recent of which was September 2017. So far we have been unsuccessful in receiving actionable offers that improve our offer to the customer.

Refinery to Auckland Pipeline Outage

In contrast to the above, during the recent Marsden Point Refinery to Auckland pipeline outage, Gull offered both storage and sale of product to the Borrow and Loan members who were affected by the failure of this pipeline. These offers were accepted by the counterparts.

Gull's offers in all these cases for storage or sale of product was we believe at or below a fair market price.

Terminal Access and Fees

Over the last 10 years Gull has at times had intermittent terminal access in the Wellington region.

This access has been short term and not substantial enough to base a Wellington retail entry for Gull. The confidential terminal fee charged to Gull has been reflective of a cost base to Gull that limits growth in this area relative to the already high cost of self-supply.

Gull understands the standard interchange fee amongst the Borrow and Loan members in New Zealand is close to 1 cent per litre. The consistent fee charged for Gull's access in Wellington is significantly greater than this figure.

Summary

Gull is seen as the maverick fuel operator in New Zealand, we are proud with this view. We look to be (and are) profitable by providing better value to Kiwi motorists for retail fuel.

Gull operates successfully in an area it can drive a truck to from our fuel terminal. In this area retail fuel prices have been significantly lower than in the balance of New Zealand for an extended period.

Gull's successful business model is allowing us to continue to grow in our current geographies. We will continue to look for efficient ways of extending our reach into new geographies. Therefore giving Kiwi motorists nationwide the price alternative.

Annex 5: Submission from Mobil Oil New Zealand Limited

Mobil Oil New Zealand Limited

Auckland Office
Building B, Level 2
8 Nugent Street
PO Box 1709, Auckland
Telephone: +649 302 4700



An ExxonMobil Brand

Mr s 9(2)(a)
s 9(2)(a)

Resource Markets Policy – Building, Resources & Markets Group
Ministry of Business, Innovation & Employment
PO Box 1473
Wellington 6034

13 September 2017

Dear Mr s 9(2)(a)

Re: Mobil Oil New Zealand response to Fuel Market Financial Performance Study

On behalf of Mobil Oil New Zealand Limited (Mobil) I would like to thank you for the opportunity to comment on the recommendations made in the financial performance study of the New Zealand fuels market recently conducted by the Ministry of Business, Innovation & Employment (MBIE). Our feedback is outlined below.

In our experience, New Zealand continues to be a very competitive petroleum market with three major fuel suppliers, a significant specialised retailer (Gull) and a host of minor fuel suppliers actively engaged in retailing fuels, along with two supermarket chains either involved in retailing fuel or participating in fuel loyalty programs. This is in addition to a highly competitive commercial and wholesale market for all products, including marine and aviation fuels, as well as road transport fuels.

The joint venture nature of the New Zealand fuel supply chain is somewhat unique, and works well to reliably supply a relatively low-volume, geographically dispersed market with a complex supply pattern. However, we do not agree with the premise that this joint venture nature results in any sort of anti-competitive behaviour or market dynamics that lead to higher retail margins, as alluded to in the Fuel Market Financial Study recommendations regarding the borrow and loan system and the wholesale fuels market.

Conversely, the joint venture nature of the New Zealand supply chain and current wholesale arrangements allow suppliers to minimise the infrastructure and associated costs of delivering a reliable supply of quality fuel to the unique New Zealand market, to the benefit of consumers. Any changes to these structures is very likely to impose additional costs on the industry and consumers.

We will be happy to engage further with MBIE to discuss how Mobil continues to fund ongoing and future investments that underpin our continued ability to provide high quality fuels to New Zealand, thereby supporting the ongoing competitiveness of the market.

Our responses to the two specific recommendations in the Fuel Market Financial Study report are below for your consideration.

Borrow and loan registry

The current borrow and loan system requires sharing of demand and inventory information between the Coastal Oil Logistics Limited (COLL) Joint Venture participants to:

- ensure there is an efficient supply chain – allowing participants to pool terminal assets - leading to lowest cost of supply to the market;
- maximise security of supply across every port across New Zealand; and
- fairly allocate port inventories during periods of low stock (due to either supply side or demand side variations to plan).

Changing how information is shared within the existing system would be complex and costly and could lead to unintended consequences such as higher costs of supply. Restructuring these arrangements is likely to lead to significant inefficiencies and associated cost increases in the supply of fuel to New Zealand. Without strong evidence to support the recommendation to change how borrow and loan data is shared Mobil does not support this recommendation.

Further, borrow and loan is a common practice employed in many countries across the world and New Zealand's borrow and loan arrangements have essentially been unchanged throughout the entire study period (2010-2017). This further supports the argument that the system is not a factor in the change in retail pricing dynamics that is perceived to have occurred in New Zealand during this time.

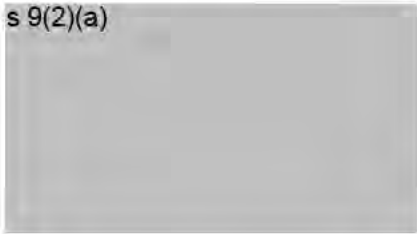
Liquid wholesale fuels market

Mobil's experience is that the wholesale market in New Zealand is highly competitive. The study itself supports this view, demonstrating that the wholesale price of fuel has been flat to declining over the study period. Any changes to the wholesale fuels market are unlikely to have any influence on reducing retail prices.

We welcome the opportunity to further discuss any of the information provided with you. Please contact Melanie Saliba, Public Affairs Adviser, on +61 467 801 719 or by email to melanie.m.saliba@exxonmobil.com if you would like more information or to arrange a meeting.

Yours sincerely

s 9(2)(a)



Andrew McNaught
Country Manager
Mobil Oil New Zealand Limited

Annex 6: Submission from Z Energy

13 October 2017

Hon Judith Collins
Energy Minister
Parliament Buildings
WELLINGTON

cc: s 9(2)(a) MBIE

Via email

Submission to MBIE on Fuel Market Performance Study

Dear Minister

The purpose of this letter is to provide a submission on NZIER's 3 July Fuel Market Financial Performance Study, as requested.

While our industry can at times be complex, Z welcomes transparency and will contribute to whatever process follows from here. I genuinely believe Z can demonstrate that this industry is highly competitive; that there are no material barriers to entry; and returns are fair and reasonable.

Regardless, consumers and the public need independent assurance on this matter.

Z has always been clear that running a successful transport energy business requires us to be sensitive to and equally cognisant of the interests and expectations of three main stakeholder groups: our customers, our stakeholders and our investors.

I fully expect that that you are similarly cognisant of your own stakeholder groups. We understand that the present inquiry into retail pricing is driven by your responsibility to those groups, particularly families for whom fuel is a material outgoing. Resolving any question in the minds of our mutual stakeholders around the operation of this industry is as important to us as it is to you.

We run a successful operation that literally powers the New Zealand economy and this is compromised if there continues to be fundamental unresolved questions or significant areas of dissatisfaction amongst any of these groups. All of these groups expect Z to safely and reliably manage a secure supply of transport fuels to the whole of the New Zealand economy, to compete vigorously through fuel prices and to generate a fair and reasonable return.

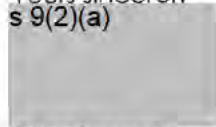
This short submission covers four key areas:

- As requested, the purpose of borrow and loan agreements with a cost / benefit analysis around intervention in current arrangements;
- As requested, a response to the recommendation to consider establishment of a liquid wholesale market;
- Z's request for MBIE to clarify whether certain aspects of Z's submissions were or were not taken into account in the Study and the reasons for this;
- Review of the current MBIE margin monitoring programme and OECD fuel pricing analysis with accompanying recommendations.

In our submission we make observations and comments about the industry. We wish to note that any points we make are solely informed by Z's experiences and analysis, and are not intended to be representative of an industry position. There is much in this submission that is highly commercially confidential and Z requests that it is please treated this way.

As always, please feel free to call me directly at any time if there is anything you want to discuss in relation to our business or this industry.

Yours sincerely
s 9(2)(a)



Mike Bennetts
Chief Executive

Section one: Borrow and Loan Registry – costs and benefits

One of the recommendations in the study was to consider the creation of an independent 'borrow and loan registry' in order to limit each participant's visibility of other participants' fuel market shares.

The Cabinet Paper, *Report back on the Fuel Market Financial Performance Study*, noted that it was unclear whether the industry borrow and loan arrangements provide information that would otherwise not be known to the participants. The Cabinet Paper also noted a lack of clarity about whether the costs of intervention in the system would outweigh any benefits.

Z confirms that:

- Borrow and loan arrangements are only one of a number of ways industry participants can have visibility of competitors' market shares. Assuming the closing down of this visibility is a benefit, a registry would not deliver it.
- Z fundamentally and completely disagrees with the underlying suggestion that visibility of competitor market share positions is in any way a mechanism through which to detect and punish competitors for failure to uphold supposed price coordination arrangements. This theory holds that breaches of 'coordinated arrangements' would show up as unstable market shares. The significant changes in market share over the last seven years, as outlined in Z's initial submission, highlight the fact that there never have been any such arrangements and that market share data is not used for any such purpose.
- Z also believes a borrow and loan registry could deliver additional cost and unintended consequences, including in the area of supply chain security.

Visibility of market shares

Industry market shares can be readily and accurately assessed via a combination of the Refining NZ processing allocations (through which market share is linked to allocation of refinery processing capacity) plus imports (which necessarily form part of Coastal Oil Logistics Limited's scheduling process).

Imported refined fuel volumes can also be viewed via the imports duty declarations on the government's Statistics New Zealand website. Additionally, the Local Authority Petroleum Tax data collection process provides another data source that can be used to generate assessments of relative market positions. Accordingly, a borrow and loan registry would not change the ability of industry participants to have visibility of competitors' market shares.

Z cannot see any benefit to a borrow and loan registry and points to the Commerce Commission's previous work in this space as further evidence of this point or the problem it seeks to solve.

In the Commission's clearance determination of Z's acquisition of Caltex New Zealand in 2016, the Commission noted that coordination was unlikely in a market characterised by high service differentiation and different cost structures, and that while overall demand is growing only marginally, the demand of each firm is not stable and that changes in market share appear more consistent with competition rather than coordination.

The clearance determination noted that national volumes are likely to be transparent given the borrow and loan scheme and that firms are also likely to be able to obtain regional figures through the volumes submitted for the purposes of the Local Authority Petroleum Tax.

However, importantly, the document notes that the volumes of rivals on a local level are likely to be difficult to observe.¹ Given the significance of the current borrow and loan system to New Zealand's fuel supply security, Z takes this opportunity to provide a simple explanation around exactly what the borrow and loan system is and how it works. Similar material was shared with the Commerce Commission to support its own analysis and conclusions, which Z has also provided to MBIE.

The Borrow and Loan system optimises the supply chain and minimises costs to customers

To avoid duplication of primary distribution assets, the major fuel firms share the use of each other's terminal assets. Each of the major fuel firms has terminals at various ports, although not necessarily at every port or for every refined product grade. In all but one of the locations (Wellington), the terminals are independently owned by each of the fuel firms. In Wellington, BP and Z jointly own three terminals.

Under the borrow and loan system, the participants' terminals are declared as industry storage – effectively “one big tank” – and the refined product held within the terminals is jointly owned by the participants. This means that any of the participants are able to draw down product from one another's terminals without having to buy or sell that product. A fuel firm may draw down as much refined product as it wishes. However, it must ensure that it contributes the same amount back to the system, either through fuel that it has had domestically refined or imported.

The borrowing and lending is accounted for by Coastal Oil Logistics (COLL), the joint venture company that operates the two coastal vessels that deliver product around the country from Refining NZ. If a fuel firm has borrowed more product than it has contributed to the system, COLL requires that firm to contribute more product to reduce the deficit.

Although there is no transaction at a terminal for the refined product, the owner of a terminal charges a throughput fee to other participants of the shared system that draw down product from its terminal. Throughput fees are charged on a cent per litre basis and are paid by the fuel firm which draws down the product, rather than by any reseller or third-party distributor that is responsible for physically delivering the product.

As such, COLL provides a scheduling service which maintains availability of all products across all storage facilities included in the arrangements across the country, in addition to providing a coastal shipping service to key New Zealand ports.

Borrow and Loan Registry, port and supply chain management, unintended consequences

Z assumes that creating a borrow and loan registry would require removal of the current borrow and loan inventory tracking and reporting functions and instead vest that function in a body not owned or accessed by industry participants. Z assumes that, as a result, participants would no longer have visibility of each other's relative product holdings, allocations, or the balance between each participant's borrow and loan volumes (typically these are roughly in balance).

A lack of transparency between competitors is likely to raise disputes around issues such as product allocations during supply shortages.

Typically through the sharing of data, port fuel supply shortages are signalled ahead of time, allowing customer deliveries to be bridged via trucking from alternate ports and / or rationed. Rationing is based on allocations of fuel proportionate to a participant's market share in order to ensure ability to adequately supply each participant's customer base.

¹ Z Energy Limited and Chevron New Zealand Clearance Determination 29 April 2017, p52-53

'Coordination' then occurs to allocate the limited amount of product available in a port's tanks until the next planned coastal tanker or import replenishment date. The entire supply chain is incentivised to ensure port stocks are suitably low – sometimes to only a day or two's cover – before coastal deliveries are made in order to ensure the maximum efficiency, and therefore lowest cost, of the supply chain.

The port coordination management system is critical to New Zealand's secure fuel supply and entitlement to these limited stocks is determined by market share, i.e. any "pain" from limited stocks is shared proportionately. New Zealand's geographic isolation from major markets and continued refinement of supply chain efficiency has led to a 'just in time' approach to fuel supply management. Typically, each participant tracks its own national product ownership and checks this against the register managed by COLL. This COLL register is called 'CONCORD'. Discrepancies are monitored by each participant and reconciled twice a month.

If a coordination is triggered to manage port stocks ahead of an anticipated shortage, the 20 day rolling average volumes from CONCORD are used for the allocation calculations. Participants will check the calculations to ensure they reconcile with their own information. This requires visibility of all the data behind the calculations.

In Z's view, it seems likely, if not inevitable, that if participants lost access to continuous visibility of the CONCORD data, disputes would arise. The only way Z can envisage a non-industry entity providing assurance of its calculations would be to share the same data users currently have access to.

Conclusion: borrow and loan registry - all risk and no reward

Z does not see any benefit in the idea of a borrow and loan registry. Introducing one would achieve nothing, as market share positions are visible through a range of other publicly available means and Z does not believe that it leads to anti-competitive behaviour anyway. However, the downside risk of compromising arrangements which successfully serve New Zealand's consumers and economy would be very real and need to be considered carefully.

Section two: Establishing a liquid wholesale market - costs and benefits

Low barriers to entry, South Island changes already well underway

Z has stated in its previous submission that barriers to entry in the South Island are low with four importers of finished product into New Zealand (three in the South Island) and 21 retail brands – 17 independent – supplying the retail market.

Given the significant increase in competition in the sector over the last decade, but particularly the last five years, Z does not believe that the establishment of a liquid wholesale market is necessary. That said, there is potentially more value in this proposal than in the proposed borrow and loan registry but the pros and cons would need particularly careful consideration. This submission seeks to explore some of them, without providing a recommendation one way or another.

As evidence of low barriers to South Island market entry, the number of new independent service stations operating in the South Island has increased from 157 to 198 between August 2012 and 2016. The number of South Island service stations under the brand of one of the fuel importers has declined from 219 to 185 in the same period.

In addition, during 2017, Z has recorded increased price board discounting taking place in the South Island, with price spreads (the difference between the highest and lowest market price displayed on the price board) in the South Island market now typically up to ~12-13 cents per litre, and currently 22 cents for diesel. The rapid expansion of independent site numbers and increasing price diversity is evidence that the current contracted wholesale market provides sufficient financial incentive and ready access to product for competition to occur and to grow.

Z believes it will only be a matter of time before the dynamism of price board competition in the North Island is also seen in the South Island; indeed it is already occurring. Wellington already has a spread of around eight cents per litre in posted petrol prices at the time of writing this document. This is a recent phenomenon.

Available land in the South Island is plentiful and generally cheaper than in the North Island. There is little to stop a competitor such as Gull, whose Australian parent company has a market capitalisation of over \$8 billion, from investing in building tanks in the South Island.

Approach should preserve commercial imperatives and not discourage further investment

Z is open to a conversation around the point of how to encourage a more liquid wholesale market. There are potential ways in which settings in this area might start to send the right investment signals in relation to wholesale terminal / distribution operation and pricing.

A potential benefit of getting these settings right could be breaking an effective terminal infrastructure investment drought and, in doing so, enhancing fuel supply resilience. One of the risks will be the potential implications for the national supply chain – and costs to consumers – when the real area of target represents a very small part of the country's national fuel volumes, i.e. the South Island is 25 per cent of national petrol and diesel sales.

While Z believes there might be ways to advance a more liquid wholesale market, it is important to maintain a commercial approach to considering this matter. A number of companies have invested many hundreds of millions of dollars in building, maintaining and upgrading safe and secure fuel storage infrastructure across New Zealand over the last 100 or so years and New Zealand's business

environment protects the property rights of companies that invest in assets. This principle should be protected in any consideration of changes to wholesale supply arrangements.

As another general principle, Z firmly believes that companies should be prepared to invest in their own growth and expansion.

Questions to consider

The fuel companies that already own tanks in all parts of New Zealand are incentivised to run as efficiently as possible given the country's low population density and corresponding relative high cost to supply. The supply chain is set up to deliver the lowest possible operating cost as a direct consequence of unsustainable margins between 2000 and 2010. While Z is open to possibilities, any attempt to change the operation of the supply chain is fraught with the risk of raising costs to consumers and compromising security of supply.

For example, in the context of establishing a liquid wholesale market, introducing a charge at the terminal gate will likely require a restructure of existing commercial arrangements. This should not be read as Z opposing the possibility - rather simply raising the potential challenges. As noted above, the current borrow and loan system treats New Zealand's storage capacity as 'one big tank' and COLL co-ordinates both the coastal shipping of products ex refinery as well as the shared national inventory agreement.

The fuel that is "borrowed" from a competitor's terminal does not belong to the company until it is loaded on to trucks at the gantry. So an immediate complication of trying to sell product at the terminal gate would be "how do we sell a product we don't own"? In other words, the existing borrow and loan agreement would limit liquid wholesale transactions at a particular terminal to only being made by the terminal owner. This would have the effect of halting the present practice of contracted wholesale participants, like a Mobil supplied regional distributor (Nelson Petroleum Distributors), accessing a BP or Z terminal where Mobil does not have a terminal in that location.

Another point here is simply to consider the question as to how a 'spot' market for fuels would work in times of coordination. What would the implications be for prices and supply to non-asset owners? A truly liquid or spot wholesale market would typically see escalating prices during periods of tight supply and any supplier would have a contractual commitment to their contracted customers as a priority over any spot customers. This is evidenced by the volatility of prices in spot wholesale markets overseas. By way of one recent example, Hurricane Sandy saw a 25 per cent spike in regional fuel prices, while across the rest of the US prices actually fell slightly at the same time.


Implications would need to be worked through across the industry. Because one or more terminals in the South Island are on coordination up to approximately half of the time, it would be difficult under the current storage constraints to supply a spot market without implications on the current levels of security of supply, at least for spot customers, given the contractual requirement to supply (and therefore prioritise) existing contracted customers. Even within its current contracted portfolio of customers, Z prioritises some over others based on explicit agreements (reflected in supply contracts) around priority in times of coordination, i.e. gold, silver and bronze customers, and this service level is reflected in the pricing this range of customers receive.

