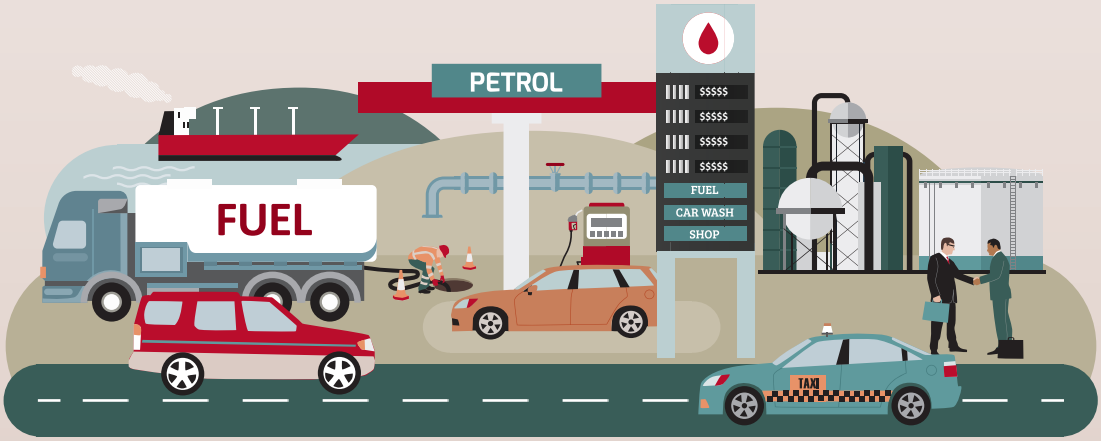
FOCUS REPORT

COMMERCE COMMISSION NEW ZEALAND
Te Komihana Tauhokohoko

Removal of Auckland Regional Fuel Tax



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Key findings

- Available evidence indicates that the removal of the Auckland Regional Fuel Tax (ARFT) was passed through to consumers in the form of lower prices by 1 July.
- Fuel prices inside the two Auckland border areas dropped by an average of 8-11 cents per litre (cpl) relative to prices nearby, but outside Auckland, between Saturday 29 June and Monday 1 July. This is in the context of the 11.5 cpl ARFT (including GST).
- It appears that publicity and awareness about the impending tax removal may have influenced prices in Auckland in June and July. A further, more detailed, follow up to this analysis using data over a longer period would be necessary to inform an assessment of the potential impact of these price changes on margins.
- Localised competition appears to have at times had a greater impact on board prices than the ARFT itself. We see evidence of stronger, and growing competition in the South Auckland area as well as changing competitive dynamics near the northern border of Auckland. Consistent with our findings on the impact of unstaffed sites on fuel prices in local markets,[1] this appears to be driven, at least in part, by the presence of unstaffed sites in these areas.
- We observed that the relationship between average prices in different parts of Auckland changed, both after the tax was applied in 2018, and after the policy to remove the ARFT was publicly announced on 8 February 2024. That is, the ARFT appeared to impact prices differently depending on whether there was localised competition with stations outside the Auckland region or not.
- In South Auckland the drop in prices following the removal of the ARFT made them significantly lower than those outside the border, rather than approximately equal as we observed prior to the tax being applied in 2018. Price differences between stations within and outside of the southern border decreased to nearly zero over the six weeks from late April to mid-June, having been steady at around 10 cpl previously.
- We note that in late April we published our findings that unstaffed sites create downward pressure on prices in local markets, and in South Auckland there is an unstaffed Waitomo station at Bombay. Additionally, a new unstaffed NPD station opened in Manurewa in May, this is some distance from the southern border but may have impacted the wider South Auckland market. Furthermore, a new Caltex station opened at Bombay in 2023, meaning there are now four stations in the small area of SH1 marking the southern border, compared to three in 2018 when the tax came into effect. Any, or all, of these events may have stimulated increased competition in South Auckland in 2024, which may explain the reduced differences in prices observed at the southern border leading up to the removal of the tax.
- Just north of the Auckland border, a new unstaffed Gull station opened in Kaiwaka in 2023. There have also been significant changes to SH1 in this region since the tax was applied in 2018, including a major part being closed for most of 2024. It appears that market dynamics in the north have shifted considerably over the analysis period and these events and conditions are likely to have contributed to this. This may explain some of changes in relative prices that we have observed around the northern border.