The level of South Island port coordination reflects the value associated with the guaranteed access for contracted customers to these terminals. This value would need to be reflected in any additional new entrant access arrangements.

Z also notes that the Report quoted that existing contracted regional distributors did not raise any concerns about terminal access or fuel pricing from their current contracted relationships with one of the major suppliers.

The role of the refinery

s 9(2)(b)(ii)



Terminal access

Should a more liquid wholesale market be a preferred pathway forward, this could be enabled by spot prices posted daily to any and all potential customers, or by the major suppliers granting access to their terminals.

Granting readier access to terminals would require a combination of a fixed and variable charging regime to be commercially viable. This could replace (by superseding) the current borrow and loan agreement among the major suppliers, as well as providing terminal access to new entrants or existing participants who no longer wish to be a contracted wholesale or a spot wholesale customer to an existing major supplier. While Z is not advocating one way or another around this, such a regime would allow all existing market participants and new entrants to access other companies' storage and inventory without needing to invest in infrastructure and bear the carry costs and price risk of inventory. These costs would, obviously, need to be recovered in commercial access charges.

While under the current borrow and loan system costs are largely variable and volume-based, most of the costs of running a terminal operation are actually fixed. Any change to the system requiring additional competitor access to existing terminal assets must be based on both fixed and variable pricing components. Take or pay provisions – where a company seeking to access storage either has to take the contracted amount of fuel or pay for it anyway – could also form a part of any such arrangement, but the charging regime becomes critical. This is because the current system does not provide any incentive or reward for terminal owners to provide access to non-reciprocating market participants or new entrants.

Higher costs as an unintended consequence

Any changes to the national inventory agreement could lead to the disestablishment of the system. This would necessitate a move to each participant providing all required storage for themselves and managing their own product deliveries.

While a single participant could potentially make such a change to existing arrangements work – regardless of cost – it is likely that a lack of visibility of stock holding positions or the national supply position across the industry would compromise New Zealand's security of supply.

In addition to the feasibility of such a set of changes, Z's own high level and approximate estimate for its own operations are a one off of \$15-20 million of capital expenditure and an additional \$10-

\$20 million of annual operating expenditure each year. These numbers are possible very conservative and Z can provide more detailed modelling if required.

Of any capital expenditure increase, Z would seek a return on the capital expenditure which would need to reflect forecast declining product demand and uncertainty around likely useful lifespans of fuel storage and distribution infrastructure in a market of a growing number of electric vehicles. A basic breakdown of high level approximate costs would include:

- Building storage and wharf lines individually where they are currently shared.
- More trucking (needing to go further distances, bypassing competitors' storage that participants can currently use) and the consequential increase in operational risks.
- More frequent smaller shipments to individual terminals rather than fully utilised shipments to multiple terminals under a coordinated schedule as currently operates.

Additional to the cost point, any changes to the system may compromise the viability of all current participants continuing to compete in the same geographies. One possible unintended consequence of any changes to this system could be the withdrawal of competitors rather than addition of them due to significantly higher capital and operating costs, particularly outside of the three main ports of Mt Maunganui, Wellington and Christchurch.

For example, there are current participants in the national inventory agreement that do not own terminal assets or associated infrastructure across very large parts of New Zealand and others with a very strong national terminal footprint.

There would be a significant increase in road transport with the accompanying health and safety implications and increasing volumes of carbon will be generated by multiple uncoordinated supply chains.

Section three: Clarification on Fuel Market Financial Performance Study

The Study acknowledges that various issues including time limits, lack of comparable information, refusal of some companies to fully participate, and complexity of financial analysis contributed to the report being ultimately inconclusive, notably on the key issue of whether returns generated in the industry were 'fair and reasonable'.

In particular, the Study was unable to deliver on its terms of reference, including the requirement to answer the question as to whether prices were reasonable through a market level analysis of ROACE.

Z provided a considerable amount of information on ROACE and other market data, supporting Z's contention that, regardless of the varying methodologies to calculate a meaningful comparison, Z's returns are indeed fair and reasonable and that the market is competitive.

Z understands that due to the lack of comparable information, the Study may not have had regard to Z's data or been able to use it constructively to compare across the industry responses. When MBIE reports back on its own analysis of the study on 30 November, Z would find it helpful to understand the extent to which the following issues were considered or not as part of the Study and its conclusions and recommendations:

- Historic poor returns of the industry (pre 2010) and the possibility that the current period in New Zealand is part of a longer cycle – partially evidenced by Z's declining Net Operating Profit After Tax Margin in FY16 and FY17;
- ROACE of Caltex Australia and other international transport fuel companies compared with the New Zealand fuel industry participants;
- Increasing competitive intensity over the last 18 months, including participants other than Gull entering into new geographic markets and the impact this has had throughout New Zealand on fuel prices and gross margins;
- Low barriers to entry into the South Island.

Z also notes that the Commerce Commission impartially considered all of these issues, without time constraints, in its consideration of Z's application to acquire the assets of Chevron New Zealand. It is difficult to discern from the NZIER report whether the Commission's analysis or the information Z provided for the Commission was considered. Z would appreciate it if MBIE could confirm to what extent the Commerce Commission materials that Z provided were considered in the Study when it reports back on 30 November.

Given the limits imposed by time and data availability, the authors of the Study chose to speculate, based on the limited information available to them, on whether the industry is structured and behaving in a way that yields the best possible prices for customers. As such, Z believes it is important that MBIE's 30 November report back on its own analysis of the Study and also addresses the extent to which MBIE:

- Accepts that the application of the concept of 'double marginalisation' as the basis for speculating that the fuel industry may not be competitive is supported either in theory or observation;
- Supports the conclusion that the contracting arrangements with Refining New Zealand are a cause for concern in assessing if fuel prices are reasonable;

- Supports the conclusion that there appears to be insufficient profit available to enable the construction of a new terminal in the South Island, and if this assessment takes into account the advantaged product and freight procurement available to a large international party such as Caltex Australia, the owners of the Gull business in New Zealand.

While the Study was inconclusive about whether there was a competition problem in the retail market or not, it did find that further analysis of the market was required before deciding what, if any, intervention might be warranted.

As per its original submission, Z believes it can clearly demonstrate that its returns are fair and reasonable against international and domestic peer benchmarks. Additionally, Z's internal modelling suggests that its financial performance is best-in-class – i.e. that competitors in New Zealand are generating returns lower than Z's.

Section four: OECD data, margin monitoring, discounting

OECD data modelling and discounting

One of the drivers for the report's original commissioning was that New Zealand appears in MBIE's OECD data table as having the highest pre-tax retail fuel prices of the jurisdictions included in the published data. While the authors of the study and MBIE may not draw the conclusion that margins are also the highest in the OECD, we believe that the OECD table is misleading and lends itself to exactly that interpretation.

Z would appreciate seeing MBIE outline its position in regard to the integrity of its OECD data, and the detailed methodology – including on a comparative basis – used for its calculation, in its 30 November response.

The OECD pricing data in the Study is drawn from the International Energy Agency (IEA). As Z understands it, the IEA collects the data for New Zealand from MBIE which in turn collects the data from Hale and Twomey with some input from Statistics New Zealand.

Z's belief is that the sampling process used by Statistics New Zealand – which was established in 2007 in a markedly different pricing environment – has not captured the following changes to the industry and does not reflect the actual prices paid by New Zealand consumers. The key question is whether the sample size and coverage across regional markets accurately captures the weighted average of actual prices paid, i.e. is it sufficiently statistically reliable, given:

- The depth and breadth of price discounting leading to a significant variation and volatility in prices across New Zealand. For example, over the last 12 months the average spread (lowest to highest price) in pricing at Z branded sites was 36 cpl, with approximately 70 per cent of Z's volume discounted by an average of nine cpl.
- The growth in additional discounts and increasing sales associated with proprietary fuel card use, such as Z Card, and whether these sales are actually captured in the sample. Over the last 12 months these discounts represented a cost of just under $\$9(2)(b)(ii)$ across all of the Z branded volume and $\$9(2)(b)(ii)$ for the Caltex branded volume.
- Of Z-branded retail volume, $\$9(2)(b)(ii)$ is now associated with a proprietary fuel card, up from $\$9(2)(b)(ii)$ in Jan 2014.
- The extent to which discounts associated with loyalty programmes have penetrated the market. Some brands now provide such discounts to more than 50 per cent of all fuel transactions. This is in addition to any discounting that is displayed on a price board. The costs of these loyalty programme discounts are $\$9(2)(b)(ii)$ for Z and Caltex branded service stations respectively and between $\$9(2)(b)(ii)$ across total network volume.

Each of these points is a relatively recent phenomenon in New Zealand's retail fuel markets which has significantly changed the final price customers pay, including through the variety of ways customers can be rewarded for loyalty with fuel discounts.

Regarding the final point, Z notes MBIE's view that "The cost of discounting activity is borne by a range of parties. All other things being equal, this will tend to underestimate the importer margin attributable to oil companies."²

² <http://www.mbie.govt.nz/info-services/sectors-industries/energy/liquid-fuel-market/weekly-fuel-price-monitoring/#5>

For the Z and Caltex-branded volume, the impression that such discounts are predominantly funded by third parties is no longer true. There has been a shift over the last two to three years for both the Z and Caltex networks in which the costs of supermarket dockets and AA Smartfuels now sit much more with fuel companies than with other parties, again further disconnecting MBIE's observed margins from Z's actual margins. Z is happy to provide more quantification of this point if required as holds the company holds evidence completely contrary to MBIE's stated view that discounting is borne by a range of other parties.

Z repeats the offer previously made to provide MBIE with real time sales data for all Z sites in New Zealand. Using this type of actual data rather than a sampling method which has not been updated for a decade is consistent with the methodology used in other OECD countries where margins are assessed at an industry level through the collection of actual transaction data.

As just one example, the Korean pricing information is highly representative and includes discounts because it uses credit card data, i.e. what was actually paid by the customer, not the 'price' advertised on the price boards. This eliminates the risk of any sampling errors.

The OECD data also does not appear to distinguish between relative costs across different jurisdictions. New Zealand, being a small, geographically isolated country with relatively small fuel volumes and relatively unique fuel specifications is distant from the main ports such as Singapore where refined fuel is widely sourced. This is demonstrated by New Zealand having the highest cost of imported product out of the OECD.

In Z's view, New Zealanders are entitled to know whether they are paying a reasonable price for fuel. As such it is essential that the data being used for comparison purposes is sufficiently accurate and provides 'apples with apples' information. From what we know of how fuel pricing information is collected in comparable jurisdictions, Z does not believe this is currently the case.

Margin monitoring

Given that the margin monitoring data is depicted as weekly and stakeholders believe this is an accurate reflection – indeed a proxy for profitability on a week-to-week basis – getting this data right is of fundamental importance to the industry and stakeholders. Given that MBIE's published margin monitoring function was a catalyst for the original study, Z believes the methodology behind this needs to change.

As Z has submitted previously outside of this process, the current margin methodology places an up to three-month-long and three month averaged lagging assessment of sampled discounting over a weekly sample of pump price data and movements in the 'main port price'. As per the Study's recommendation, Z no longer publishes a main port price as the phenomenon no longer exists – less than one third of Z's retail sites are priced at what once would have been the main port price.

MBIE's data uses a sample of sites which, Z understands, has not been updated in a decade. This sampling was sensible when almost all sites were at the main port price but it now ignores the plethora of new market entrants and regional price diversity. Most importantly there is no volume weighting in the methodology, i.e. it is simply an arithmetic average of sites across New Zealand where it is commonly known that fuel sales are proportionately much higher in discount areas than say the bottom of the South Island.

When markets are moving rapidly as they did over June, coupled with significantly changing levels of discounting, the MBIE margin monitoring data was unable to accurately keep pace with market changes – as the below graph illustrates.



In fact, as the graph below shows, crude prices were falling significantly in June which triggered reductions in non-discounted retail pump prices. Rather than being highly unusual, these price cuts were predictable and have occurred in similar circumstances over the past seven years. Similarly, a reduction in levels of discounting in a rapidly falling market is also predictable – particularly as those independents who do not price risk manage their inventories (as Z does) find margins compressed by falling prices for products that they have already paid a higher price for.

Brent crude oil in US\$: April – September 2017



The role of MBIE's data in the problem and the solution

Z has consistently acknowledged through its audited and publicly disclosed accounts that fuel gross and net margins have increased over the last seven years. Z has equally been open and transparent on Z's view as to why.

Z believes MBIE's margin monitoring and OECD benchmarking data are at times unreliable and misleading. It is this misleading data which has contributed to some of the scrutiny on this industry and what Z believes to be misleading commentary around it.

As part of moving through this process with the goal of providing greater transparency for all stakeholders, Z requests a fundamental rethink of MBIE's data gathering and reporting methodologies in relation to the provision of margin monitoring and OECD data.

The role of this data is increasingly important and all stakeholders must be able to have full confidence in it.

Z's view is that the industry should be consulted on the overhaul of this data gathering methodology and that the most accurate means of capturing this data is through actual transaction records as it is in other countries. Otherwise, the risk is that significant decisions with significant social and economic implications are considered and committed to based on inaccurate and misleading data.

Gross margin versus net margin

Establishing what is a fair and reasonable margin also goes to the question of what is a fair and reasonable return.

The gross margin should not be used as a proxy for profitability as the graph below shows. Z's gross retail fuel margins (for the Z brand) have increased since 2015 but this has not translated into a corresponding increase in net margin. Over this period Z also invested \$258 million of capital, from which it would have expected an increase in gross and net profits.



In relation to this graph, direct costs have increased primarily driven by costs being amortised across declining volumes and increased depreciation driven by Z's investment in infrastructure and increasing asset values. Allocated costs have increased, again through costs being amortised over falling volumes, costs associated with the acquisition of the Caltex business in FY17 and increasing people costs. Z has provided this data on a consistent basis for each of the years outlined in the graph. Note that FY17 includes the Caltex business contribution in the ROACE line.

The significant point to make in relation to this graph is that it is impossible – and meaningless - to consider margins in the absence of returns, as margins simply contribute to ultimate returns. It's much simpler and more acceptable to determine what might be an acceptable ROACE over an acceptable margin, which is why Z has overlaid its retail ROACE on this graph.

As per the previous comment, Z requests that comparative ROACE considerations, for both domestic and international peer companies, are reflected in the MBIE report back on the Study.

Consistent Z benchmark data

As mentioned in the covering letter to this submission, data can be cut, compared and interpreted multiple ways. Z has always sought to provide clear and accurate data and apologises if this was not immediately obvious in its previous submission.

In the interests of clarity, Z seeks to provide the following facts from the company's statutory accounts, consistent with the material provided to MBIE for the purposes of the Study. Z will also make one or two observations or comments around this data.

Z is happy to discuss any of the company's financial accounts with MBIE and its advisors anytime. The following data relates to the Z brand only, and is entirely consistent with the data set provided to the Study's authors, with that being sourced from the same accounting system which the auditors have used to approve Z's statutory accounts:

- In providing retail financial data for the financial years ending March 2012 to March 2017, Z has provided a wider range than that generally measured by the study (2011 – 2015) and this should be factored into any comparisons.
- Between FY12 - FY17, Z's retail delivered margin (the margin most comparable to MBIE's importer margin) increased from 15.9 to 33.0 cents per litre; retail gross margin increased from 10.1 to 23.3 cents per litre; Net Operating Profit After Tax increased from 2.3 cents per litre to 8.1 cents per litre.
- The bulk of margin expansion occurred between 2012 and 2014 in a period of industry recovery from low returns (below WACC) and underinvestment.
- Between 2015 and 2017, Z's retail delivered margin increased from 29.0 to 33.0 cents per litre; retail gross margin increased from 21.1 to 23.3 cents per litre; Net Operating Profit After Tax decreased from 8.5 to 8.1 cents per litre. This drop in performance is consistent with expansion of competitive forces within the market.

s 9(2)(b)(ii)

- Z's retail fuel volume has decreased for each of the years from FY12 – FY17 as it has sought to grow unit profitability, something it observes all other participants are not doing.
- The cost of loyalty offers and the use of Z Card costs Z s 9(2)(b)(ii) or every retail litre sold – more than double the s 9(2)(b) cents per litre in 2012.
- Operating costs have increased for Z from 4.6 cents per litre in FY12 to 6.4 cents per litre in FY17, excluding operating lease costs which have increased by 1.4 cpl over the same period.
- Dealer Commissions (retail site costs) have increased from 4.0 cents per litre in FY12 to 5.7 cents per litre in FY17.

Conclusion

Z remains committed to constructive engagement with MBIE and the government in relation to the questions asked by the release of the Study and looks forward to advancing this conversation.

As always, please contact Jonathan Hill in the first instance with any questions or points of clarification on 021 440 090, jonathan.hill@z.co.nz.

Annex 7: Hale & Twomey report: *Supplementary Information on Shared Data*

New Zealand Fuel Market Study, Supplementary Information on Shared Data

Prepared for the Ministry of Business, Innovation and Employment

October 2017

Hale & Twomey Limited is an energy consultancy specialising in strategic issues affecting the energy sector. With a comprehensive knowledge of local and international energy markets, we provide strategic advice, comprehensive analysis and services across the entire sector.

Hale & Twomey prides itself on being able to analyse and interpret the detail, then translate the implications into strategic directions for our clients. We provide expertise to a broad range of companies and government departments. Hale & Twomey has established a strong reputation in the sector by producing timely, high quality, value-adding work.

Authorship

This document was written by:

Ian Twomey Phone: +64 4 471 1109, e-mail: ian@haletwomey.co.nz

Steve West Phone: +64 4 471 1153, e-mail: steve@haletwomey.co.nz

Please phone or e-mail for further information.

Disclaimer

Hale & Twomey Limited, its contributors and employees shall not be liable for any loss or damage sustained by any person relying on this report, whatever the cause of such loss or damage.

P +64 4 471 1155 F +64 4 471 1158

Level 14, Terrace Conference Centre, 114 The Terrace, PO Box 10 444, Wellington 6143, New Zealand

Executive Summary

The shared storage and B&L arrangements provide BP, Mobil, Z Energy and Z Energy 2015¹ (the Users) with an efficient way of managing shipping of petroleum product from Marsden Point refinery and imports to coastal ports around New Zealand. The shared storage arrangement is administered for the Users by a joint venture company Coastal Oil Logistics Limited (COLL) that is owned in equal shares by the Users. For the system to work COLL requires information on each User's supply and demand situation, as well as tankage they have provided to the system.

A key feature of this shared storage system (the System) is each User's storage is pooled, with product deemed to be held in "one big tank"; effectively each User's product is commingled with the other Users' product. The arrangements see COLL directing where product (either refinery produced or imported cargoes) is discharged to ensure product is available at each port to meet projected aggregated demand. Each User is entitled to lift product from any port, with the terms of access for using another User's facility (including throughput or hosting fees) governed by an individual bilateral B&L arrangement with that User for that terminal.

The New Zealand Fuel Market Financial Performance Study recommended further assessment on how the borrow and loan (shared storage) system works to establish if an independent registry should be created to limit visibility of regional market share data. Having assessed these arrangements, and how COLL aggregates data to limit visibility of each User's forward market share, Hale & Twomey has concluded the joint venture company is already providing an independent way for data to be collected and aggregated, albeit COLL is owned by the Users. Furthermore, the B&L contracts are bilateral arrangements between two Users, so contracting terms within these arrangements are not visible to other Users. The periodic B&L net down process that is required to correct product imbalances that arise from the arrangements only uses nationwide B&L product balances rather than locational information.