1 https://comcom.govt.nz/__data/assets/pdf_file/0030/350697/Impact-of-new-unstaffed-retail-petrol-stations-on-fuel-prices.pdf

Background

The ARFT of 10 cpl, plus GST of 1.5 cpl, was introduced on 1 July 2018 to help fund transport projects in the region. It was applied to all liquid fuels (petrol and diesel) sold in Auckland. On 8 February 2024, the Government announced that the tax was to cease on 30 June 2024 to provide some cost-of-living relief to Aucklanders.

The Commerce Commission published a report on 11 June 2024 which showed that fuel companies were quick to put up prices at the pump in response to increased costs, but slow to pass through cost reductions.[2] We highlighted the implied cost to motorists if the same pattern was to occur with the removal of the ARFT. There was significant publicity about the tax removal. Public responses from some of the major fuel companies indicated they reduced board prices to reflect the tax removal prior to midnight on 30 June.

2 https://comcom.govt.nz/__data/assets/pdf_file/0036/354978/Focus-report-Impact-of-changing-costs-on-retail-fuel-prices.pdf

Introduction

This report seeks to assess the impact of both the introduction and removal of the ARFT on prices in and around the Auckland region. It provides observational analysis on pricing in these areas for 2018-2019 and 2024 respectively.

Assessing whether the ARFT has been removed is more complex than comparing a price within the Auckland region with a price outside of the region. Neither can we simply look at the price on the last day of the tax period and the first day of the untaxed period given that there are other variables which also may have changed.

Our analysis needs to control for all the other sources of variation in prices before we can consider the impact of the ARFT, which is not straightforward. Consequently, for this analysis we considered prices in groups of fuel stations inside and outside of the Auckland region that should, on average, face similar costs. We then compared average prices in these groups, on the assumption that average costs are the same. Our observations are based on these group averages. While more sophisticated analysis could provide results that may be more robust, we consider this approach is appropriate given the time and resource constraints.

The groups used in this analysis are:

- "South Auckland" – 17 selected stations located close to, but within, the southern border to which the ARFT applied;
- "South of Auckland" – 16 selected stations located close to, but outside, of the southern border to which the ARFT did not apply;
- "North Auckland" – 17 selected stations located close to, but within, the northern border to which the ARFT applied;
- "North of Auckland" – 13 selected stations located close to, but outside, of the northern border to which the ARFT did not apply; and
- "Central Auckland" – 15 selected stations located within the Auckland region away from the borders to which the ARFT applied.

We note that each local market within or across these areas would have been subject to its own set of unique competitive dynamics, independent of whether it was subject to the ARFT or not. Although we have not undertaken detailed formal market definitions or sophisticated competition analyses in each of these areas, we consider that these groups are sufficient for us to make general observations on the application of the tax, and the likely degree to which this was influenced by competitive tension between stations within and outside of the (taxed) region. We have used average prices on the assumption that these are reflective of prices within these groups.

Specific questions for the analysis

In undertaking this analysis, we considered the following specific questions:

- What was the average price difference between the pairs of groups either side of the border for the six months before the tax went on? This provides insight into the local market dynamics before the tax came into effect.
- How much did the price difference between the pairs of groups change when the tax was introduced? This provides insight into the degree to which fuel stations within the borders initially passed through the tax into prices.
- Did these price differences settle or change over time? This provides insights into how the market settled into a 'new normal' with the tax.
- What was the average price difference between the pairs of groups for the six months before the tax was removed? This provides insight into the local market dynamics before the tax came off and lets us compare the 'new normal' of 2018 and 2019 with what's 'normal' in 2024.
- How much did the price differences between the pairs of groups change when the tax was removed? This provides insights into the degree to which fuel stations within the borders initially passed through the tax removal into prices.
- Have these new price differences been maintained in the two weeks after the tax was removed? This provides insight into whether the tax removal remains reflected in board prices.