A summary of Hale & Twomey's findings and conclusions is provided in the table below. This highlights some areas where it might be possible to further limit data sharing by using COLL (as an independent third party) to manage the level of data available to each of the companies.

Item	Finding	Conclusion
Third party provider	COLL already provides third party outcome for the System.	No need to add another party. Government could seek annual confirmation of appropriateness of data collection/dissemination done by COLL.
Shared storage (tanks)	Users can access details of all tanks in the System, including those provided by other Users.	Restricting access to System tank data is not relevant to regional market share data, and is available through other means.
System supply	Planned refinery production for each User is used to work out each User's share of expected production by product. Users can see other User's import cargo details for product into the	Refinery production and import details by cargo are required for scheduling. Without this data Users would need COLL to have specialist knowledge to manage tasks like vessel vetting, product quality, coordinating terminal

¹ Z Energy 2015 is the old Chevron NZ which Z Energy purchased in 2016.

Item	Finding	Conclusion
	System, but not non-industry cargo.	operations and management of stocks. The acceptability of this outcome would seem unlikely.
System demand	For all locations other than Wiri Users can only see total forward System demand for each product.	The current arrangements address the Study's concern about the visibility of other User's regional market share data. Any further reduction in data visibility seems unnecessary.
	Users can also see total forward System demand for each User by product.	
	For Wiri, Users can see each User's forward demand by product so that capacity on the Refinery to Auckland Pipeline (RAP) can be managed.	If RAP becomes unconstrained it would be reasonable to expect only total forward demand would be shared with each User.
	Users can obtain historic demand details for each User by port, product and in total.	As this is historic data no change is required.
System stock ownership	Users can see what stocks by product the other Users are holding in the System. This allows Users to verify that others are meeting their System obligations.	The visibility is important for each User so they can ensure all Users are meeting their obligations. It provides no market sensitive information.
B&L	Each B&L contract is a bilateral arrangement between two Users and while a common database is used for matching transactions, the actual data is only shared by the two transacting parties.	As these are bilateral contracts there's no need to make any changes as there's no visibility to the non-participating party(s).
	The net down process requires Users to share current nationwide B&L stock balance data for the net down calculations to be done.	While this task could be done by COLL (in its role as a third party) to limit sharing of B&L balances with other Users, this seems unnecessary as the net down is done at a nationwide level.

In conclusion, Hale & Twomey has found the shared storage arrangement provides an efficient solution for shipping of product from Marsden Point refinery to the coastal ports and for imports and that the Users are using COLL to collect detailed data. This is then used by COLL to manage supply of product to the ports, with COLL aggregating data to limit the visibility of individual User information provided back to Users, such as:

- Users can see total forward demand estimates for each product at each port;
- Users can see nationwide forward demand estimates for each product by User; so
- Users are not able to see other User's forward demand estimates at any one location.

Hale & Twomey has been asked to comment on whether the current level of data sharing is strictly necessary to ensure an efficient system, or if less data could be shared with the Users. Our findings are that generally the level of data sharing is appropriate, including for Wiri. However, if the RAP becomes unconstrained it would be reasonable to expect the level of data shared to be reduced to show the total forward demand, consistent with reporting at other locations.

Table of Contents

Executive Summary	i
1.0 Introduction	1
1.1 Definition of the system for this report	1
1.2 Public information on the NSS	2
2.0 Details on how the NSS works	3
2.1 Key NSS components	3
2.1.1 Shared storage arrangement	3
2.1.2 Coastal Oil Logistics Ltd (COLL)	3
2.1.3 B&L agreements	3
2.2 Data inputs and outputs for the NSS	3
2.2.1 Storage	4
2.2.2 Supply	5
2.2.3 Demand	6
2.2.4 Stock ownership (CONCORD)	7
2.2.5 Bilateral borrow & loan transactions	8
3.0 Further User feedback	9
4.0 Other data sources	10
5.0 Data sharing options	12
5.1 Third party to manage data sharing	12
5.2 Minimise NSS data sharing	13
5.2.1 Storage	13
5.2.2 Supply	14
5.2.3 Demand	14
5.2.4 Stock ownership	15
5.3 Minimise B&L data sharing	15
6.0 Conclusions	16
Appendix 1: Data summary	18
Appendix 2: Public information on the NSS and B&L	20

1.0 Introduction

The Ministry of Business, Innovation and Employment (MBIE) monitors the performance of New Zealand's deregulated retail petrol and diesel market. While the retail fuels market has historically been considered broadly competitive, in recent years (particularly since 2011) observed importer margins have trended upward. In response to this trend MBIE commissioned the New Zealand Fuel Market Financial Performance Study (the Study) to review its significance.

The Study was published in July 2017 with the authors concluding that *"although they could not definitely say that fuel prices in New Zealand are reasonable, they have reason to believe that they might not be"*. One recommendation was to make a further assessment on how the borrow and loan (shared storage) system works and to establish if an independent registry should be created for this system to limit the visibility of market share data.

MBIE has asked Hale & Twomey (H&T) to investigate the details of how this shared storage system works with the oil companies who use it, and to assess if the data used is strictly necessary to ensure an efficient system and if less data could be shared with those who use it. This report summarises H&T's findings on the system.

1.1 Definition of the system for this report

In previous studies the borrow and loan and shared storage arrangements have either been described as two separate but interrelated systems or collectively as one arrangement. Having consulted with the fuels marketing companies who use this system and considered how the arrangements work, H&T concluded the review of this system is intended to cover both the shared storage arrangements and transacting of borrow and loans.

For this report the following definitions of the arrangements have been developed:

- National Storage System (NSS): Covers the whole system including shared storage, shared products and scheduling of coastal vessels and import cargoes.
- Users: The oil companies who participate in the NSS; these are BP Oil New Zealand Ltd, Mobil Oil New Zealand Ltd and Z Energy Ltd (including Z Energy 2015 Ltd²).
- Borrow and Loans (B&L): Is used in relation to the process of transacting bilateral borrows and loans of Product.
- Product: The products that form part of the NSS are premium and regular petrol, jet fuel, diesel, fuel oil grades and bitumen.
- Non-industry storage: This is storage owned by the Users that has not been made available to the NSS. This storage is not part of the NSS so no information is recorded in the NSS or shared with other Users. Comments provided were that most tankage is likely to be part of the NSS, with speciality products (like 98 octane petrol) held in non-industry storage.
- Non-industry product: This is products that are stored in non-industry storage.

For clarity, the terminology used in this report (including for sections that refer to other reports) has been updated to use this terminology. In particular B&L only refers to the actual bilateral transaction, not the wider system as done in some other reviews including the Study.

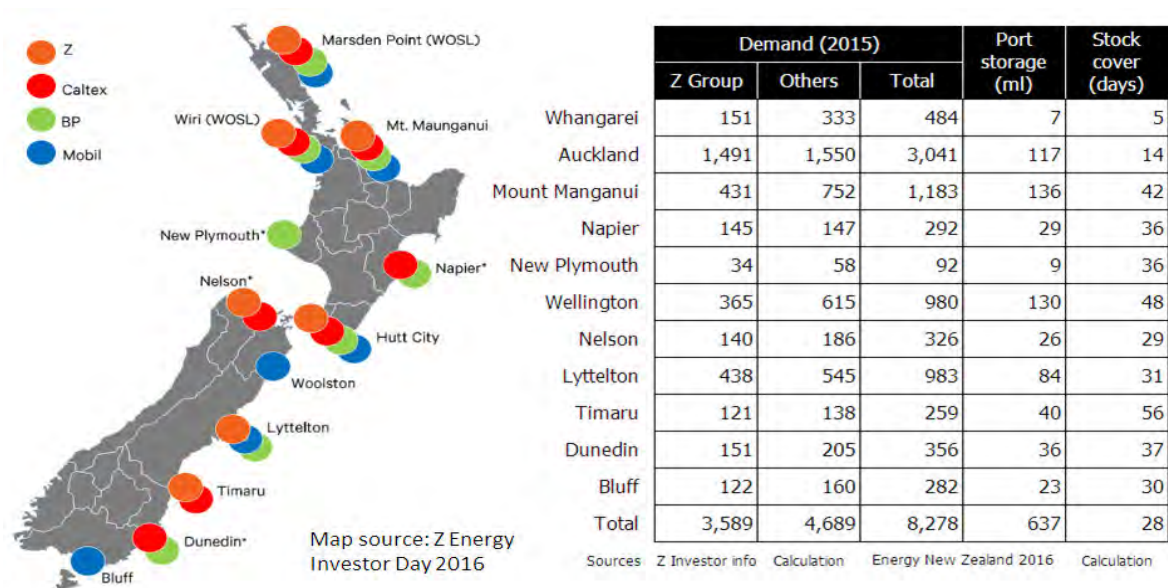
² Z Energy 2015 is the former Chevron New Zealand (Caltex brand), purchased by Z Energy in 2016. It is a separate party to some of the NSS arrangements so is still treated as a separate User.

1.2 Public information on the NSS

Recent literature gives some insight into the purpose and principles of the NSS, although the level of public detail is limited and in some cases contradictory. Details of the public information found on the NSS is given in Appendix 2, but in summary public information on the NSS outlines that:

- Users contribute to a pool of storage in the NSS (public storage info. is shown in Figure 1).
- Users can put Product into and take Product out of the NSS, subject to having agreed access arrangements with the terminal owner.
- Custody and risk for Product put into the NSS transfers to the terminal owner on entry, but title remains with the User who supplied the Product, with B&L used to account for stock movements into and out of other User's terminals.
- Terminal owners charge a throughput fee to Users who lift Product under B&L arrangements.
- There is no restriction on how much Product a User lifts from the NSS, but it must contribute the same amount of Product to the NSS. COLL³ monitors stock ownership for each User.
- **A User's national** B&L stock position will generally balance, but at a terminal level stocks may vary as there is no requirement for Users to supply Product to locations where they lift from.

Figure 1: Public information on the storage facilities⁴



The authors of the Study have suggested the NSS may provide Users with a high level of visibility and a way of monitoring regional market shares for other Users and later concluded that:

"Such information sharing is often a cause for concern to competition authorities because it might help to support coordination among firms leading to higher prices."

In their conclusion, the authors noted they were confident that information sharing of this type was a cause for concern, but were not able to conclude if these particular arrangements were of concern as they had only limited ability to inquire into the specifics of the arrangements.

³ Coastal Oil Logistics Limited (COLL) is a joint venture company that is owned in 25% equal shares by the Users, with the Z Group owning 50% of COLL following its acquisition of Chevron NZ in 2016.

⁴ While there's no information on storage capacity that might be held by Users outside of the NSS, we estimate there might be ~25ml (~4%) for products like 98 octane petrol.

2.0 Details on how the NSS works

As summarised in Section 1.0 there is limited and conflicting information on aspects of the NSS and how this works. To fully understand this system H&T consulted with each of the Users and COLL to develop a complete picture of the NSS arrangements.

2.1 Key NSS components

2.1.1 Shared storage arrangement

The shared storage arrangement has been summarised by Users as a way of providing efficient use of and investment in storage facilities with the arrangement's purpose described as follows:

- To achieve efficient coastal scheduling of Product from the refinery to the ports and efficient discharge of import cargoes, COLL provides a consolidated scheduling service for Users.
- To facilitate efficient scheduling by COLL, the Users have agreed to share the use of, and access to port tankage with Product in this storage comingled or pooled.
- Consistent with the nationwide coverage provided by this arrangement, Product is deemed to **be held in "one big tank" with each User having title to its ownership share⁵** of the total Product held in the system at that time.

There are rules for how storage is made available in the NSS (but there are no rules on how much storage must be provided or the location of that storage), nominating import cargoes for COLL to schedule, advising COLL of Product demand requirements and accounting of Product movements to and from the NSS (**this is done separately to each company's internal stock accounting systems**). COLL also administers a Product allocation process to allocate remaining Product at a port to each User based on their ownership share in the case of a projected Product shortage.

2.1.2 Coastal Oil Logistics Ltd (COLL)

COLL is a joint venture company established by Users to provide efficient shipping of Product from the Marsden Point refinery to coastal ports around New Zealand. COLL is responsible for acquiring coastal vessels, providing a consolidated forward looking scheduling service (known as COSMIC) to efficiently manage coastal vessels and imports, and to provide a stock management system (known as CONCORD) for the NSS **with details on each User's** Product ownership position.

2.1.3 B&L agreements

Outside of the NSS arrangements, Users also have bilateral arrangements with other Users covering access arrangements for lifting Product from a terminal. These bilateral agreements will contain the commercial (hosting) fees for use of that terminal. As these are bilateral, the details will only be known by the terminal owner and the lifting company; this would include hosting fees, specific details of Product lifted from the terminal (e.g. product type, quantity, date of lifting, etc.) and any details used to facilitate matching of these B&L transactions between the two companies.

2.2 Data inputs and outputs for the NSS

H&T has discussed with COLL and Users what data is provided to COLL to make the NSS work and what is provided back to Users, this is summarised below with any reasons given for its collection.

⁵ Ownership is calculated from opening stock plus refinery production plus imports minus demand

2.2.1 Storage

- **Shared tankage:** details of each tank including owner, location, product, gross and net capacity
- **Refining NZ tankage:** details of each tank including the finished product or blending component, gross and net capacity
- **Wiri tankage:** details of each tank including product, gross and net capacity
- **Marsden Point Truck Loading Facility (TLF) tankage:** details of each tank including product, gross and net capacity

COLL sums shared tankage for each Product at each port to determine available storage capacity for discharge of cargoes by coastal and import vessels. This data is required for COLL to be able to provide the scheduling service for Users. As part of the scheduling activity COLL and Users have a weekly review of the COSMIC to check the robustness and operational efficiency of the latest plan for each Product at each port given the currently available tankage in the NSS.

Refinery and joint venture tankage at Wiri and TLF is also used by COLL in the CONCORD (which records nationwide stock ownership and tankage contribution for each Product for each User). As part of the process for accepting import cargoes, COLL will use the CONCORD to check that a User has sufficient available storage capacity for ullaging arriving cargoes. The acceptance rule is that the User must have sufficient spare capacity for that Product before import cargoes can be discharged.

Refining NZ also requires details of the Wiri and TLF tankage so it can schedule the pipelines that supply products to these facilities.

Table 1: Summary of the data outputs for storage

Data	Refining NZ	COLL	User
Total port tankage for each product	Not needed	For scheduling cargoes and imports	For verifying the schedule is robust
RNZ storage for each product	Used daily as part of refinery operations	For verifying refinery cargo lifting feasibility	For verifying lifting schedule is ok
Wiri/TLF storage	For planning pipeline pumping schedules	For understanding impact on cargoes	For verifying pipeline pumping plan is ok
Each User's national tankage by product	Not needed	For checking each User's space for ullaging imports	For checking ullage for own imports and that there is sufficient capacity to meet its stockholding strategy Also allows Users to check other Users are contributing sufficient storage

The data outputs from COLL provides Users with information of each tank in the system and the total available storage at each port for each Product. As demonstrated by the recent RAP outage, knowledge of available tankage in the consolidated scheduling system allows the Users to manage disruption events more effectively than would be the case if there was lack of visibility on what storage capacity was available for use.

2.2.2 Supply

- **Refinery production:** Refining NZ's daily production (actual and projected volumes) for each Product
- **Planned refinery production:** Each User's production request for each Product over the two-month production period⁶
- **Import cargoes:** details of each import cargo including product type and volume, vessel name and details, expected arrival timing, any special requirements (such as requirements to call at a specific port for non-industry product)

Establishing actual (historic) and projected (forward) refinery production for each Product is a critical input to the scheduling system. Refining NZ needs to know there will be sufficient ullage within the refinery tanks to hold the production as well as for scheduling the RAP and TLF pipelines. COLL needs to know this information to make sure the coastal vessels are lifting sufficient Product from the refinery to avoid stocks at the refinery reaching tank tops.

Users also need to know projected refinery production so they can estimate their likely share of the Products that will be produced, as each User's production is calculated from "their planned refinery production" divided by the "sum of all users planned refinery production" multiplied by "the Refinery's projected production" for each Product. At the end of each two-month production period each User's final production plan is used to calculate what Product volumes each User has produced from the refinery.

The final part of the supply puzzle for COLL's scheduling activity is the import cargoes. COLL is responsible for working out how best to organise the discharge of the import vessels to ensure imported Product is placed in the right ports to meet the expected demand in the NSS. Each User can see details of import cargoes to be discharged into the NSS, but not details on non-industry products imported. As the Product in the NSS is commingled, it is logical that all Users should have knowledge of the cargoes including details such as the fuel quality parameters. They also need to ensure that COLL is treating all import cargoes equitably in their application of the rules.

Table 2: Summary of the data outputs for supply

Data	Refining NZ	COLL	User
Refinery production by product	Used daily as part of refinery operations	For verifying cargo lifting feasibility and managing refinery stocks	For calculating share of refinery production and verifying shipping schedule is ok
User planned refinery production by product	For establishing refinery production plans and each User's share of production	For calculating User's share of refinery production for stock ownership reports	For calculating share of refinery production
User import cargoes by product	Not needed	For scheduling discharge of imports	For verifying vessels and schedules are ok

Each of the Users are reliant on decisions made by others using the NSS. Examples of this are refinery production which is a share of actual refinery production, so any change in request will

⁶ The refinery planning and production is done on a two-month block basis.

impact all Users. Likewise, each User needs certainty that import cargoes will meet the system specifications and that tankers meet the criteria for discharging Product into their infrastructure.

2.2.3 Demand

- **Location demand:** forward details of each User’s demand for each product at each port, plus Wiri and TLF in the NSS
- **National demand:** historic national demand by product for each User, including sales that are outside of the NSS

COLL requires details of each User’s forward NSS demand by location for developing a robust (COSMIC) shipping schedule that will ensure sufficient Product is delivered to each port location to meet the expected demand for Product at that location, see Figure 2 for a worked example of how COSMIC works. COLL also uses this data when administering the stock allocation process for allocating remaining Product at a port to each User.

Figure 2: Worked COSMIC example for a port (e.g. Seaview) for a product (e.g. diesel)

Published COSMIC data for the Seaview location		COSMIC port calculations done within COLL for diesel at Seaview				
Date	Diesel stock	Opening	NZ Cargo	Imports	Demand	Closing
1 Jan	22,000	15,000	8,000	0	-1,000	22,000
2 Jan	21,000	22,000	0	0	-1,000	21,000
3 Jan	20,000	21,000	0	0	-1,000	20,000
4 Jan	29,000	20,000	0	10,000	-1,000	29,000
5 Jan	28,000	29,000	0	0	-1,000	28,000

Refining NZ need details on the forward demand for fuels at Wiri and the TLF so that it can develop a pumping plan for supply of the required Product to these locations.

In addition to the locational demand, COLL sums forward NSS demand for all locations (including Wiri and the TLF) to establish projected national NSS demand by Product for each User; this data is used in the stock management system (CONCORD) that COLL administers for the Users.

While Users see the total NSS demand at each location by product, they are not able to see what individual Users’ forward demand might be at any one location as COLL keeps this detailed data confidential. They can see each User’s forward national NSS demand by product (as calculated by COLL) in CONCORD. The stock management system is discussed further in Section 2.2.4.

Separately to the demand data collected by COLL for the NSS, the Users also use BDO New Zealand Limited⁷ to provide aggregated historic sales data for all products for each User. The reports show each User’s historic monthly national sales by product type, including sales that are outside of the NSS. This data is used by Refining NZ and Users annually to establish refinery capacity for the next year and by some Users for calculating their market share situation.

⁷ As an independent party for compiling the data.

Table 3: Summary of the data outputs for demand

Data	Refining NZ	COLL	User
User system demand by port and product	Not needed	For administering stock allocations	Don't need other User's data
System demand by port and product	For scheduling Wiri and TLF pipelines	For scheduling cargoes and imports	For verifying schedules are ok
System demand by User and product	Not needed	For calculating system stock ownership by User and product	For verifying other Users are meeting stock obligations and for planning import cargoes
National sales, incl. non-JV, by product	For annually setting refinery processing capacity	Not needed	For annually setting refinery processing capacity

Historic and forward NSS demand data is both an input and output of the NSS. Without forward NSS demand data both COLL and Refining NZ would not be able to schedule supply of products to the terminals located around New Zealand.

NSS demand data is provided to Users, but this is aggregated so the level of detail each User can see is limited. As examples, for forward NSS demand Users can see NSS Product demand at each port and each User's national NSS demand by Product, but are not able to see each User's forward NSS demand for Products at each location.

Historic national sales by product type for each User is also available from the BDO New Zealand Limited data that is collected monthly. This data includes sales that are not part of the NSS. This data is used by Refining NZ and Users annually to calculate next year's refinery capacity for each User. From this data it would be possible for a User to estimate what volume of each product has been sold outside of the NSS.

In other markets (such as the New Zealand electricity market) publication of historic information is a feature of the market arrangements with authorities tasked with providing this information. For the New Zealand fuels market, there are many other sources of data (this is discussed further in Section 4.0) and, as the BDO data is historic, this is unlikely to create any competition concerns, although H&T are not experts on completion matters.

2.2.4 Stock ownership (CONCORD)

COLL is responsible for accounting for the Product movements to and from the NSS (this is done separately to each company's internal stock accounting systems) to show what each User's stock ownership position is for each Product in the NSS. National stock ownership for each Product is calculated as follows for each User:

$$\text{"closing stock"} = \text{"opening stock"} + \text{"refinery production"} + \text{"imports"} - \text{"demand"}$$

COLL reports national daily stock ownership figures for each Product by User and in total to all Users so they are aware of their own stock situation in the NSS and so they can verify that other Users are meeting their obligations for providing sufficient Product to the NSS to meet their national NSS demand requirements. CONCORD is also used by COLL to assess if a User has sufficient ullage for discharging their import cargoes. See Figure 3 for a worked example of how CONCORD works.

Figure 3: Worked CONCORD example for a User for a product (e.g. Diesel)

Published CONCORD data for User A		National CONCORD calculations done within COLL for User A				
Date	Diesel stock	Opening	Production	Imports	Demand	Closing
1 Jan	39,000	40,000	2,000	0	-3,000	39,000
2 Jan	53,000	39,000	2,000	15,000	-3,000	53,000
3 Jan	52,000	53,000	2,000	0	-3,000	52,000
4 Jan	51,000	52,000	2,000	0	-3,000	51,000
5 Jan	50,000	51,000	2,000	0	-3,000	50,000

As the NSS storage is shared, Products are comingled, and as stock held in the NSS is a result of three independent Users who each make their own decisions on the level of stock and timing for resupply, it is logical that each User would want proof that the other Users are providing sufficient storage for ullaging imports and holding sufficient Product stocks to meet their NSS demand.

From discussions with the Users each have their own stock accounting systems for recording stock movements into and out of storage locations; this will include both NSS and non-industry storage. The stock movements recorded for their own terminals capture both their own stock transactions plus loans made to other Users. They each also record their own borrows made from other Users.

2.2.5 Bilateral borrow & loan transactions

As outlined in Section 2.1.3, Users have bilateral arrangements with other Users for the access arrangements for lifting of Product from another User's terminal. When a User lifts Product from another User's terminal there is a B&L transaction.

This transaction will record:

- The Product lifted
- The volume lifted
- The date and time of the lifting
- B&L reference codes to allow for matching of the B&L transaction
- The fee payable to the terminal owner

This information is recorded by both the terminal owner and the User lifting the Product in their respective stock accounting systems, with the B&L reference codes provided to the other party.

Each month Users will generate data reports listing all B&L transactions recorded in their stock accounting systems – there is a separate data report for each User (i.e. each report will only list B&L transactions for one User). These data reports are shared with the relevant counterparty so these bilateral B&L transactions can be matched (or verified) as being correct by the two parties.

While Users have a single database platform for matching B&L transactions, each User has its own copy of that database with only their bilateral B&L transaction data. It is not possible for User to see B&L transactions where they are not a participant.

The periodic net down process

COLL determines which ports domestic and import cargoes are delivered too, based on the combined NSS demand at each port; COLL's task is to ensure the ports are "kept wet". This

means that while Users are supplying product to the NSS (i.e. into the “one big tank”), at a port level this may not correspond with their offtake (demand) requirements. As an example, COLL may require a User to discharge their jet import at the Miramar terminal, **even though they don’t** sell much jet at Wellington Airport. This means Product balances for individual Users at a Port, and therefore between individual Users for each Product at a national level may get out of balance over time. To fix these imbalances Users periodically apply a net down process to rebalance the national stocks for User by Product as follows:

- **Collect data on and compare each User’s current** B&L balance for each Product in the NSS **with the other User’s balances for each Product** in the NSS;
- Calculate and apply adjustments between Users for each Product to square off Product balances for each User; and
- Check that **each User’s national B&L balance situation for each Product remains unchanged** following the net down process.

While the net down process requires Users to share current nationwide B&L balance totals by Product with each other so the net down adjustments can be calculated and applied, no B&L transactional data is shared amongst Users. Companies may also do bilateral B&L transactions for non-industry product that is outside the NSS and these will not be part of the net down process.

3.0 Further User feedback

Feedback given by Users is the current arrangements provide a cost-effective way of managing the transportation of Product from the refinery to the ports around New Zealand and for efficient discharge of import cargoes. To achieve this COLL requires detailed forward-looking data for each User, and while Users require some data to verify the system is working as intended the level of data needed is less. Using COLL to aggregate data is seen by Users as a practical way to minimise the level of data being shared with Users.

In addition to the general information provided by the Users on the NSS, the comments below were also provided to H&T as part of the consultation process.

BP

Commented that the Study found no evidence of collusion nor did it suggest there is collusion. BP noted it does not use this information, shared for legitimate commercial reasons as noted in this report, in any way when setting its wholesale prices or retail pricing for its COCO sites.

Mobil

Data provided to Users from the arrangements is required so that Users can ensure the efficient and fair operation of the system. Mobil noted the Study did not suggest there was evidence of collusion and indicated the arrangements arguably have resulted in greater competition than would be the case if each User was required to operate on a standalone basis. Mobil commented the bilateral nature of the B&L contracts places commercial information outside of the NSS.

Z Energy

Highlighted a key feature of the NSS is how this has minimised duplication of infrastructure and coastal shipping assets and that this arrangement provides each User with access to Product around the country which should ensure maximum competition at all locations.

While the arrangement needs Users to provide **storage to the NSS, there's no obligation for a User** to provide a minimum level of storage or the location of that storage; rather the NSS relies on **feedback mechanisms related to national volumes to encourage provision of storage**. Z's view is that some Users have (arguably) under invested in storage at some (often smaller) locations while bolstering their national storage contribution by over investing in other (often larger consolidated) storage locations. In their view, the lack of formal rules for providing storage has led to storage inefficiencies both nationally and locally.

Z also noted the bilateral B&L contracts they have **don't require the** other party to provide any information on their forward demand requirements, instead Z relies on COLL to ensure sufficient product is provided at each port to meet the projected aggregated demand.

4.0 Other data sources

The authors in the Study expressed concern that the NSS may provide Users with a high level of visibility of regional market share for other Users. While the NSS does require some data to be shared with others via COLL there are other means of obtaining data, particularly for historic data. This section summarises some of the other data sources available to Users.

Energy in New Zealand publication and the energy data files

Each year the New Zealand Government publishes a book **on New Zealand's energy use**. The Oil Section provides details of supply by product and national demand for each product by end use as well as information on port offtakes and port storage for petrol, diesel, jet fuel and fuel oil (for storage only)⁸.

The energy data files provide a more frequent (quarterly) update on details for supply by product and national demand for each product by end use. There is no breakdown given on demand for individual companies or for different types of suppliers (such as wholesalers or fuel distributors).

Local Authorities Fuels Tax (LAFT)

Each territorial authority collects LAFT from those who sell transport fuels (i.e. petrol and diesel, other than diesel sold for marine use). It is possible to obtain monthly petrol and diesel volumes **attributable to LAFT from each regional council**. While H&T's experience has been that it can be difficult to know who to approach for this data, we expect this would be straight forward for the Users and others (like fuel distributors) who pay LAFT as they will already have contacts due to their requirement to submit volume data and make LAFT payments. We are not sure how readily the authorities make this data available (may vary between authorities).

Resource consent applications

Information on new tanks is easily obtainable from resource consent applications for the intended **work**. H&T's experience is that **in most cases new tanks are required to be notified making it easy** to obtain details on the number and size of tanks being built, the fuels these are intended to be used for, and any other associated work to be done at the site.

⁸ Port offtakes have been published from 2014 and port storage in 2016. Both appear to have been discontinued in 2017.

Satellite maps and visual inspections

Tank volumes can be easily estimated from satellite images (google maps) and visual inspection. The google maps tool has a distance feature that allows easy measurement of tank diameters and coupled with **visual inspection to count the number of steel plates used in the tank's construction** it is easy to make a quick calculation of the likely tank volume for each tank at a terminal.

Refining NZ

Refining NZ is a publicly listed company with reporting requirements to the stock exchange and its shareholders. The Users are also customers of the refinery which requires them to jointly plan how the refinery is operated for each two-month operating period.

From Refining NZ's annual reports and other more frequent disclosures (such as quarterly analyst briefings) it is possible to determine annual refinery production and RAP volumes (although this is not consistently reported).

As noted in Section 2.2.2 **each User's share of actual refinery** production is derived from their share of requested production versus the total requested refinery production, so we expect Users will have detailed information on the products made and the volume of products pumped to the Wiri Terminal from their joint planning of refinery production for each operating period.

Wiri and TLF terminals

The fuels terminals at Wiri and at Marsden Point (the TLF) are operated by Wiri Oil Services Limited (WOSL) which is a joint venture company owned by the Users. Currently each User's monthly forward demand estimate is provided by COLL to all Users, Refining NZ and WOSL to allow each of the parties to manage supply of Product to Wiri through the RAP. Users commented the forward demand data is currently required as the RAP is operating at capacity and therefore an allocation process is done (using this data) to apportion available capacity to each User.

New Zealand Oil Services Limited (NZOSL)⁹

NZOSL is a joint venture company owned by BP and Z Energy that is responsible for the operation and maintenance of various storage terminals across New Zealand. **NZOSL's activities will** include management of incoming product via shipping and outgoing product through the truck fill stands.

Under this arrangement we expect both BP and Z Energy will know the volume of each product lifted from each terminal and by deduction what volume the other party has lifted. As there is also public information on port demand (e.g. Energy data, LAFT figures) it would also be possible for BP to accurately estimate the volume of fuel lifted in total by Mobil and Z Energy 2015¹⁰, and in **the case of Z Energy, Mobil's volume as it will know the Z Energy 2015 volume.**

The latest Z Energy strategy¹¹ indicates they are planning to consolidate the Z and Caltex terminal operations in-house, which might impact on the future NZOSL arrangements.

⁹ <http://nzosl.co.nz/>

¹⁰ While Z Energy 2015 (formerly Caltex) is now owned by Z its volumes are not part of the NZOSL JV

¹¹ Z Investor Day 2017 presentation

Import statistics

While H&T hasn't investigated what level of detail is available from customs and statistics on import cargoes we understand information can be obtained on import cargoes with more detail than can be selected from the public website enquiry screens.

Port company annual reports

Another source of data is the port company annual reports; these often provide details of volumes **across the wharf by segment (e.g. container TEU's or bulk petroleum volumes)**. While the volumes provided are usually for all petroleum products rather than for each product in conjunction with the other data sources the mix of products can be accurately estimated.

Z shareholder reports

Z Energy (including its subsidiary Z Energy 2015) is a publicly listed company and like Refining NZ has requirements for reporting to the stock exchange and to its shareholders. While the Z annual reports provide some detail on sales volumes, the quarterly operational data reports are more useful as these give a detailed breakdown of Z Energy and Z Energy 2015 national sales data by fuel type for each quarter.

Findings summary

In summary, there are numerous sources for obtaining historic data beyond the data available in the NSS. Some of this data is readily available while other sources require a bit more effort to obtain. Given this, it is difficult to see a concern with the historic information that is currently shared. Perhaps the area of greater concern raised by the Study was sharing of forward or projected data, this is considered further in the next section.

5.0 Data sharing options

Having identified how the NSS and B&L arrangements work, and the data needed to make the systems work, this section focuses on the recommendation from the Study for assessing if there should be a third-party managed registry for the arrangements and considers options for limiting the data available to the Users. As highlighted in Section 3.0, there is significant historic data that can be obtained from public sources, so in this section we focus on forward (estimated) data, as that is not readily available from the public domain.

5.1 Third party to manage data sharing

The Study refers to investigating use of a third-party managed registry for the arrangements to limit the visibility of regional market share data. Currently COLL is used for collection, aggregation and promulgation of data in the NSS. While COLL is jointly owned by the Users, in many ways it is acting as a third party, particularly with how it manages forward data by aggregating to limit the **level of visibility of each User's regional data**.

Users can see the following forward data from COLL:

- Total NSS demand for each User by Product
- Total port demand by Product
- Coastal cargoes by Product and delivery location

- Import cargo details by Product and delivery location for each User for the Product delivered into the NSS
- Contributed tankage by Product and port for each User

It is not possible to see each User's forward **total demand as the NSS doesn't include non-**industry product, nor is it possible to see each User's forward demand at a port, other than for Wiri. At Wiri forward demand estimates by User are currently shared to assist with allocation of RAP capacity to each User as the pipeline is at capacity.

During consultation with Users it was suggested that having a third-party involved in the process could create risk/liability issues for that third-party, as Users would likely require some form of performance guarantee and/or liability insurance to cover the situation where costs are incurred from processing or other errors. Currently this is not an issue as should COLL make an error, the cost of that is met by COLL which is owned by the Users.

H&T's view is that COLL already provides a third-party service for collection, aggregation and promulgation of data in the NSS **which allows information that the Users themselves don't want to share** (e.g. forward demand by port) to be kept confidential. We do not think having another third-party arrangement would provide any further benefit for limiting the level of visibility of each **User's regional data** beyond what COLL is able to do now. However, the level of data visibility available to Users should be reviewed periodically and if the Government was concerned about **this a practical solution would be for the Government to make periodic audits of COLL's operations** to ensure that the level of data being shared with Users remains reasonable. This could also be addressed by asking COLL to make an annual representation to Government on the level of data provided back to the Users.

5.2 Minimise NSS data sharing

If there is concern about the current level of forward data that is available to Users from the NSS, it would be possible in some cases to further limit the amount of data shared without significant impact on how the NSS works, although from discussion with COLL this might require COLL to modify its systems to accommodate these changes (although no information was provided to H&T on the practicality or potential cost for COLL to modify its systems). H&T also expects this would require Users to rely more on COLL to independently monitor each User is meeting their NSS obligations. We go through some of these items in this section.

5.2.1 Storage

Currently Users have full visibility of each other's contributed tankage to the NSS, but as expected no visibility of tankage outside the NSS. The level of detail available to Users could be reduced so that Users **would only see total storage available at each port for each product and each User's nationwide tankage contribution by product**. Such restrictions **might impact on each User's ability to plan forward tank maintenance and with establishing future tank requirements**. COLL would also need to restrict access to tankage data so that Users could only see their own data.

H&T's view is that restricting details of tankage contributed to the NSS won't address the Study's concern that Users have easy access to other User's regional market share data and therefore there seems little benefit in further restricting this data, especially given the importance of tank contribution for the NSS to be able to function properly.

5.2.2 Supply

Each User's production from the refinery is based on their share of the production request for each product, adjusted to equal what Refining NZ is producing. Currently Users can see each other's production requests, but only limited data on the crude oil being run, although for BP and Z Energy they will have greater visibility due to their joint crude procurement and processing arrangement that they operate in conjunction with Refining NZ¹². While it might be possible to further reduce the data visibility so that each User can only see their production request and the total production request, from what we understand this might not be practical, as Users want visibility of how other User's production changes throughout the planning process to ensure that each User is working within the agreed operating rules.

In any case the refinery processing arrangements are outside of the NSS, with the interface with the NSS being the shipping of refinery production to the ports on the coastal vessels.

Users can also see full details of other User's import cargoes and volume of product being delivered into the NSS. It would be difficult to restrict access to this data as this is a critical input into the shipping schedule (COSMIC).

H&T's view is that restricting Users visibility of other User's supply information (refinery production and import cargoes) means Users wouldn't be able to complete necessary tasks such as:

- Confirming the acceptability (vetting) of each vessel for berthing
- Acceptability of product quality for each cargo
- Verification of terminal capacity to receive the specified discharge quantity
- Arranging terminal operations (e.g. staff) to receive cargoes when the vessels arrive
- Ensuring other User's stock holding won't impact on their own import requirements and to determine the best timing for their own import cargoes

Instead Users would have to fully rely on COLL to manage these tasks, some of which would require specialist technical knowledge or in some cases for COLL to become directly involved in the terminal operations. COLL does not currently have this ability and it is unlikely Users would be willing (for safety and quality reasons) to give up control of these tasks. This outcome would seem even less likely if an independent third party was used instead of COLL.

5.2.3 Demand

Users visibility of forward demand is already restricted to other User's total demand in the NSS by Product and port NSS demand by Product other than for Wiri, which is used for managing the allocation of available RAP capacity as the pipeline is currently operating at capacity. It would be difficult to further restrict visibility of forward demand as Users need to see other Users national demand by Product (in CONCORD) to check Users are supplying sufficient Product to the NSS to meet their NSS demand. They also need to see forward port NSS demand to verify the shipping schedule (COSMIC) is robust and that Refinery stocks are acceptable.

Each month Users also receive the latest BDO New Zealand report of historic sales data for all products for each User (we understand Users provide the data to BDO for this report). This report doesn't include any forward data, but could be provided less frequently (e.g. quarterly) if the

¹² <https://investor-centre.z.co.nz/investor-centre/assets/Uploads/Z-welcomes-commitment-to-greater-refinery-efficiency.pdf>

frequency of update is of concern. As noted in Section 2.2.3, this data is primarily collected so that Refining NZ and Users can annually establish refinery capacity for the next year.

H&T's view is that the current restriction of User's forward demand data is appropriate, including for Wiri as the current pipeline constraint means the volume of Product pumped will not equate to **each User's regional market share. If the RAP becomes unconstrained it would be reasonable to expect that only the total forward demand volume would be provided to each of the parties.**

5.2.4 Stock ownership

The CONCORD report shows daily stock ownership figures for each Product by User and in total. This gives each User details of their stocks in the NSS and allows them to verify that other Users are meeting their obligations for providing sufficient Product to the NSS to meet their NSS demand requirements. COLL also uses the CONCORD reports to assess if a User has sufficient ullage for discharging their import cargoes.

It would be possible to limit visibility of other User's stock ownership details by providing separate reports to each User with their own figures and the total stock figures in the NSS. However, that would require Users to rely on COLL to ensure that each User was complying with the agreed operating rules for providing sufficient stock and storage to the system to meet their national NSS demand requirements.