Composition of fuel prices

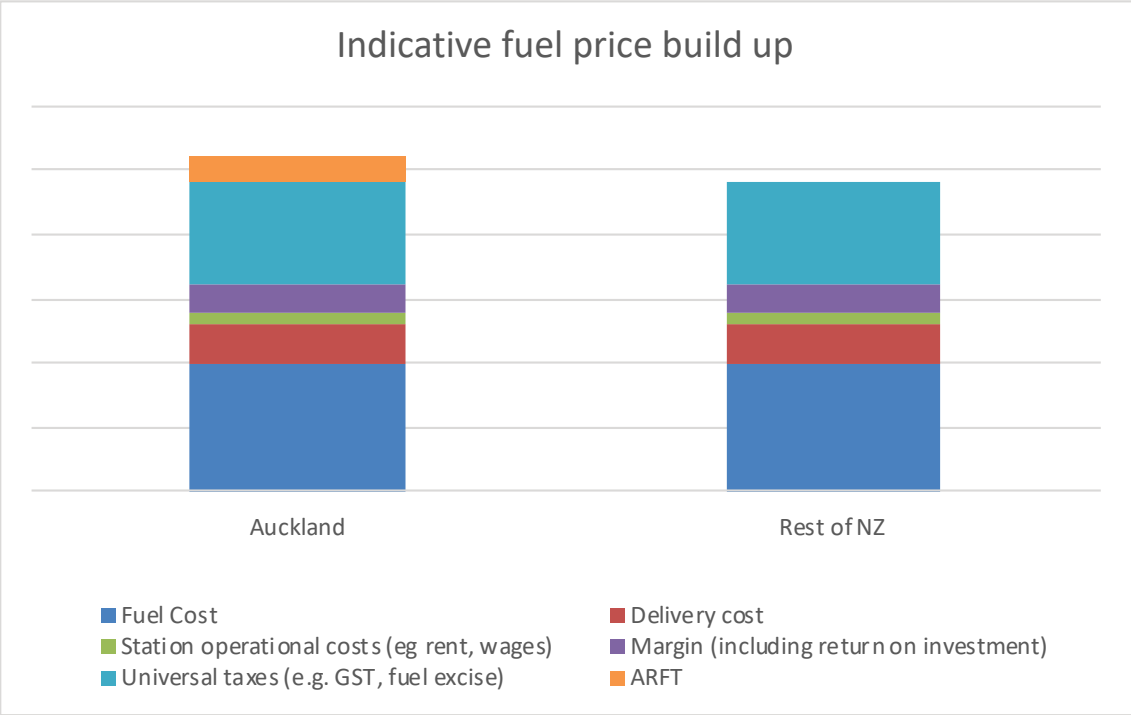
The costs of supplying fuel at different stations can differ based on various aspects. For instance, the wholesale cost of fuel can depend on:

- the port it is delivered to;
- the distance from the port to the station (delivery cost); or
- purchase volumes (e.g. bulk discounts may apply).

Retail costs can differ depending on:

- location (e.g. high traffic areas may incur higher rental or land costs);
- number of staff employed; or
- other services or amenities provided onsite.