Where there is a projected product shortage at a port Users would require details of the product allocation for each User so they can verify the accuracy of the allocation and to ensure Users only lift product allocated to them at that port. Terminal operations are managed by terminal owners so they require details on what stock each User is entitled to lift from the port when there is a shortage of stock at that port. As the allocation process is derived from stock ownership positions this requires COLL to disclose projected stock ownership data. **Also as COLL doesn't manage terminal operations and doesn't have real time stock information it would be impossible** for COLL to ensure that individual Users only lift stock that has been allocated to them.

H&T's view is that as the CONCORD report reflects NSS stock ownership (i.e. nationwide) and as there is no restriction on Users lifting product from the NSS (except where there is a product shortage), **it seems unlikely that knowledge of another User's** national stock ownership position would result in one User being able to obtain a competitive advantage over another User at a port so retaining the current report arrangements seems acceptable.

5.3 Minimise B&L data sharing

The B&L contracts are bilateral arrangements between two Users with a common database platform used for reconciling individual transactions. While the database used is common, the data shared is bilateral, that is other Users are not able to see transactions they are not involved in.

Due to the way the NSS works (i.e. User products may be discharged into different locations to where User product is lifted from), there is a net down process that is done periodically to fix product imbalances. Currently the net down process requires Users to share current nationwide B&L balances by Product (no B&L transactional data or locational balances are shared), with adjustments then applied for each product to square off product imbalances for each User.

Feedback provided indicates that previously Product balances for each location were shared as stock accounting system limitations (number of available digits) meant the net down was required for each location to ensure the volume figures remained within the constraints of the accounting software. However, this is no longer a constraint, hence only nationwide balances are used.

If there was concern about Users sharing their current B&L balance data for the net down, it would be possible for Users to share this with COLL (or some other third-party) for them to do the net down calculations. This would limit the level of data shared with Users to that which would be required to make the adjustments to square off the product imbalances.

H&T's view is that shifting responsibility to COLL for calculating the net down adjustments is not required as the net down process is done at a nationwide level; this doesn't provide Users with information or insight of other Users regional market shares.

6.0 Conclusions

Consultation with each of the Users has clarified how the NSS and B&L arrangements work and the data used in the system. As a result of this review and taking into account other data sources available to Users, H&T has concluded that:

1. The NSS provides an efficient coastal shipping outcome for Users to manage the shipping of product from Refining NZ to the coastal ports and for ensuring efficient discharge of their import cargoes. For the NSS to work the Users need to share data on their supply and demand situation as well as tankage contributed to the NSS. **H&T's conclusion** that the system is efficient is constant with previous **economists' findings on how the system works**.
2. COLL, while owned by Users, does act as a third party. We expect Users will, for commercial reasons, want to limit data sharing and that the NSS arrangements will have confidentiality obligations. This ownership arrangement will resolve potential liability/risk issues that might arise if a third-party was used to administer the arrangements. If there was concern about **COLL's** independence and protection of User data (particularly forward-looking data) this could be managed via periodic audit or an annual assurance process to Government.
3. COLL already aggregates individual User data for use in the NSS. Users can see forward demand for each port by product and also for each User (in total) by product. However, **Users are not able to see other User's forward demand at** any one location. If there is concern about the current level of data sharing it would be possible reduce this without significantly impacting on how the NSS works.

Options identified are:

- Restrict tankage details to the total NSS storage at each port by product and the total NSS storage for each User by product, although this seems unnecessary;
 - Forward demand data is already aggregated, other than at Wiri which should be aggregated (once the RAP becomes unconstrained), but for the historic BDO New Zealand sales reports the frequency of update could be reduced; and
 - Stock ownership reports (CONCORD) could be done for each User showing only their forward stock ownership position in the NSS by product and the total NSS position, **although as the NSS doesn't stop Users from lifting product (unless there is a product shortage at a location)**, it is questionable if restricting this data would matter.
4. The B&L contracts are bilateral arrangements between two Users, so H&T does not see any concerns with these arrangements. If there is concern about the level of data currently shared for the periodic net down process, this could be mitigated by using COLL (or another third-party) to do the calculations with the output provided to Users for them to make the necessary adjustments to correct Product imbalances in the NSS, **however H&T doesn't think** this is required as currently the net down process is done at a nationwide level.

A summary of H&T's findings and conclusions is provided in Table 4 below.

Table 4: Summary of H&T's findings and conclusions

Item	Finding	Conclusion
Third party provider	COLL already provides third party outcome for the NSS.	No need to add another party. Government could seek annual confirmation of appropriateness of data collection/dissemination done by COLL.
NSS storage (tanks)	Users can access details of all tanks in the NSS, including those provided by other Users.	Restricting access to NSS tank data is not relevant to regional market share data, and is available through other means.
NSS supply	Planned refinery production for each User is used to work out each User's share of expected production by product.	Refinery production and import details by cargo is required for scheduling. Without this data Users would need COLL to have specialist knowledge to manage tasks like vessel vetting, product quality, coordinating terminal operations and management of stocks. The acceptability of this outcome would seem unlikely.
	Users can see other User's import cargo details for Product into the NSS, but not non-industry cargo.	
NSS demand	For all locations other than Wiri Users can only see the total forward NSS demand for each product.	The current arrangements address the Study's concern about the visibility of other User's regional market share data. Any further reduction in data visibility seems unnecessary.
	Users can see total forward NSS demand for each User by Product	
	For Wiri, Users can see each User's forward demand by Product so that RAP capacity can be managed.	If RAP becomes unconstrained it would be reasonable to expect only total forward demand would be shared with each User.
	Users can obtain historic demand details for each User by port, product and in total.	As this is historic data no change is required.
NSS Stock ownership	Users can see what stocks by product that the other Users are holding in the NSS. This allows Users to verify that others are meeting their NSS obligations.	This visibility is important for each User so they can ensure all Users are meeting their obligations. It provides no market sensitive information.
B&L	Each B&L contract is a bilateral arrangement between two Users and while a common database is used for matching transactions, the actual data is only shared by the two transacting parties.	As these are bilateral contracts there's no need to make any changes.
	The net down process requires Users to share current nationwide B&L stock balance data for the net down calculations to be done.	While this task could be done by COLL to limit sharing of B&L balances with other Users, this seems unnecessary as the net down is done at a national level.

Appendix 1: Data summary

COLL

Data	Use
Total port tankage for each product	For scheduling cargoes and imports
RNZ storage for each product	For verifying refinery cargo lifting feasibility
Wiri/TLF storage	For understanding impact on cargoes
Each User's national tankage by product	For checking each User's space for ullaging imports
Refinery production by product	For verifying cargo lifting feasibility and managing refinery stocks
User planned refinery production by product	For calculating User's share of refinery production for stock ownership reports
User import cargoes by product	For scheduling discharge of imports
User system demand by port and product	For administering stock allocations
System demand by port and product	For scheduling cargoes and imports
System demand by User and product	For calculating system stock ownership by User and product

Users

Data	Use
Total port tankage for each product	For verifying the schedule is robust
RNZ storage for each product	For verifying lifting schedule is ok
Wiri/TLF storage	For verifying pipeline pumping plan is ok
Each User's national tankage by product	For checking ullage for own imports and that there is sufficient capacity to meet its stockholding strategy Also allows Users to check other Users are contributing sufficient storage
Refinery production by product	For calculating share of refinery production and verifying shipping schedule is ok
User planned refinery production by product	For calculating share of refinery production
User import cargoes by product	For verifying vessels and schedules are ok
System demand by port and product	For verifying schedules are ok
System demand by User and product	For verifying other Users are meeting stock obligations and for planning import cargoes
National sales, incl. non-JV, by product	For annually setting refinery processing capacity

Public data

Data	Source
Port, Wiri and TLF tankage by grade	Energy in New Zealand report for Petrol, diesel, jet and fuel oil for each location Satellite images and resource consents can provide location specific information on tankage
Refinery production by product	Refining NZ annual reports and analyst briefing papers
Import cargoes by product	Import statistics
Demand by port and product	Energy in New Zealand for Petrol, diesel and jet LAFT for regional petrol and diesel demand
Demand by User and product	Z Energy annual reports and analyst briefing papers also some information on other company websites
National demand by product	Quarterly Energy Data File

Appendix 2: Public information on the NSS and B&L

A review of recent literature gives some insight into the purpose and principles of the NSS and B&L, although the level of detail found in the public arena is not of sufficient detail to respond to the questions asked by MBIE. Known information on the NSS and B&L is summarised below. For ease of reading the terminology in each section has been updated to the same terminology as used in this report.

Commerce Commission Determination

The Commerce Commission determination on Z Energy's acquisition of Chevron New Zealand¹³ summarises that to avoid duplication of primary distribution assets, the Users share the use of **each other's terminal assets**¹⁴. Under the NSS terminals are declared as shared storage with the Product held in these terminals jointly owned by the Users. Users can lift Product from another User's terminal **without** having to buy or sell that product. While a User may lift as much Product as it wishes, it must ensure it contributes the same amount to the NSS, either locally from Refining NZ or by importing. B&L transactions for Product are accounted for by COLL. If a User has borrowed more Product than it has contributed, COLL can require that User to contribute more Product to the NSS. Terminal owners will charge a per litre throughput fee to Users who lift Product from that terminal under B&L arrangements.

Z Energy application to acquire Chevron New Zealand

In its application to the Commerce Commission to acquire Chevron New Zealand¹⁵ Z Energy describes how the Users operate a NSS and use B&L to track inventory in this arrangement. Each of the Users has a stake in key New Zealand terminal storage assets used for storing Products¹⁶ and can access supply at each of the shared terminal locations under the purview of the NSS.

Z Energy further explains how Users' **Product is discharged into others' tanks, and at that time** (until it is drawn from the tanks by truck) Product custody and risk transfer to the terminal owners, **but not title. "Borrowing" and "lending"** of Product are netted off against each other, on an equal basis regardless of location, when calculating a User's **"balance"**. While individual Product balances at a terminal location can be large (hundreds of millions of litres out of balance), on a nationwide basis each User will generally be in balance (i.e. neither materially in credit or debit) for each Product. Shared storage can be considered collectively on a national basis and not segmented by Product or location due to the nationwide operation of the NSS.

Information in the Study

The Study outlines the Users operate the NSS and B&L whereby they can take Product from shared terminals operated by other Users. Product held within shared terminals are jointly owned by the Users. The NSS and B&L operates under rules intended to ensure that each User's dealings with other Users are balanced, that is the net amount of product **taken from the other's** terminals is zero (i.e. takings are netted against fuel added to terminals).

¹³ Determination | Z Energy Limited and Chevron New Zealand | [2016] NZCC10 | 29 April 2016

¹⁴ Users independently own terminals at various ports, although not at every port or for every product

¹⁵ Z ENERGY LIMITED | Notice seeking clearance to acquire Chevron New Zealand Limited | 30 June 2015

¹⁶ Certain terminal assets are owned by joint venture, while others (particularly storage tanks) are owned by one of the companies individually

The authors noted that while the NSS and B&L will create real and substantial logistical efficiencies for the operation of Refining NZ, coastal shipping, and terminals¹⁷ these potentially come at the cost of restricting competition. Furthermore, the authors indicate the NSS and B&L seems to provide the Users with a high level of visibility of regional market shares for each of the Users (as well as independents). This concern has resulted in the recommendation for further investigation on the practicality of modifying the NSS and/or B&L, e.g. via exchanging data through an external (third party) registry to limit the visibility of each other's market shares.

2005 Oil Security Report

The 2005 Report¹⁸, although more historic, perhaps provides the most detailed overview of how the shared storage arrangements work, but lacks detail on the NSS and B&L; this describes:

- The Users employ a system enabling each User to lift Product from any location subject to having access arrangements with that terminal owner. This system works on the concept of stock ownership, with the right to draw stock based on having a positive stock balance. The system is monitored by COLL on behalf of the Users.
- Each User contributes storage held across the country into a pool of storage. The system is best explained as if each User has one large tank (even though this is a combination of all tanks contributed into the pool). Stock parameters are used to replicate how storage would operate on a standalone basis, these cover minimum and maximum stock levels that can be held in the NSS and an optimal stock target for each User.
- Each User's stock ownership in the NSS is continually monitored by COLL. If a location faces the prospect of supply disruption (e.g. from a delayed import vessel), remaining Product at that port is **placed on "coordination"** with remaining Product allocated to each User with consideration to their current Product ownership position.

Consolidated information on the NSS and B&L

Consolidating the above information on the NSS and B&L indicates the following:

- The Users operate a shared storage arrangement that allows them to **use each other's** storage (subject to access arrangements). Users contribute to the pool of storage.
- The Users use stock parameters to replicate how storage would operate on a standalone basis. This includes stock targets for each User.
- When Product is discharged into others' tanks custody and risk is transferred to that terminal owner, but not title.
- Product held in the NSS is jointly owned by the Users with Product movements into and out of other User's terminals in the NSS accounted for using B&L.
- Users can lift Product from other terminals without having to buy or sell that product, but terminal owners will charge a throughput fee to Users who lift Product from that terminal.
- While a User may lift as much Product as it wishes from the NSS, it must contribute the same amount to the NSS. COLL monitors the Product ownership position for each User in the NSS. There is conflicting information on whether COLL can require a User to contribute more Product to the system or if this is managed by way of "coordination" at ports with low stocks.

¹⁷ This might include enabling Refining NZ and coastal distribution to be operated at high capacity utilisation, and allow Users to avoid the need to replicate terminal fixed costs

¹⁸ Oil Security | Covec and Hale & Twomey for The Ministry of Economic Development | February 2005

- A User's "stock balance" is derived by netting off their nationwide "borrows" and "loans" (i.e. without regard to location). This can result in large individual Product imbalances at a particular location or terminal but each User's nationwide stock balance for each Product will generally be balanced.
- Some information suggests COLL is responsible for accounting of B&L transaction, but this is not described as being the case by Z Energy in its application to acquire Chevron.
- The authors of the Study have also suggested the NSS and B&L may provide Users with a high level of visibility of regional market shares for each of the Users.

In conclusion, the level of detail found on the NSS and B&L is limited and will be insufficient to fully understand how the system operates. There are also some areas where information conflicts or is unsubstantiated.

Annex 8: Hale & Twomey report: *Supplementary Information on Wholesale Markets*

New Zealand Fuel Market Study, Supplementary Information on Wholesale Markets

Prepared for the Ministry of Business, Innovation and Employment

October 2017

Hale & Twomey Limited is an energy consultancy specialising in strategic issues affecting the energy sector. With a comprehensive knowledge of local and international energy markets, we provide strategic advice, comprehensive analysis and services across the entire sector.

Hale & Twomey prides itself on being able to analyse and interpret the detail, then translate the implications into strategic directions for our clients. We provide expertise to a broad range of companies and government departments. Hale & Twomey has established a strong reputation in the sector by producing timely, high quality, value-adding work.

Authorship

This document was written by:

Richard Hale	Phone: +64 4 471 1108, e-mail: richard@haletwomey.co.nz
Ian Twomey	Phone: +64 4 471 1109, e-mail: ian@haletwomey.co.nz
Steve West	Phone: +64 4 471 1153, e-mail: steve@haletwomey.co.nz

Please phone or e-mail for further information.

Disclaimer

Hale & Twomey Limited, its contributors and employees shall not be liable for any loss or damage sustained by any person relying on this report, whatever the cause of such loss or damage.

P +64 4 471 1155 F +64 4 471 1158

Level 14, Terrace Conference Centre, 114 The Terrace, PO Box 10 444, Wellington 6143, New Zealand

Executive Summary

This report examines how a selection of petroleum wholesale markets work (including any regulatory interventions) and how these compare with the New Zealand situation. The report responds to questions arising out of a review of the financial performance of the fuels market in New Zealand which noted that *"New Zealand lacks liquid regional wholesale markets through which independent suppliers can reliably access fuels – instead they are reliant on being able to secure long-term supply contracts from the majors"* and that *"this reliance potentially limits their ability to compete head to head with the majors"* in parts of New Zealand. It examines the types of interventions for the markets in Australia, Canada, Chile, South Africa, the United States and the United Kingdom and then considers applicability to the wholesale market in New Zealand.

Petroleum wholesaling is generally characterised as the supply of petroleum from bulk storage facilities to distributors/retailers for on selling to end consumers. In some cases the distributor may be part of the wholesaling activity but as a general guide a company that only wholesales would not supply to end consumers. Transacting is typically bilateral, and in some countries transactions may be supported by regulatory obligations to disclose a daily ex terminal price (Australia) or wholesale rack (US) price. Australia also has an Oilcode, which is designed to regulate the conduct of suppliers, distributors and retailers.

These countries exhibit a range of interventions in their competition framework, from light handed (information disclosure, market studies) to stronger interventions (price control). We have not been able to identify any liquid wholesale markets where wholesale suppliers and buyers contract through a market or trading platform on a daily basis, in a similar way that major commodity markets operate, or local markets such as the New Zealand electricity and gas¹ markets.

How regulatory interventions arise in wholesale markets does not necessarily follow a predictable path. Some have occurred because of merger and acquisition activity (Canada) where the regulator has imposed interventions to minimise the impacts of the transaction on competition at the wholesale level. This suggests that regulators need to take care to understand whether impacts can arise beyond the immediate boundary of a transaction. It also suggests that interventions adopted will tend to be situation specific.

Petroleum wholesale and retail markets internationally have undergone significant change over the last 30 years. Supply and distribution activities have become more diverse and fragmented, with greater participation from non-traditional players (e.g. independent wholesalers including storage only provider/operators, supermarket retailers, branded distributors and independent retailers). At the same time, we have seen a reduction in the extent of vertical integration that was a feature of the traditional market. As a result, wholesale markets have become less concentrated in the hands of a few players although our review suggests issues around concentration can still increase (such as the merger/acquisition activity in Canada and Z Energy's acquisition of Caltex in New Zealand).

Probably the intervention of most interest for New Zealand is the Australian Oilcode and the related disclosure obligations. The Oilcode entitles a party to purchase a minimum quantity of fuel (30,000 litres) at the Terminal Gate Price (TGP) set by the terminal owner/wholesaler. Provided the party meets certain criteria (including creditworthiness), the supplier cannot unreasonably refuse to supply. The TGP is the published price at which an independent purchaser can expect to buy a minimum quantity of fuel in a road tanker at each terminal facility. The TGP operates effectively as a spot price for small volumes (a buyer must buy a minimum 30,000 litres).

¹ Spot trading of natural gas is a relatively new feature in New Zealand with some volume traded on a market trading platform.

In reality there are few transactions concluded at the TGP level and therefore TGP's are not considered representative of wholesale prices. This is understandable given the expectation that wholesale transactions would likely be for term supply (we would expect prices to be lower) but it does suggest that TGPs may act as a baseline or reference point for companies wishing to negotiate longer term arrangements with wholesalers.

One further feature of the Australian market is that wholesale market participants are required to provide on a monthly basis the price at which they conclude wholesale sales. The ACCC tracks and **publishes TGP's against month average wholesale prices as well as the notional cost to landed** petroleum product at the relevant location. Hence the Oilcode mechanism is accompanied by a disclosure regime that provides greater transparency around wholesale pricing by location.

While a code of practice could be beneficial in New Zealand as it might provide an opportunity for new entrants to gain access to product, at a relatively low threshold (this may signal competitive threats to incumbent wholesalers), this is unlikely to provide a strong bargaining position for a new entrant. However, this may prejudice how they would view a market opportunity or how the market might evolve in the knowledge that spot supply could be available. We note the Oilcode **does not mandate access to a wholesaler's storage capacity terminal** (i.e. the right to import into and draw product from the facility). Rather, **the obligation on the wholesale supplier is to "not unreasonably refuse to supply"**.