Figure 1 - Indicative fuel price build up

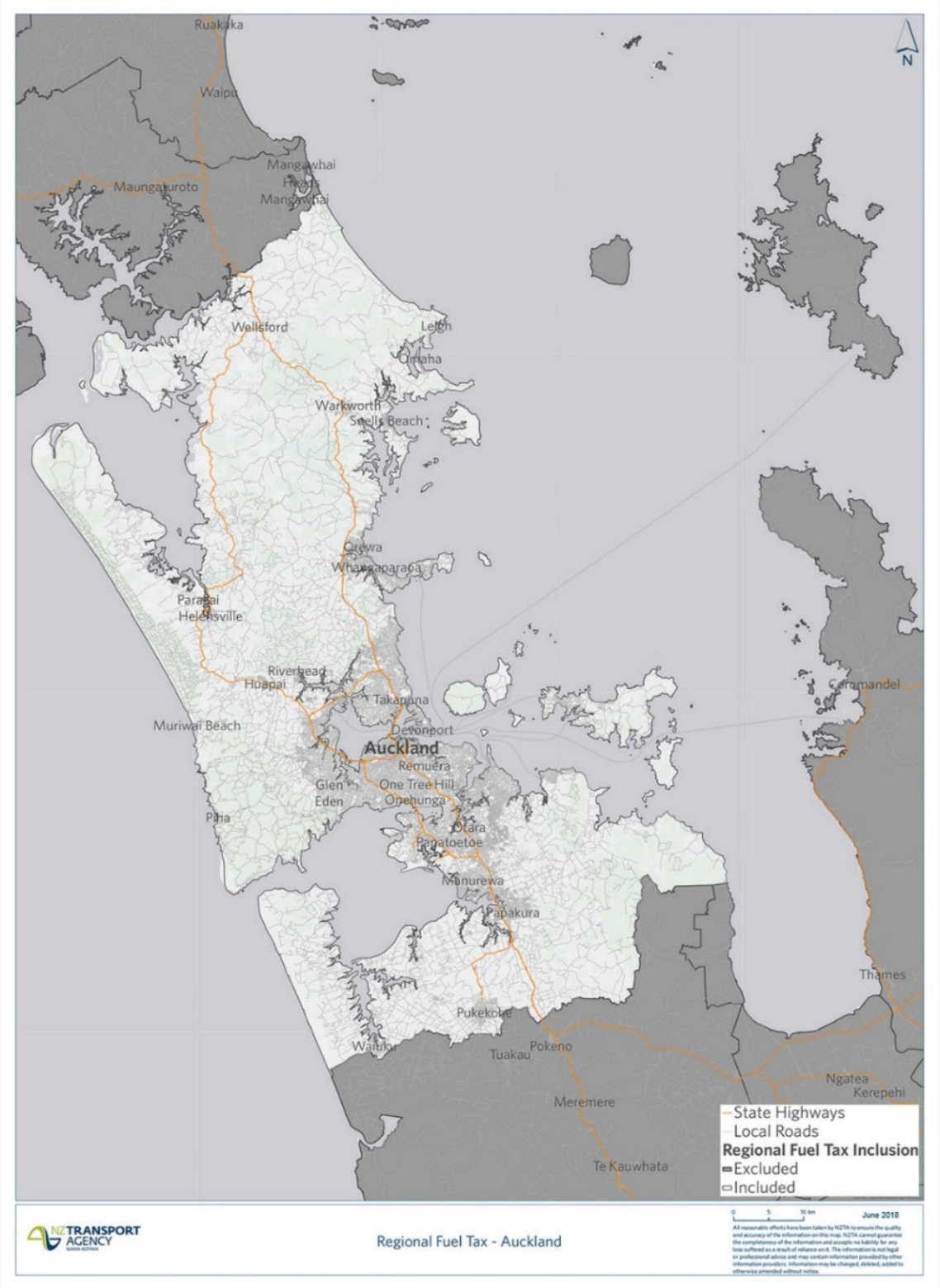


The only non-cost and non-tax component of fuel prices are margins. If local competition is strong, we expect margins to be relatively small. If local competition is weak, we expect less downward pressure on margins, resulting in prices that are higher relative to other stations facing the same costs. The key findings in this analysis are the result of the interaction between local competitive constraints and the application of the tax.

The Auckland region

The Auckland region includes Wellsford to the north, and Bombay and Waiuku to the South. Kaiwaka is the location of the first fuel station to the north of Auckland and Pokeno is the first location to the south of Auckland (see map below).

Figure 2- Auckland map showing fuel tax boundaries



There are notable differences in retail fuel markets at each of the borders.

The southern border is crossed by State Highway 1 (SH1), which is a key road freight route and has three traffic lanes in each direction. Bombay is a major service hub for those travelling in and out of Auckland. It is located just within the southern border and has four fuel sites: BP, Waitomo, Z, and Caltex. Just outside of the border on SH1 are several large retail fuel sites, including GAS and Gull in Pokeno, Mobil Mercer, and Gull Hampton Downs.

The northern border is geographically narrower, with substantially less traffic. The main route north, SH1, has single lanes in each direction. The main fuel market in this area is the Wellsford township. There are three fuel stations at Wellsford, including an unstaffed Gull. Given the closure of the Brynderwyn Hills (the main route north on SH1) for much of 2024, light traffic has been diverted via an alternative (typically quiet) route along the coast through Mangawhai. While this diversion is located north of Wellsford, we cannot determine how much impact the closure of the only major route north has had on the local fuel market around the border.

The Auckland region is geographically vast and extremely diverse socio-economically. Even in central Auckland there are likely to be numerous local markets which have their own characteristics based on the suburb. We have selected a range of stations from different suburbs to comprise a "Central Auckland" group. This grouping seeks to capture the geographic difference from the border regions, but also mitigate some of the impact of localised competition. That said, some degree of price differences between this group and others may reflect cost differences. For example, real estate costs in central Auckland are typically the most expensive in the region.

Freight costs to supply fuel stations mean we would expect that the further from the supply terminal, the higher the price at the pump, all else being equal. South Auckland and north Waikato are supplied fuel from the Wiri terminal, in south Auckland. Most fuel stations from Wellsford north (inclusive) are supplied from Marsden Point. The rest of Auckland (including some of the Warkworth area) is supplied from Wiri. Therefore, all sites near the northern border are a significant distance from their respective supply terminals, all sites near the southern border are reasonably close to their supply terminal, and all sites in "Central Auckland" are somewhere in between.