In circumstances where the regulatory intervention has been to stipulate access at a wholesale level (Canada, and to a lesser extent Chile) this has been in response to a specific market event after a review of the potential impact on competition generally. Other than that we have not seen stipulated access as a common feature of the jurisdictions considered.

Applicability for New Zealand

Adopting posted or terminal gate prices at the wholesale level would appear to be feasible, although as we note with respect to Australia would likely require regulation. Furthermore while TGPs are indicative in Australia they generally are not the basis for pricing at wholesale. This would raise questions about the benefit of such regulation here. It may be that the benefit is in greater transparency of costs at the wholesale level, when taking into account landed cost of petroleum using Import Parity Pricing.

One specific consideration for New Zealand would be the use of shared storage by BP, Mobil and Z Energy. Under this arrangement market participants could each be wholesaling out of the same facility. This raises questions about the ability to delineate a wholesale facility at a given location (who is the wholesaler?) as well as how obligations (e.g. posted pricing) would be placed on wholesalers. To the extent wholesalers were each required to post prices this might add to the competitive dynamic around shared storage locations. We would recommend that any proposals to create a visible wholesale market should consider this aspect in more depth.

The table below summarises the range of interventions identified in this report over a spectrum from light to more heavy-handed with comment on what might be applicable for New Zealand.

HEAVY < ----- INTERVENTION ----- > LIGHT

Intervention/Process		Approach/Applicability to NZ
Monitoring	<ul style="list-style-type: none"> Public retail prices (e.g. NZ) 	<ul style="list-style-type: none"> Done in NZ, with national retail prices by MBIE and regionally through public platforms such as PriceWatch and the Gasp app
	<ul style="list-style-type: none"> Provide sales point market data, including wholesale prices (e.g. US) 	<ul style="list-style-type: none"> Process for collecting sales point data would allow regional retail price comparison – would require market to provide data (possibly regulation to enforce if not volunteered)
	<ul style="list-style-type: none"> Visible sales point data (e.g. TGP in Australia) 	<ul style="list-style-type: none"> Could require TGP in NZ, but would need to consider how the shared storage might impact process
Reviews	<ul style="list-style-type: none"> Periodic examination of market (e.g. AU) 	<ul style="list-style-type: none"> Done in NZ, but process is retail focused and infrequent, could set framework for defining wholesale market and triggering reviews
	<ul style="list-style-type: none"> Keep abreast of market developments (e.g. UK) 	
	<ul style="list-style-type: none"> Check local wholesale prices vs international benchmarks (e.g. AU) 	<ul style="list-style-type: none"> Would require provision of data from market participants
Market Studies	<ul style="list-style-type: none"> Targeted focus such as location study (e.g. Darwin in AU) 	<ul style="list-style-type: none"> Not done but differences in regional pricing suggests same drivers as seen in Australia
	<ul style="list-style-type: none"> Could be done in relation to Merger & Acquisition 	<ul style="list-style-type: none"> Done in NZ, but greater focus on wholesale market delineation/market data could provide wider basis for testing system effects
	<ul style="list-style-type: none"> Market wide studies 	<ul style="list-style-type: none"> While not an option currently, this could be an option for NZ
Codes	<ul style="list-style-type: none"> Use of a code to regulate conduct between suppliers, fuel distributors, retailers, etc. (e.g. AU) 	<ul style="list-style-type: none"> Currently no mechanism exists in NZ, this would require regulation
	<ul style="list-style-type: none"> Provides a framework for access to wholesale products (e.g. AU) 	
	<ul style="list-style-type: none"> Wholesale price transparency 	
Mergers	<ul style="list-style-type: none"> Impose specific conditions (e.g. CH) 	<ul style="list-style-type: none"> NZ generally has focused on retail market impacts Increased focus on wholesale market impacts would likely strengthen outcomes for NZ
	<ul style="list-style-type: none"> Force wholesale access to address competition concerns (e.g. CN) 	
	<ul style="list-style-type: none"> Identify barriers to entry 	

Table of Contents

Executive Summary	i
1.0 Introduction	2
2.0 Wholesale markets	2
2.1 The Study findings.....	2
2.2 What is the wholesale market?	3
2.3 Wholesale market definitions in this report	4
3.0 Wholesale markets in other jurisdictions.....	5
3.1 Australia.....	5
3.2 Canada	8
3.3 Chile	9
3.4 South Africa	10
3.5 United Kingdom.....	12
3.6 USA	13
3.7 Reflections on other jurisdictions	13
4.0 Wholesaling in NZ.....	14
5.0 Summary of Wholesale Market Interventions	16
5.1 Disclosure and Monitoring	16
5.2 Provision of information	17
5.3 Mandated Requirements	17
6.0 Applicability for New Zealand	19
6.1 How to delineate the wholesale market.....	19
6.2 Disclosure and monitoring	19
6.3 Mandated Requirements	20
6.4 Interventions and Applicability to New Zealand.....	21

1.0 Introduction

The Ministry of Business, Innovation and Employment (MBIE) monitors the performance of New Zealand's deregulated retail petrol and diesel market. While the retail fuels market has historically been considered broadly competitive, in recent years (particularly since 2011) observed importer margins have trended upward. In response to this trend MBIE commissioned the New Zealand Fuel Market Financial Performance Study (the Study) to review its significance.

The Study was published in July 2017 with the authors concluding that *"although they could not definitely say that fuel prices in New Zealand are reasonable, they have reason to believe that they might not be"*. One recommendation was to make a further assessment of the costs and benefits for creation of a liquid wholesale market as *"New Zealand lacks liquid regional wholesale markets through which independent suppliers can reliably access fuels – instead they are reliant on being able to secure long-term supply contracts from the majors"* and that *"this reliance potentially limits their ability to compete head to head with the majors"* in parts of New Zealand.

MBIE has asked Hale & Twomey (H&T) to look at wholesale markets in other jurisdictions focusing on those where there have been regulatory interventions. H&T has been asked to summarise how these markets work and to compare how these markets or features of these markets compare with New Zealand's situation with commentary on the applicability of these for New Zealand.

2.0 Wholesale markets

2.1 The Study findings

The Study describes the wholesale market in New Zealand as limited as the market is dominated by the three vertically integrated major oil companies that operate in New Zealand (defined in the Study as the Majors)². As part of their activities the Majors wholesale fuel to others, mostly fuel distributors, such as Allied Petroleum, Farmlands, McKeown Petroleum and Waitomo Petroleum under long-term supply contracts. However, wholesale sales ex-terminal to smaller wholesalers (such as Gull) or other independent market participants is not a regular feature in New Zealand.

The Study found most wholesale contracts involve a pricing formula that pegs the wholesale price to the cost of imported refined products and while prices will reflect movements in the commodity price, the pricing formulas are generally fixed for the term of the contract. They also highlighted that part of the reason for rising retail fuel margins in the South Island and Wellington relative to the rest of New Zealand was due to the inability of independent suppliers to be able to reliably access fuels on a wholesale basis from terminals located in that part of the country.

The Study concluded that unless terminal capacity in places like Wellington and the South Island were to become available, it would be difficult for an entrant to enter these markets (despite higher margins) due to lower population density, higher distribution costs (for the South Island) and the need to quickly secure market share (i.e. retail sites) as well as lack of terminal access.

The study recommended further assessment on the possible creation of a liquid wholesale market to allow independents to compete head to head with the Majors in all parts of New Zealand.

² BP Oil New Zealand Ltd, Mobil Oil New Zealand Ltd and Z Energy Ltd including Z Energy 2015 Ltd

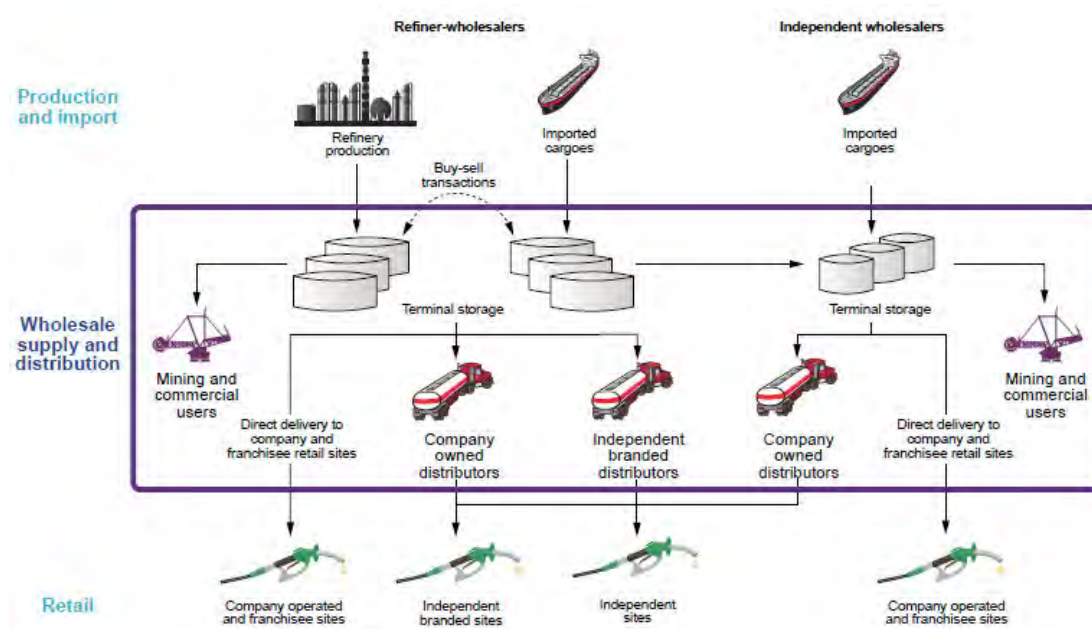
2.2 What is the wholesale market?

It is important for the purposes of this review to define what is meant by wholesale markets so we can compare the New Zealand market with other jurisdictions.

The Australian Competition and Consumer Commission (ACCC) provides a view of wholesaling in its role promoting competition and fair trade in Australia. It is responsible for monitoring the effectiveness of an industry oil code (the Oilcode) under the Australian Competition and Consumer (Industry Codes-Oil) Regulations 2017³. The Oilcode sets a framework for regulating the conduct of suppliers, distributors and retailers involved in the petroleum marketing industry.

The Oilcode defines wholesale suppliers as *"a person who sells declared petroleum products by wholesale from a wholesale facility"* and defines wholesale facilities as an oil refinery, a shipping facility, or a facility that is connected to an oil refinery or a shipping facility either directly or indirectly via another facility. Hence the Oilcode delineates wholesaling by reference to defined activities. This is illustrated in Figure 1.

Figure 1: Pictorial diagram of the wholesale market in Australia



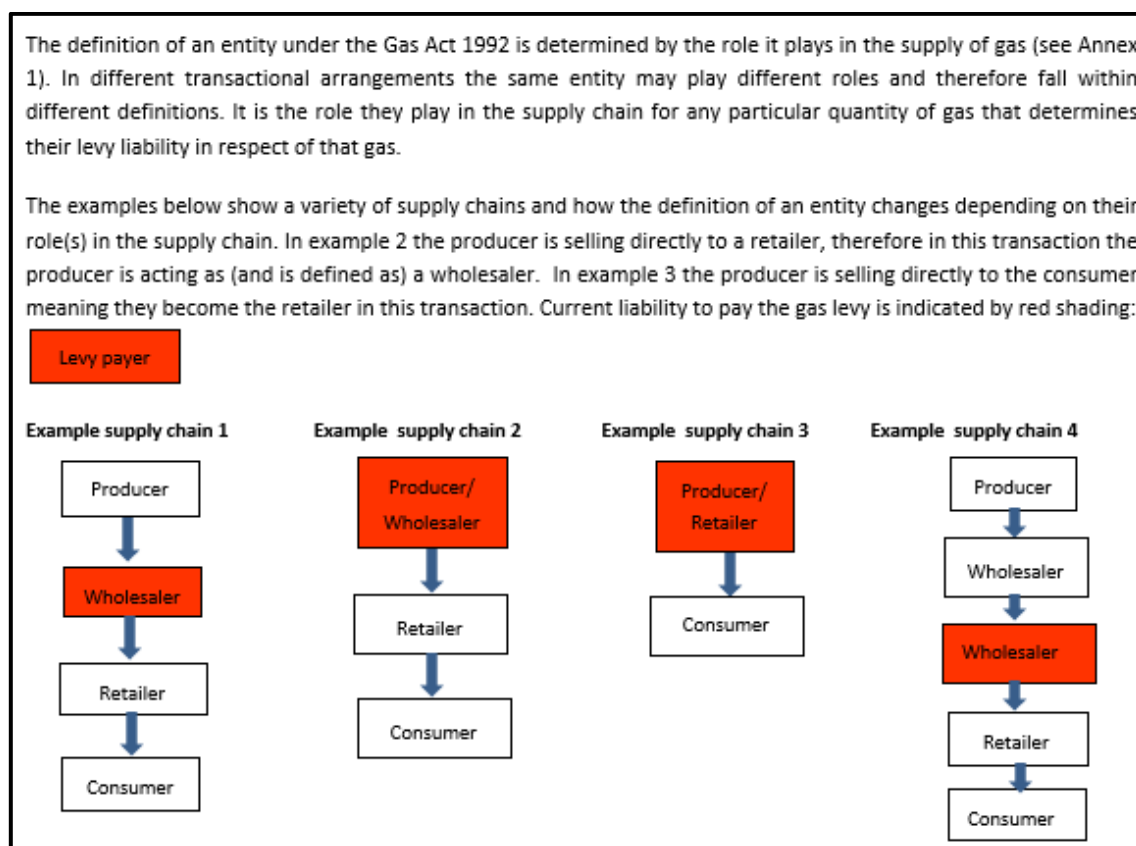
Source: ACCC

There may be circumstances where a market participant is of sufficient scale to justify its own storage facilities e.g. an industrial or mining activity. If it was also retailing it could be considered a wholesaler but that is unlikely to be an outcome in New Zealand. Nevertheless it suggests that classifying a market participant may at times be situation specific.

The implications of how different entities might be classified by activity was identified as an issue by MBIE in considering how levies proposed under the Gas Act could be recovered. This identified that the role of an entity could change depending on the nature of the activity undertaken in the supply chain (see Figure 2).

³ Competition and Consumer (Industry Codes – Oil) Regulations 2017

Figure 2: Diagram of different supply chain arrangements for paying the gas levy



This suggests the activities that delineate wholesaling petroleum products could include:

- The supplier acquires, receives, stores and distributes bulk petroleum product;
- The customer purchases petroleum product from the facility for resale;
- The supplier supplies to other participants in the chain; and
- The supplier generally does not supply to the ultimate end user.

In the New Zealand market however, only some of the participants involved in the wholesale market are buyers or sellers. For example, Refining NZ provides a refining service to its customers. It does not act as the wholesale supplier, even though **Refining NZ's** facilities may be used by its customers in wholesaling products. Hence control or use of facilities may also be a test to delineate wholesaling rather than ownership. Also, while the larger fuel distributors may on-sell to the retail market they generally do not own or control storage. Hence, having storage will be relevant to considering whether distributors are wholesalers.

2.3 Wholesale market definitions in this report

For the purposes of this report, as it is likely to equate with most descriptions used in other markets, when we refer to:

- **"the wholesale market"** or **"the wholesalers"** we mean the market in line with the adjusted Oilcode definition (for New Zealand this would be for bulk sales from fuel terminals by one of four companies (BP, Gull, Mobil or Z)

Under this definition fuel distributors would not be considered as wholesalers (as they **don't tend** to own or control storage), although they are involved in wholesale activities either as a purchaser or in some cases as a reseller of bulk fuels to an end user.

3.0 Wholesale markets in other jurisdictions

In many countries competition authorities have responsibility for reviewing and monitoring the performance of wholesale and retail fuels markets. In some cases, markets are highly regulated requiring authorities to set or establish prices; in other countries (like New Zealand) authorities take a more light-handed approach, with price transparency and monitoring being their key tool for checking competitiveness of the retail fuels market.

While this report focuses on regulatory wholesale market interventions in other jurisdictions, the literature review done by H&T found interventions have often arisen out of merger/acquisition activities and retail price reviews, rather than from a review of the wholesale market. This is the case for New Zealand where the Study was in response to concerns about rising retail fuel margins. This section **summarises H&T's findings on** selected market interventions (both wholesale and retail where relevant) for other jurisdictions.

3.1 Australia

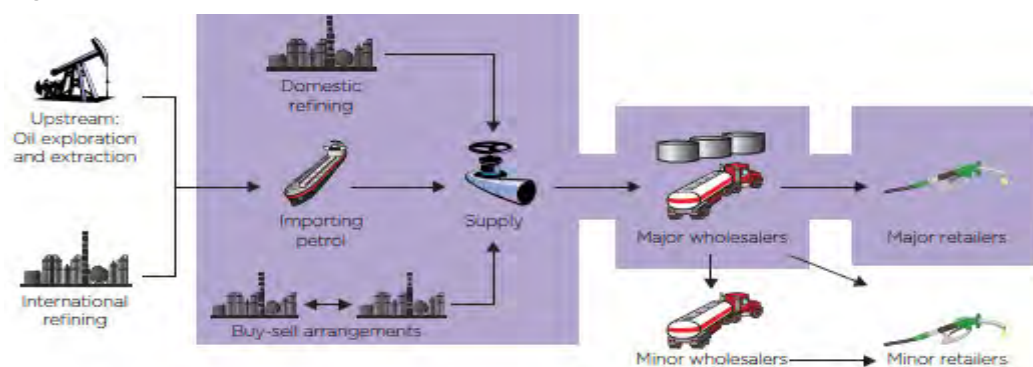
Responsibility for assessing effectiveness of competition in petrol and diesel markets in Australia is held by the ACCC. It does this in its role to enforce the Competition and Consumer Act 2010 (the Act) across the Australian economy. ACCC's activities in the petroleum sector cover enforcement and compliance, merger and acquisition, authorisations and notifications. It also undertakes market studies of the broader petroleum market from time to time, along with studies in specific geographic areas. The ACCC is charged with reviewing effectiveness of an Oilcode, a mechanism designed to regulate the conduct of suppliers, distributors and retailers in the petroleum sector.

The ACCC has defined the wholesaling sector by reference to three broad categories including:

- **Refiner-wholesalers:** BP, Caltex, Mobil and Viva. These companies supply petroleum which has been produced in domestic refineries, bought from other refiner-wholesalers through 'buy-sell' transactions, and imported.
- **Independent wholesalers:** including Puma Energy, United and Liberty. These companies source petrol from Australian refiner-wholesalers and/or overseas refineries.
- **Independent importers:** a small number of companies import low volumes of petrol into the Australian market, which they wholesale.

The wholesale and retail activities making up the supply chain delivering petrol and diesel to end consumers are illustrated in Figure 3. The ACCC monitors these elements, but exploration and extraction along with international refining do not form part of its remit. Petroleum prices are not regulated in the **Australian market; ACCC's role is a monitoring one.**

Figure 3: Australian Wholesalers



3.1.1 The Oilcode

The change from a regulated to deregulated market in Australia resulted in the need for change to the regulatory framework. In 2006 these arrangements were replaced by an Oilcode⁴ to regulate the conduct of suppliers, distributors and retailers. The objectives of the Oilcode were to:

1. Improve transparency in wholesale pricing;
2. Set minimum standards in relation to contracting requirements;
3. Assist market participants to make informed decisions when managing fuel reselling agreements; and
4. Provide access to cost effective and timely dispute resolution processes as an alternative to litigation.