Data

We use Gaspy data for end of day prices for both Regular 91 petrol and diesel. The retail markets for each fuel are different, with Regular 91 tending to be for private car use and diesel tending to be for commercial heavy vehicle use. Diesel may be more competitively priced because of the higher proportion of commercial users, making it a business input cost which is purchased in greater volumes rather than a consumer cost purchased in smaller volumes.

We have used Gaspy data in this study because of its immediate availability. This allows us to provide a timely report on our monitoring of the ARFT removal. We have analysed data from:

- January 2018 to December 2019; and
- January 2024 to mid-July 2024.

This study looks into the differences in prices between pairs of groups to determine what the relative average differences were when the tax went on and when it was removed. We also analysed any trend which suggested that this difference changed over time or in response to other events.

Under existing Information Disclosure requirements under the Fuel Industry Regulations 2021, fuel importers (BP, Mobil, Z, and Gull) must provide us with retail price data for the quarter 1 July to 30 September 2024 by 30 October 2024.[3] This will provide us with the opportunity to follow up this study with a more robust econometric study of the pass-through.

3 Fuel Industry Regulations 2021, r 17L(5).

Methodology

This analysis is based on calculating simple averages of reported, close-of-day board prices in the relevant groups of fuel stations.

In looking at trends over time we have used simple linear regression estimators to test whether there has been a statistically significant change to the relationship between average prices in pairs of groups over the period analysed. There is considerable inter-day fluctuation in prices and we have not looked into any more complicated trends or cycles. This regression analysis tests whether these relationships stayed the same after the tax was introduced, and indicates whether margins may have changed to accommodate the tax.

Where we were interested in whether this linear relationship changed in response to an event we used the Chow test for 'structural change'.[4] This tests whether the relationship we observed before the event is statistically different to the relationship we see after the event. We were interested in whether the relationship between prices in different parts of Auckland were impacted by any changes in market conditions at the border.

Observations from 2018 -2019 period

a) Southern border

For the six months prior to the tax being applied the average price of Regular 91 in South Auckland was less than one cpl cheaper than the average price of the South of Auckland group. This jumped to being almost 10 cpl higher on 1 July 2018 when the ARFT was applied. There was a very slight, but statistically significant, trend downwards in this difference over the following 18 months. The resultant average difference for the period being just over nine cpl. The daily difference fluctuated between around 5-13 cpl.

The average price of diesel was less than one cpl more expensive in South Auckland prior to the tax being applied and just over 10 cpl more expensive after. There was no significant trend over the following 18 months for diesel prices between the two groups. There was considerable daily fluctuation in the price differential, with an observed range of around 7-16 cpl.

The average daily difference in fuel prices on either side of the southern border after the implementation of the ARFT (but prior to COVID) was around 9-10 cpl. This is slightly less than the 11.5 cpl tax.

b) Northern border

For the six months prior to the introduction of the tax the average price of Regular 91 in North Auckland was around one cpl cheaper than the average price of the North of Auckland group. This difference jumped to almost 10 cpl higher on 1 July 2018 when the ARFT was applied. However, over the following months the average price difference then trended downwards significantly, to around 6.5 cpl, although there was substantial daily fluctuation of this difference. In fact, North Auckland stations were often cheaper than those North of Auckland by a few cpl, even with the ARFT. Anecdotal evidence suggests that this may be, at least partially, the result of competitive constraint from the unstaffed Gull in Wellsford.[5]

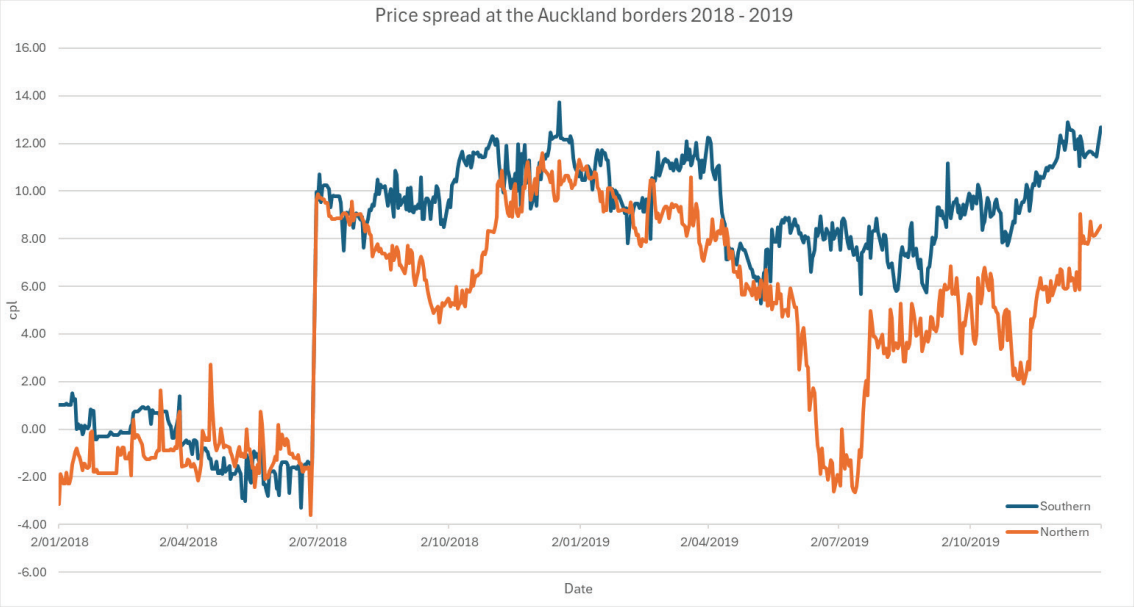
4 A Chow test compares the residual sum of squares (RSS) of the whole time series with each of the RSS from before and after the event to statistically test if they represent different relationships.

5 https://gull.nz/assets/Uploads/Media/fc43dfbb98/30.10.19-Wellsford-Community-reaping-the-benefits-of-the-Gull-Effect.pdf

The average price of diesel was nearly 3 cpl more expensive in North Auckland than North of Auckland prior to the tax being applied. There was then a jump up of around 9 cpl in prices in North Auckland on the day the tax was applied, which is close to reflecting the full tax amount. The price difference then trended down in the following 18 months to around 8 cpl, although the daily difference fluctuated greatly, with a 15 cpl range in the difference. As with Regular 91, at times diesel sold at stations in North Auckland were cheaper than those outside of the border, even with the ARFT.

The average daily difference in petrol prices on either side of the northern Auckland border after the implementation of the ARFT (but prior to COVID) was around 5-6 cpl. This represents around only half of the tax. For diesel this difference was slightly higher but still did not equate to the entire tax. This could be the result of some combination of two aspects: the stations on the Auckland side of the border 'absorbing' some proportion of the tax and effectively reducing their margins in order to remain competitive with stations outside of the border; and/or stations on the northern side of the border increasing prices, and therefore margins, and 'sheltering' under the higher (tax inclusive) prices of their Auckland-based competitor stations.

Figure 3- Price spread at the Auckland borders 2018 - 2019



c) Across Auckland

There is statistical evidence that the relationship between average board prices for the three groups (South, Central, and North) in different parts of Auckland, changed for both Regular 91 and diesel, after 1 July 2018. Average prices in Central Auckland became comparatively higher than prices at both borders at that time. This observation is consistent with competitive constraint from stations just outside the borders and not subject to the tax suppressing margins at stations in the South and North Auckland groups that are subject to the tax, whereas stations in Central Auckland face no such constraint.

Table 1- Average Regular 91 price difference to Central Auckland (cpl)

Average Regular 91 price difference to Central Auckland	Before ARFT (cpl)	After ARFT (cpl)
South Auckland	2.73	4.13
North Auckland	1.00	1.60

Observations from 2024

a) Southern border

For the first half of 2024 the average price of Regular 91 in South Auckland remained around 11 cpl more than the average price in the South of Auckland group. This was consistent with what we observed in 2018 – 2019 when the tax was introduced. However, this difference trended downwards since the start of 2024 such that the average prices between the two groups were close to parity by the middle of June. Subsequently there was a notable increase in prices in South Auckland compared to those South of Auckland in the two weeks leading up to the removal of the ARFT. This brought the price difference to around 5 cpl before the tax was removed.

The average price in the South Auckland group then dropped nearly 8 cpl between the close of Saturday 29 June and the close of Sunday 30 June. This made it significantly cheaper than the average price in the South of Auckland group, but the gap started to close in the two weeks following the removal of the tax.