The ACCC was charged with assessing the effectiveness of the Oilcode.

The initial Oilcode had a sunset clause (April 2017). A review of the Oilcode in 2008 concluded that the code had met its objectives but improvements could be made in the areas of contract terms and conditions, terminal gate pricing arrangements, dispute resolution and ongoing review.

In 2013 the Australian government undertook a major independent review on competition policy. This review identified that codes of conduct play an important role in competition policy. This fed into a specific review of the Oilcode, which began in late 2014 via a process of public consultation. Several options were proposed including repealing the code, retaining in current form and retention with the possibility of substantive change. Retention was supported across the industry, but with differences in view about the need for change. The review recommended the Oilcode should continue with minimal change and the regulations were promulgated in April 2017.⁵

Terminal Gate Price

One key mechanism is the requirement for wholesalers to set a daily Terminal Gate Price or TGP. The TGP is the published price at which an independent purchaser can expect to buy a minimum quantity of fuel in a road tanker at each terminal facility.

Access

This entitlement to buy is conditional on meeting certain requirements, including the ability to pay, **and to meet the wholesale supplier's** environmental, health and safety standards. However, under **the TGP arrangements a wholesale supplier must not 'unreasonably refuse' to supply** declared petroleum products (Part 2, Division 3,11). The Oilcode contains a dispute resolution mechanism (which includes appointment of a dispute resolution advisor by the Minister) and a process for good faith, but non-binding, mediation for resolving disputes such as a wholesale supplier refusing to supply declared petroleum products.

Reasonable refusal to supply would include having insufficient product, inability of the reseller to pay, the reseller not meeting health and safety standards or not ordering the minimum set quantity.

⁴ The Competition and Consumer (Industry Codes-OilCode Regulation 2006)

⁵ <https://www.legislation.gov.au/Details/F2017L00223>

The TGP operates effectively as a spot price for small volumes (a buyer must buy a minimum 30,000 litres; **the supplier must not 'unreasonably refuse'**) and may act as a baseline or reference point for companies wishing to negotiate longer term arrangements with wholesalers. As it is a **spot price for small quantities, TGP's are not considered representative of wholesale prices, which** would normally be transacted at a discount to spot pricing and hence there is some doubt about its effectiveness. Few wholesale sales are actually made at the TGP level and with the continued structural change in the industry, from a large number of small independents to a smaller number of larger independents, the demand for small spot sales is likely to diminish.

However, ACCC's analysis of wholesaler **pricing indicates TGP's** generally follow import parity and actual wholesale pricing as is indicated in the following charts:

Figure 4: TGPs and month average wholesale prices (cpl)



Figure 5: Month average wholesale prices and IPP from RULP (cpl)



3.1.2 Role of the ACCC

The ACCC has powers to undertake market studies. In 2007 the ACCC carried out a major public enquiry into unleaded petrol. This found that while the market was fundamentally competitive, the wholesale market was highly concentrated in the hands of the four refiner marketers, which impacted on the wider market. The ACCC noted several factors worked against new entrant wholesalers, including lack of access to import terminals. It also noted that features like “buy-sell” arrangements (the way that refiners sold their fuel to satisfy each other’s requirements) had an impact through the whole distribution chain.

ACCC put forward several recommendations to help promote greater competition in wholesale markets including identifying barriers to entry for independent importers. It was also mandated to conduct ongoing annual reviews of the industry, the last of which occurred in 2014. More recently its monitoring has switched to market studies of particular regions. These regional studies may not endure as the findings suggest market conditions in one area are broadly consistent with others.

TGP’s are also used as the wholesale basis for measuring average retail margins for the ACCC regional studies. Margins have been calculated by subtracting average TGPs from average retail petrol prices. Market studies have been undertaken in:

- **Darwin (November 2015):** There has been a substantial decrease in the differential between Darwin prices and the five largest cities in 2016 compared to the 2013/14 period which predated the market study.
- **Launceston (July 2016):** A similar story as for Darwin.

3.2 Canada

The retail fuels market in Canada has seen significant change over the last couple of decades with development of large multipurpose retail sites where fuel is just one of the many offers available; similar to New Zealand, Canadian retail sites have expanded to include non-fuel offers such as barrister made coffee and food outlets. Concerns have been raised with **Canada’s Competition Bureau** (the Bureau) about the impact of this on retailer margins.

Of interest to this report is the 2009 Suncor/Petro-Canada merger which involved assets across the supply chain including production, refining, shipping, terminal facilities, distribution, and the wholesaling and retailing of refined products. The area of greatest concern to the Bureau was the Greater Toronto Area (GTA) where ownership of two out of six refineries would be combined, with the merged entity controlling much of the terminal capacity at the GTA end of the Trans-Northern Pipeline. The Bureau concluded that absent wholesale and retail remedies, there would be a substantial lessening of competition.

In response to the Bureau’s concerns about the impact on competition within the GTA the parties agreed to provide:

- A 10-year terminal access agreement for capacity in GTA (awarded to Ultramar⁶);
- Provide wholesale volumes to unintegrated retail competitors in the GTA; and
- Divest 104 retail sites; 98 of these were divested to Husky who was an established player in the market, but with limited presence in Southern Ontario.

⁶ Ultramar (a subsidiary of Valero Energy Corporation) was a market participant in the GTA, but its existing terminal/distribution contracts were nearing expiry. The new terminal access agreement greatly increased their capacity allowing them to expand their wholesaling presence and compete for supply to independents.

More generally the Canadian federal government does not regulate fuel prices in Canada, but some Canadian provincial governments have more recently chosen to regulate retail prices, principally to reduce price volatility and to protect small retailers:⁷

- **Quebec:** Sets a minimum weekly petrol price based on its estimate of the acquisition cost, plus costs such as transportation and a minimum margin.
- **New Brunswick:** The Energy and Utilities Board sets a maximum weekly petrol price using a formula based on the New York Harbour price, with allowance for other costs and margin.
- **Nova Scotia:** Uses the New York Harbour spot prices as a benchmark. Wholesale prices are set 6cpl above the benchmark with different transportation costs for each price zone. Retailers are allowed a margin of between 4cpl (minimum) to 5.5cpl.
- **Prince Edward Island:** The Island Regulatory Appeals Commission has full discretion for setting retail prices and tracks a variety of benchmarks, although it typically uses New York Harbour prices when regulating maximum and minimum prices. Wholesalers also have the right to apply for a wholesale price decrease.
- **Newfoundland and Labrador:** Maximum retail petrol prices are set by the Board of Commissioners of Public Utilities based on spot prices for petrol with add-ons for various factors such as wholesale and retail margins, transportation and taxes. Transport costs differ for each of the 18 zones in the province. Prices are revised monthly.

Information on the Consumer Council website⁸ indicates major oil companies opt to post daily wholesale prices for petrol at each terminal and that these rack prices will be similar to the price companies would sell fuel to independent resellers. **It's not clear from the literature if wholesalers are required to post wholesale prices or if this is done for commercial reasons.**

3.3 Chile

Chile's fuels market has some interesting lessons for New Zealand as there are many similarities (long thin country supplied by a mix of refined product and import cargoes). The structure of the Chilean market is:

- All three refineries are owned and operated by ENAP, which is a State Owned Enterprise (SOE). ENAP is also active in the upstream (exploration and production) but not in the downstream (retailing);
- The refineries supply about 60% of the market with the balance being imports of finished product;
- ENAP is involved in product imports as are private companies (private company imports are dominated by one company - Copec);
- Much of the key distribution assets (pipelines) are owned by SONACOL a company owned by ENAP and participants in the wholesale market (a total of five owners);
- Storage facilities are owned by companies directly (ENAP and participants in the wholesale market), sometimes as joint ventures between two companies. Some major industry customers own their own storage facilities;
- The total market size is about 340 thousand barrels per day (20 billion litres) just over twice the size of the New Zealand market;

⁷ http://www.consumerscouncil.com/index.cfm?pagepath=Help_Library/Gasoline_Prices/Price_Regulation&id=13904

⁸ http://www.consumerscouncil.com/index.cfm?pagepath=Help_Library/Gasoline_Prices/Refining_and_Wholesale_Market_s&id=13898

- The wholesale market consists on ENAP and direct imports as the 'sellers' and four companies (Copec, Enx, Terpel and Petrobas) as the main buyers with other small wholesalers having less than 5% share;
- Retail (based on site numbers) is dominated by the four companies above with Copec in particular having almost 60% market share. Independent distributors have only 3% of sites. The retail segment "*has been identified by the competition authorities in Chile as a highly concentrated market.*"⁹

Competition issues in the market are overseen by a government department (Fiscalia Nacional Economica - FNE) with cases investigated by the Chilean Competition Tribunal (TDLC). The main cases of relevance to the wholesale market relate to conditions put on mergers. When the largest company (Copec) sought to purchase a company that also owned a competitor in the Chilean wholesale/retail market, conditions were imposed. While Copec had proposed selling the company's Chilean subsidiary within two years and keeping operations independent in the interim, TDLC added additional conditions with the aim of keeping competition in the wholesale market:

*"The TDLC upheld the position of the FNE, holding that maritime terminals and storage facilities were essential facilities for the wholesale distribution at a national level, that the high sunk costs were an entry deterrent and that the time needed for planning new infrastructure and logistics projects for wholesale distribution made it very hard to have timely entry or new entry at all"*¹⁰

The additional conditions imposed included selling all the Chilean downstream assets (including marine terminals and retail sites) to a single buyer (aiming to give the buyer scale to compete independently) within 18 months. When the proposed purchaser was another competitor in the market, TDLC also rejected this due to entry barriers and coordinated effects. However, this was appealed to the Supreme Court who overturned the rejection (they held that prohibiting the transaction was not proportionate) and allowed the purchase to go through (with some minor conditions for retail site divestment).

3.4 South Africa

Retail petrol prices are regulated in South Africa by the South African Department of Energy with these built up on a first principles basis using a notional import parity price formula, allowances for local costs (e.g. transportation) plus annually set wholesale and retail margins. Retail diesel prices are not regulated, but the Department uses the same methodology to calculate a wholesale diesel price. Further details on each of the components used in the price build up is given below.

Basic Fuel Price (BFP)¹¹

The BFP is described as a notional import parity price that provides a realistic estimate of what it would cost to bulk import that fuel. The BFP methodology has been in use since 2003 (replacing an earlier price methodology dating back to 1994). The BFP also includes some local costs.

- Uses daily spot market prices (petrol = 50% Med. + 50% Sing., diesel = 50% Arab Gulf + 50% Med.)
- International shipping cost to South African ports and shipping related costs such as demurrage, insurance and other minor costs

⁹ OECD Competition in Road Fuels, 2013 (page 101)

¹⁰ OECD Competition in Road Fuels, 2013 (page 103)

¹¹ http://www.sapia.org.za/Portals/0/doc/Price_adjustment_FINAL.pdf?ver=2016-02-01-090916-157

- An allowance for cargo losses and landing (wharfage) charges
- Receiving terminal costs
- Stock financing

The BFP is reviewed monthly (just prior to the end of the month) against the spot prices for that month to determine if an adjustment is required to correct for how spot prices moved versus the figure used for that month's BFP. The information reviewed implies the BFP is used as the transfer price from refining to marketing, although we've not found detail on how this is done.

Regulated retail petrol price

South Africa has a long history of price regulation with information suggesting this dates back to the mid-1970's where the government at that time controlled the level of returns oil industry participants could make on their assets. In 2004 the predecessor to the South African Department of Energy started using the regulatory accounts to set appropriate margins for retail petrol. While information suggests this change was made as a precursor to deregulation, H&T has not found anything to suggest that deregulation is currently under consideration.

The current regulated retail price for petrol in each zone in South Africa is the sum of:

- The BFP for petrol;
- Government taxes and levies;
- Wholesale margin, this is set annually by the government based on a review of oil company costs and profitability;
- Service differential to cover oil company depot costs and depot to customer delivery costs - like the wholesale margin this is set annually by the government;
- Transport costs for moving petrol from coastal ports to inland distribution centres by pipeline, rail or road. Rates are set for different zones (to reflect distance from the port) using information from the Road Freight Association or actual pipeline rates;
- Dealer margin - this is described as the margin that service station owners/operators are permitted to add to the petrol price. This is set annually by the government; and
- Other adjustment factors to cover where pump price adjustments have caused a delay in price recovery and to round the price to whole cents.

Wholesale and retail margins

Chart 1 below shows how wholesale and retail margins have been set over time by the South African Department of Energy.

Chart 1: Wholesale and dealer (retail) margins over time

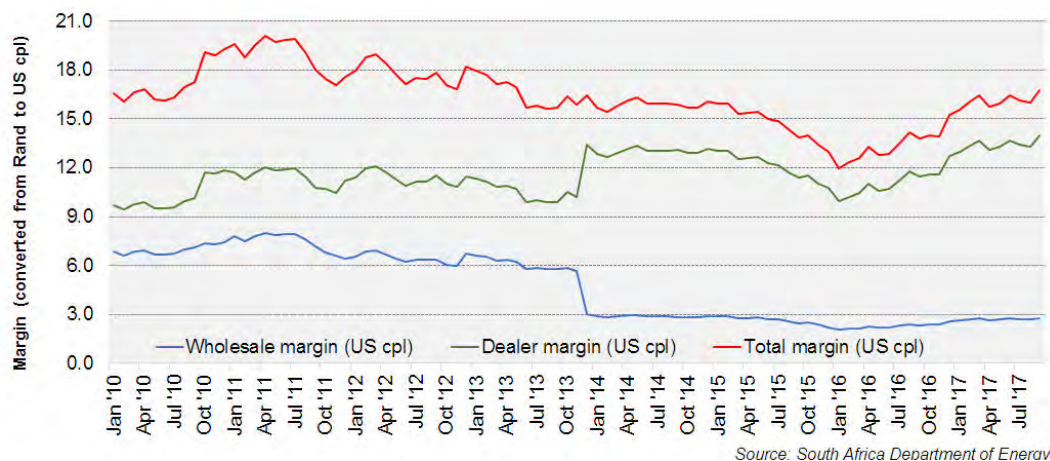


Chart 1 shows the combined wholesale and retail margins (in US dollars) have remained fairly constant since 2010, which reflects the regulatory formula used by the South African Department of Energy for setting retail petrol prices.

3.5 United Kingdom

The United Kingdom (UK) carried out an investigation into claims that its petrol and diesel sectors were not working well in 2012/2013. The UK fuel market had undergone several changes over the previous decade including:

- The rise of supermarket retailers (29% in 2004 to 39% in 2012);
- The decline in the number of retail forecourts (stations) which dropped by 20% over the same period;
- The closure of two refineries leaving seven operating refineries, of which all except one had either been sold or put up for sale; and
- The expansion of direct importers and road fuel blenders¹² in the wholesale sector (i.e. companies developing import facilities).

The complaints leading into the investigation included price variation between regions (including between Great Britain and North Ireland) and between urban and rural areas. The higher cost of motorway forecourts was also raised as an issue. Within the sector, independent dealers complained that they were unable to compete fairly with supermarkets and oil company sites.

The initial evidence (price level for fuels excluding taxes) was the market was working effectively as the UK had some of the cheapest fuel in Europe on a pre-tax basis. While pump prices had increased substantially up to 2013 this was primarily related to an increase in the cost of crude and an increase in tax and duty. The increase in the combined refining, wholesaling and retail margin was much smaller, except for diesel which was largely a result of a significant increase in refining margins.¹³

The main findings from the study was that:

- There was some variation in prices from town to town but much less than the public perception. The differences generally related to the presence in a region of a supermarket and/or local retailer resulting in better competition;
- There was a price variation between urban and rural areas (just under 2ppl or around NZ 3.5 cpl)¹⁴ but this difference was explained by higher costs (transport and lower throughputs) and less supermarket competition;
- Northern Ireland was more expensive with the difference again related to lower volumes;
- Motorway fuel was significantly more expensive and a recommendation was made to investigate a requirement to display price boards (prior to the slipways to the sites we assume); and
- There was not enough evidence to conclude that independent dealers could not compete fairly although it was noted supermarkets have greater buying power due to their volume. Generally consumers benefited from this power through cheaper prices.

¹² Road Fuel Blenders import petroleum components for blending to finished product rather than importing finished product that is ready for sale.

¹³ Note MBIE measures fuel margins from a finished product base, so refining margins are excluded from its analysis.

¹⁴ In comparison, observed regional retail price variations in New Zealand can be over 20cpl.

An important finding in the context of this review was that the rise of direct importers and Road Fuel Blenders had expanded the range of players in the wholesale market providing more options for retailers and strengthening the competitive constraints at wholesale level. The buyer power of the supermarkets was seen to be an element stimulating this expansion of the wholesale market, providing a counterbalance to large size of the wholesalers.

3.6 USA

The U.S. Federal Trade Commission (FTC) monitors the competitiveness of the downstream petroleum sector. Its activities have included market studies, investigating and prosecuting cases of anti-trust violations and advocacy with policymakers.

Wholesale markets in the U.S. offer a high level of price transparency compared to many markets elsewhere with wholesale benchmark prices published for purchasing wholesale petrol and diesel from established wholesale markets in specified locations such as New York Harbour, Gulf Coast and Los Angeles. The existence of these wholesale markets means that prices will respond to local supply and demand conditions such as temporary loss of refinery capacity, pipeline disruptions, etc. and as a result daily retail prices for petrol and diesel will also reflect local conditions.

Investigation of merger/acquisition requests is also a feature of the FTC's role, particularly for the downstream sector, where the risk of unilateral conduct might impact on subsequent activities e.g. refining on wholesale markets and wholesale markets on retail markets.¹⁵

The FTC actively monitors 20 wholesale markets and retail petrol and diesel prices for 360 cities as well as using data from the U.S. Department of Energy. They describe how an econometric model allows the FTC to quickly identify cases where there are unusual price changes, which triggers further investigation to see if this is a result of market conditions or if this might warrant an anti-trust investigation. This model has been developed by the FTC over a couple of decades. Daily wholesale and retail prices are used to check weekly prices are moving consistently compared to history and that price changes in one location reflect price changes in other locations.¹⁶

In conclusion, like Australia and New Zealand the U.S. approach is based on monitoring market performance. But with the size, depth and granularity of the U.S. market the regulator is able to provide extensive data on markets at all levels, including wholesale.

3.7 Reflections on other jurisdictions

Some general observations arise from examining the wholesale markets in other jurisdictions such as Australia, Canada, Chile, South Africa, United Kingdom and the US.

More fragmented market environment

Petroleum wholesale and retail markets internationally have undergone significant change over the last 30 years. Individual country supply and distribution activities have become more diverse and fragmented, with a greater variety of market participation from non-traditional players (e.g. independent wholesalers including storage only provider/operators, supermarket retailers, branded distributors, independent retailers). At the same time, we have seen a reduction in the extent of vertical integration that was a feature of the traditional market.

¹⁵ OECD Competition in Road Fuels, pg. 333

¹⁶ Gasoline Price Changes and the Petroleum Industry: An Update | FTC & Bureau of Economics | 2011

It is likely that other wholesale markets have become less concentrated, although it is possible that concentration could also increase e.g. the merger and acquisition activity such as what occurred in Canada. Similarly, it could be argued that the wholesale market in New Zealand has become more concentrated as a result of the Z acquisition of Chevron (Caltex brand).