For the first half of 2024 the average price of diesel in South Auckland remained at similar levels relative to the South of Auckland group as when the tax was introduced, at around 10 cpl more expensive. As with Regular 91, there was a convergence in diesel prices on either side of the border, with a downwards trend particularly pronounced after late April. We note that in late April the Commission published a report on the impact of unstaffed sites on lowering fuel prices in local markets.

As was observed for Regular 91, we noted the same clear increase in prices for diesel in South Auckland relative to those South of Auckland in the middle of June until the tax was removed. The average price of diesel in the South Auckland group then dropped 10.5 cpl between Saturday 29 June and Monday 1 July. The response to the tax removal was slower than for Regular 91.

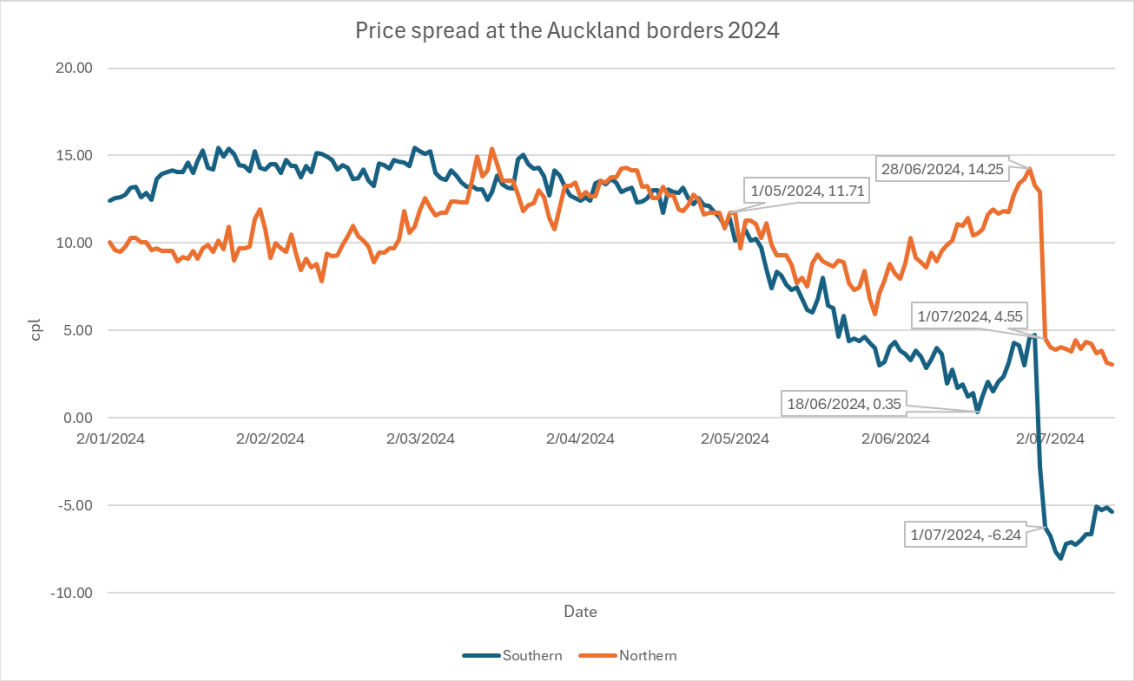
b) Northern border

For the first half of 2024 the average difference price of Regular 91 in North Auckland compared to the North of Auckland group was close to 11 cpl. This is significantly higher than observed in 2018 and 2019. This difference fell with the removal of the tax but remained at around 4 cpl in the two weeks after the tax was removed. We note that an unstaffed Gull station opened in Kaiwaka (just north of the Auckland border) in 2023. This may have substantially changed the market dynamics in the area.

Diesel has been close to 17 cpl more expensive on average in North Auckland compared to the North of Auckland group for the first half of 2024. The difference has reduced to around 6-7 cpl higher on the Auckland side of the border since the tax has been removed.

The late June uptick in prices observed in South Auckland compared to those South of Auckland, was also observed in North Auckland compared to North of Auckland.

Figure 4- Price spread at the Auckland borders 2024



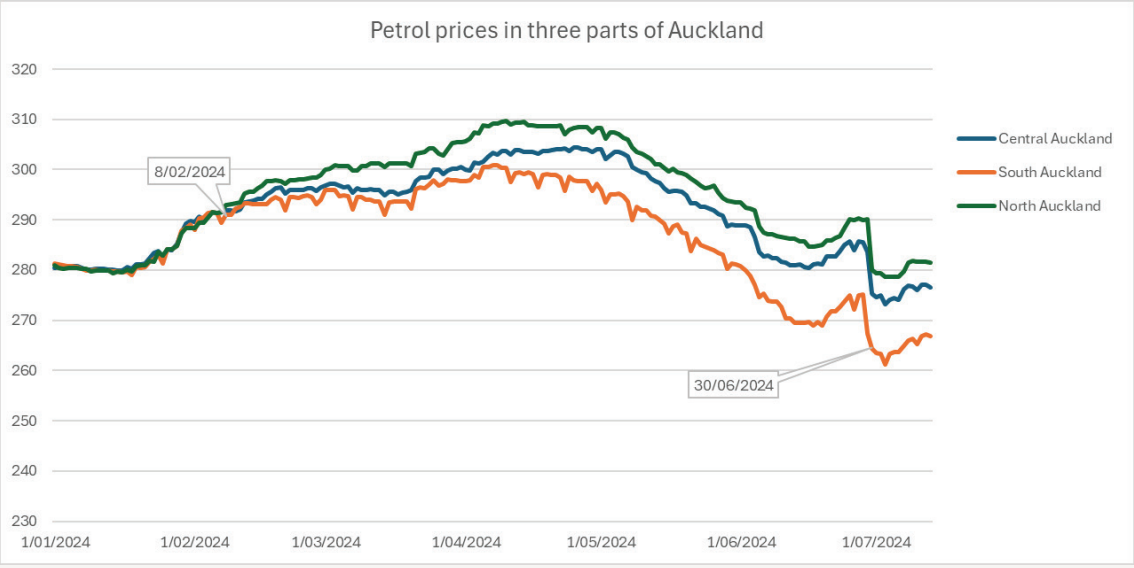
c) Across Auckland

We again observed an interesting dynamic between prices in the three different parts of Auckland. Over the 2024 summer school holiday period (the first six weeks of the year) there was little difference in the prices in each group. However, we noted that around the Government's announcement of the removal of the tax on 8 February, the prices in these three groups began to diverge significantly, with South Auckland becoming the cheapest, and North Auckland becoming the most expensive (see the chart below). This change in relationship is statistically significant.

This change coincided with the end of the holiday period and may reflect different patterns of demand. However, it is also possible the Government's announcement regarding the removal of the ARFT, along with subsequent public statements, caused a change in pricing behaviour in Auckland.

The late June uptick in prices relative to those outside of Auckland was also evident in Central Auckland.

Figure 5- Petrol prices in three parts of Auckland



Summary

We consider that the analysis we have done to date indicates that the removal of the ARFT has been passed through in the form of lower prices in the Auckland region.

We have also seen a 'tale of two borders' where the impact of the ARFT on retail prices varied depending on local competitive constraints adjacent to the borders. We have also seen evidence of correlation between pricing and both policy announcements and publicity around fuel prices.

Table 2- Price differences for Regular 91

Price differences For Regular 91	6 months before tax applied (cpl)	Tax applied (cpl)	18 months after tax (cpl)	Trend observed after tax[6]	6 months before tax removed (cpl)	Tax removed (cpl)
Southern border	-0.62	9.98	9.61	Slight trend down	10.73	-6.77
Northern border	-1.11	9.64	6.47	Strong trend down	10.82	4.07

Our analysis suggests that:

- stations just inside the border that were subject to the tax may have previously reduced prices and margins to stay competitive with stations just outside of the border that were not subject to the tax; and/or
- stations outside the borders may have been able to lift prices and margins once the tax was introduced because they faced weaker competitive constraints from stations inside the border which were subject to the tax.

In particular, the difference in average prices between groups of stations inside and outside of the Auckland region has not always fully reflected the 11.5 cpl ARFT. We consider that this illustrates the influence that competitive dynamics in local markets can have on margins. In this regard, we have also observed that the differences in prices between these cross-border groups of stations have not returned to their pre-tax levels. We consider this is consistent with the changes in competition in these areas around the Auckland border since the ARFT was introduced in 2018.

6 The trend after the tax is applied suggests whether the price difference created by the tax is sustainable competitively.

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This is a guideline only and reflects the Commission's view. It is not intended to be definitive and should not be used in place of legal advice. You are responsible for staying up to date with legislative changes.

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