Wholesale petroleum markets do not act like major commodity platforms

None of the countries examined (except perhaps for the US) currently have liquid wholesale markets where wholesale suppliers and buyers contract through a market or trading platform on a daily basis, in a similar way that other major commodity markets operate, or local markets such as the New Zealand electricity market and the more recently established spot gas market where buyers and sellers can transact in the market and prices are determined daily in the interaction between supply and demand. Rather, wholesale activities for fuel tend to reflect bilateral transactions between the wholesaler (as the wholesaling asset owner) and another market **participant who doesn't have wholesale assets**, and perhaps reflecting the need for supply security from having longer term supply arrangements rather than relying on spot transactions.

The US does have commodity markets in key petroleum commodities but these will still be based on a specific location for uplift/delivery or be used as the benchmark for uplift from other locations. This will be an outcome of the particular market where prices are assessed by reporting agencies which then form the basis for pricing from specific locations.

Wholesale market concerns can arise from other parts of the chain

Several countries have identified competition concerns at a wholesale level in the course of considering whether to approve specific merger and acquisition proposals in other parts of the value chain e.g. retail merger/acquisition. Canada provides an example and highlights that in the context of change how markets operate and the impact on competition will be situation specific.

4.0 Wholesaling in NZ

Although the New Zealand market has similar features to others in the facilities making up the supply chain, there has been relatively little focus on what could be considered a wholesale market. This is probably because the market has been relatively homogeneous - twenty years ago the profile of market participants was limited to the four oil majors and their petroleum supply chains and marketing activities were similar. This was reinforced by the way arrangements for the supply and distribution of product to consumers were shared. Over the last 20 years, and particularly after deregulation of the petroleum fuels market **in the late 80's**, this profile has changed as the companies followed divergent strategies and as new players entered the market.

The delivery of petroleum products to consumers involves two supply chains, namely:

1. **Refinery supply** – where the three largest (and vertically integrated) market participants¹⁷ (the Major Participants) receive refined petroleum products via their crude oil processing arrangements with Refining NZ;
2. **Direct importation** – where the Major Participants and Gull import finished product to the facilities they own and control to meet their full market requirement.

¹⁷ BP Oil New Zealand Ltd, Mobil Oil New Zealand Ltd and Z Energy Ltd including Z Energy 2015 Ltd

A relatively unique feature of the New Zealand market is the extent of sharing of supply chain facilities, particularly by the Major Participants. This sharing includes:

1. Refining NZ – New **Zealand's only refinery where the** Major Participants have individual processing agreements with Refining NZ, the owner of the refinery, to process the crude they present and receive back as refined product;
2. Coastal shipping – where the Major Participants control two coastal tankers (under the Coastal Oil Logistics joint venture company) that uplift their product from the refinery in Whangarei to distribute to storage terminals around New Zealand;
3. Shared storage – the Major Participants have an arrangement to share their storage with each other to facilitate efficient coastal shipping. Related to this the Major Participants have negotiated bilateral hosting arrangements (B&L) for controlling access and offtake rights to access the storage facilities at a specified location;
4. Product storage/offtake facilities receiving product via pipeline from Refining NZ;
 - a. The truck loading facility adjacent to Refining NZ;
 - b. The Wiri oil storage facility which receives product via pipeline from the refinery at Whangarei – the pipeline is owned and operated by Refining NZ but the Major Participants control access to the storage/road loading facility.

While supply chains internationally will also have these features individually they may have different attributes which need to be taken into consideration when attempting to understand competitive effects on wholesale markets, including for New Zealand. For example, the Australian wholesale market **features "buy/sell" arrangements where** the refiner/marketers negotiate mutual supply by way of purchase from each other's wholesale storage facilities. In New Zealand the use of shared storage by the Major Participants provides a mechanism at wholesale level for storing product in any of the shared facilities and drawing from the same or another facility where its marketing needs are.

Some petroleum markets distinguish between primary distribution and secondary distribution, where the primary category includes maritime supply chains from supplying refineries to main storage, pipelines to main storage and the main storage facilities themselves, with secondary distribution covering distribution from primary facilities (by truck or pipeline) to another storage facility. Secondary distribution feature more in larger markets and countries.

In New Zealand the sharing of storage is only done by the Major Participants (who have established this system), although offtake from these facilities can be done by contracted fuel distributors, some whom contract to distribute on behalf of the Major Participants and some who contract supply for their own retail activities. The greater fragmentation of the smaller distributor segment into the retailer market has been a significant trend over recent years (see Figure 6). While some distributors could be regarded as wholesalers in a wider context they are generally not engaged in wholesaling because they do not own storage.

Figure 6: NZ Wholesale/Retail Market Evolution



In New Zealand ownership of facilities may not mean control. Using the ACCC or Oilcode view wholesaler facilities in New Zealand would extend to the Marsden Point refinery, port terminals, Wiri, and the Truck Loading Facility. However, unlike the Australian situation some of these facilities are not buying or selling in the market.

For example, Refining NZ is a tolling refiner that provides a refining service to its customers. The customers present crude for processing and receive refined product back which they collect and distribute to **various locations. Refining NZ's transaction is to provide a refining service; it does not** act as the wholesale supplier, even though facilities allied to the refining process (as defined by the Oilcode) would be used in the value chain delivering petroleum products to consumers.

The ACCC's view in Figure 1 could also incorporate independently branded fuel distributors such as Allied Petroleum, Farmlands, McKeown Petroleum and Waitomo Petroleum where these companies also sell to the retail market. However, these entities generally do not own or control storage in the same way as similar entities in Australia do. This suggests that the control of storage may be a relevant consideration in delineating who is a wholesaler in the New Zealand market.

Applying this framework to New Zealand, we would consider the true wholesalers in the New Zealand market would be the four companies; the Major Participants (BP, Mobil and Z) and Gull who own storage at Mt Maunganui. And by inference the relevant wholesale facilities in New Zealand would extend to product made available from the Marsden Point refinery, port terminals, Wiri and the Truck Loading Facility.

5.0 Summary of Wholesale Market Interventions

In this section we summarise what we see as common interventions in wholesale markets and we comment on the impact on wholesale markets where they were used. We have constrained discussion to wholesale markets even though some of these interventions may have been prompted by other parts of the market such as studies on retail margins or merger/acquisition activities.

5.1 Disclosure and Monitoring

Disclosure and monitoring is a fairly common theme/response where concerns have been raised about the competitiveness of wholesale markets but it can take different forms. Our review of other jurisdictions indicates that regular reviews and/or market studies have been undertaken with reasonable frequency in Australia, Chile, the UK, South Africa and the US. The New Zealand Government also uses monitoring and reviews to check market competitiveness. In many ways,

we would expect disclosure and monitoring to be a first line response to concerns about competitiveness as the value of market studies will be to shed light on whether domestic prices are tracking international prices; this was acknowledged as an outcome by the ACCC in its 2007 study of the retail petrol market.

These studies have ranged from major enquiries, to regular, more focussed reviews that operate on an accepted range of metrics as an indicator e.g. margin analysis using TGPs. The value of regular reviews would appear to be in:

- Shedding light on particular markets and market pricing (such as in the UK where investigations found variations in UK retail prices were consistent with costs to service the market);
- Assessing specific market performance over time;
- Providing assurance or otherwise that markets are following established price benchmarks, i.e. to test that what is observed in the market under review is what is occurring in the benchmark markets as well.

5.2 Provision of information

Allied to monitoring is the ability to require information from market participants. This enables wholesale prices to be tracked against accepted approaches to building up the landed cost of petroleum at wholesale level. This power is a feature of the market monitoring activity by the ACCC in Australia. Our understanding though is that virtually all participants have voluntarily agreed to provide this information to the ACCC.

The US approach is to monitor daily wholesale and retail regional prices to compare weekly prices to look for abnormal trends and then investigating each instance where unexpected results (compared to history or with other locations) have occurred. **It's not clear if the government can** require these prices or if these are provided voluntarily like that done in Australia.

5.3 Mandated Requirements

Mandated requirements can range from strong intervention (e.g. where prices are set or certain market outcomes are stipulated by a regulator), to more light-handed approaches where a mandating framework seeks to regulate the conduct of suppliers, distributors and retailers in the petroleum marketing industry. In some cases (e.g. Canada and Chile) mandated requirements have arisen from merger and acquisition activities, but in other jurisdictions there are legislated requirements. Australia provides a useful illustration of a light-handed approach via its use of codes of practice (see Section 3.1.1). This enables other features to be part on this approach.

5.3.1 Access

Although the Australian Oilcode purports to regulate market conduct, the entitlement to access petroleum product is premised on a spot transaction (a market participant can use the code to access a minimum 30,000 litres, which we assume is based on a typical parcel that might be uplifted and delivered to distributors/retailers). The wholesaler cannot unreasonably refuse access to product.

However, the code does not specify volumes beyond the spot minimum. As such it is not clear that a distributor/retailer can rely on it to demand access to product for longer term arrangements. Although longer term transactions are referenced in the Oilcode, we are unsure that it has ever been used in earnest or relied upon by the regulator.

Furthermore, the Oilcode does not provide the ability for a market participant to demand access to **the wholesaler's storage. The Oilcode does not contemplate a market participant being able to import into the wholesaler's facility and distribute** from it. We are unsure whether accessing a wholesaler's facility was considered an issue in the formulation of the Australian Oilcode; it seems unlikely as the rationale was to regulate the conduct between suppliers, distributors and retailers at a time when the market was becoming deregulated. If access to a wholesaler's facility was to be part of an Oilcode for New Zealand this would need to be addressed through the competition framework operating in New Zealand.

In any event the Australian market has evolved with a number of the new entrants creating demand for access to product at a wholesale level. This has been reinforced by the existence of third party storage providers enabling new entrants to access these facilities without the need to rely on the existing refiner wholesalers.

So while effectiveness of the Australian Oilcode may be uncertain that doesn't mean it has proved to be ineffectual; effectiveness may depend on the state of the market or the problem to be addressed e.g. providing access to wholesale facilities.

The Canadian experience provides an example where access to wholesale facilities has been required as a condition of authorisation for a major merger/acquisition transaction. This is an example of the regulator taking a strong intervention stance in order to address its concerns about **the transaction's impact on competition**. In this case the response arose out of a specific merger and acquisition transaction, and was location specific. Canadian experience suggests wholesale market intervention needs to be assessed in terms of its impact on competition.

5.3.2 Posted/Gate/Rack Prices (Terminal Gate Price)

A visible or posted price is another feature of wholesale markets in Australia and the US. At the wholesale level a posted price can improve transparency because it provides the opportunity to:

- Benchmark the stated price with the notional cost to import product (import parity) **through the wholesaler's facilities;** and
- Provide visibility between the cost to import and prices indicated at the retail level.

Under the Australian Oilcode wholesalers are required to publish a daily Terminal Gate Price. This is intended to provide price transparency, but in reality it is the negotiated wholesale price which is the effective market measure. Nevertheless, **TGP's are used by the ACCC to monitor retail margins** across Australia.

The requirement to publish the TGP is part of the Oilcode. However, it also goes hand in hand with the right to access product. Hence without the ability to access product a TGP would arguably be of reduced value.

As noted in Section 3.6 prices are posted at specified wholesaler locations in the US and these act as commodity benchmark points themselves. The US market is of such a size (production, refining capacity, storage) that certain locations (e.g. New York Harbour, US Gulf and US West Coast) act as international benchmarks in their own right. And because of their size, local wholesale markets can reflect specific supply/demand factors at the actual supply point as well as factors impacting international benchmarks. By comparison Australian wholesale prices would likely adjust only in response to changes in international price benchmarks. We would expect this to be the case for New Zealand as well.

Despite the depth of US markets, the regulator is still able to monitor wholesale prices against international benchmarks and local margins because of its monitoring role.

6.0 Applicability for New Zealand

In this section we consider what might be applicable for a New Zealand wholesale market. This is not to be seen as an attempt to justify the intervention, but rather to understand how it might be applicable. To facilitate this discussion we consider where there might be potential competition benefits.

6.1 How to delineate the wholesale market

Currently the New Zealand wholesale market is not a strongly visible feature of the market, with most wholesale activities governed through long term supply contracts between the wholesaler and the purchasing market participant. Taking the approach that other countries apply, there are activities which can be identified as constituting a wholesale sale, enabling the identification of specific points in the value chain where the wholesale transaction occurs.

At the same time there are some parts which may or do not fit within the criteria (e.g. Refining NZ). If an outcome was to impose obligations on wholesalers these might need to be excluded. These examples are likely to be limited (the most obvious example being Refining NZ) but they would still need to be assessed according to the transaction basis discussed in Section 2.2.

6.2 Disclosure and monitoring

The Australian example indicates that wholesale participants voluntarily provide data on wholesale sales to the ACCC. The regulator is able to benchmark wholesale data supplied against the published terminal gate prices and its assessments of the import parity cost. In the Australian example disclosure and monitoring of wholesale prices on a monthly basis provides evidence of how prices are tracking cost (identifying margin trends), including where there might be divergence. **TGP's are also used by the ACCC to monitor retail margins.**

To be an effective indicator of wholesale competition it is arguable that disclosure data should be based on actual sales for the location in which the fuel is supplied. This will improve the transparency of the pricing data.

Market segment volumes in New Zealand are collected and captured in the **Ministry's Energy** in New Zealand data information and reports. However, it is not clear to what level of aggregation this is done, what particular transaction point is being used or if any pricing data is collected with the volume data. It is also not clear whether this reflects wholesale and/or commercial sales. Given the nature of the supply chain, the impact upon markets may need to be identified at the regional level so that related benchmarks and margin trends can be identified by location.

There is likely to be additional value where the regulator is required to undertake market studies or is required to assess the impact on wholesale markets of any merger and acquisition activity. Any assessment would then have recourse to possible impacts at the wholesale level, including how they might track or diverge on an intra-regional basis.

Some further work may be required to ensure the data captured is appropriate to the actual wholesale sales point.

6.3 Mandated Requirements

6.3.1 Codes of practice

As noted in Section 3.1.1 the Australian Oilcode regulates the conduct of suppliers, distributors and retailers. It does so by setting a framework by which buyers can expect to access product under certain conditions. Wholesale suppliers are required to publish a Terminal Gate Price and cannot unreasonably refuse to supply. An Oilcode type mechanism does not exist in New Zealand.

From feedback given to us by the ACCC, very little volume is transacted at the TGP as most participants access product on a longer-term basis; prices reflect the nature of the specific transaction with the supplier.

While a code of practice could be beneficial in New Zealand as it would provide an opportunity for new entrants to gain access to product, at a relatively low threshold (this may signal competitive threats to incumbent wholesalers) this is unlikely to provide a strong bargaining position for the new entrant. However, this may prejudice how a new entrant would view a market opportunity or how the market might evolve in the knowledge that spot supply could be available.

6.3.2 Access

We note the Oilcode does not mandate access to a wholesaler's storage capacity terminal i.e. the right to import into and draw product from the facility. The obligation on the wholesale supplier is to "not unreasonably refuse to supply". If access to a wholesaler's facility was to be part of an Oilcode for New Zealand this would need to be addressed through the competition framework operating in New Zealand.

In circumstances where the regulatory intervention has been to stipulate access at a wholesale level (Canada, and to a lesser extent Chile) this has been in response to a specific market event after a review of the potential impact on competition generally. Other than that we have not seen stipulated access as a common feature of the jurisdictions considered.

6.3.3 Posted or Terminal Gate Prices

Adopting posted or terminal gate prices at wholesale level would appear to be a workable option, although would likely require regulation and consideration of how this might impact on the shared storage arrangements operated by the Major Participants. Furthermore while TGPs are indicative in Australia they generally are not the basis for pricing at wholesale. This raises questions about the benefit of such regulation. It may be that the benefit is in greater transparency of costs at the wholesale level, when taking into account landed cost of petroleum using Import Parity Pricing. The ACCC monitors wholesale prices against IPP as well as using TGPs to monitor retail margins.

6.3.4 Wholesale market and shared storage

As noted in Section 4.0 the Major Participants share storage capacity using bilateral (B&L) hosting arrangements for controlling access and offtake rights at specified locations. This raises questions about the ability to delineate a wholesale facility at a given location (who is the wholesaler?) as well as how obligations (e.g. posted pricing) would be placed on wholesalers. Under the hosting arrangements, a number of market participants could be wholesaling out of the same facility.

To the extent wholesalers were each required to post prices this might add to the competitive dynamic around shared storage locations. This suggests that any proposals to create a visible wholesale market in New Zealand would need to consider the specific market circumstances.

6.4 Interventions and Applicability to New Zealand

In Table 1 below, we map the range of interventions identified over a spectrum from light to more heavy-handed to summarise what might be applicable for New Zealand. We use the term spectrum because interventions can occur as a structural approach as well as being an outcome of another regulatory mechanism e.g. conditions attached to authorisation of a merger or acquisition transaction. This table doesn't cover price regulation as an option for New Zealand.

Table 1: Wholesale Interventions for New Zealand

		Intervention/Process	Approach/Applicability to NZ
HEAVY < ----- INTERVENTION ----- > LIGHT	Monitoring	<ul style="list-style-type: none"> Public retail prices (e.g. NZ) 	<ul style="list-style-type: none"> Done in NZ, with national retail prices by MBIE and regionally through public platforms such as PriceWatch and the Gaspy app
		<ul style="list-style-type: none"> Provide sales point market data, including wholesale prices (e.g. US) 	<ul style="list-style-type: none"> Process for collecting sales point data would allow regional retail price comparison – would require market to provide data (possibly regulation to enforce if not volunteered)
		<ul style="list-style-type: none"> Visible sales point data (e.g. TGP in Australia) 	<ul style="list-style-type: none"> Could require TGP in NZ, but would need to consider how the shared storage might impact process
	Reviews	<ul style="list-style-type: none"> Periodic examination of market (e.g. AU) 	<ul style="list-style-type: none"> Done in NZ, but process is retail focused and infrequent, could set framework for defining wholesale market and triggering reviews
		<ul style="list-style-type: none"> Keep abreast of market developments (e.g. UK) 	
		<ul style="list-style-type: none"> Check local wholesale prices vs international benchmarks (e.g. AU) 	<ul style="list-style-type: none"> Would require provision of data from market participants
	Market Studies	<ul style="list-style-type: none"> Targeted focus such as location study (e.g. Darwin in AU) 	<ul style="list-style-type: none"> Not done but differences in regional pricing suggests same drivers as seen in Australia
		<ul style="list-style-type: none"> Could be done in relation to Merger & Acquisition 	<ul style="list-style-type: none"> Done in NZ, but greater focus on wholesale market delineation/market data could provide wider basis for testing system effects
		<ul style="list-style-type: none"> Market wide studies 	<ul style="list-style-type: none"> While not an option currently, this could be an option for NZ
	Codes	<ul style="list-style-type: none"> Use of a code to regulate conduct between suppliers, fuel distributors, retailers, etc. (e.g. AU) 	<ul style="list-style-type: none"> Currently no mechanism exists in NZ, this would require regulation
		<ul style="list-style-type: none"> Provides a framework for access to wholesale products (e.g. AU) 	
		<ul style="list-style-type: none"> Wholesale price transparency 	
	Mergers	<ul style="list-style-type: none"> Impose specific conditions (e.g. CH) 	<ul style="list-style-type: none"> NZ generally has focused on retail market impacts Increased focus on wholesale market impacts would likely strengthen outcomes for NZ
		<ul style="list-style-type: none"> Force wholesale access to address competition concerns (e.g. CN) 	
		<ul style="list-style-type: none"> Identify barriers to entry 	