



Improvements to MBIE's Weekly Fuel Monitoring series

The Ministry of Business Innovation and Employment has added premium petrol to its [weekly fuel monitoring update](#).

The Commerce Commission Market Study into Retail Fuel found that margins were higher in premium petrol and that sales of premium petrol now represented a larger share of the market. The Ministry is responding with a range of measures, including adding premium fuel to its weekly monitoring.

This document sets out the methodology for a premium fuels margin series and some limitations for noting.

We have also added an excerpt about the update to the way we apply the Auckland Regional Fuel Tax the values we produce.

We would value your comments and suggestions prior to us releasing on our website.

Regional fuel tax update

The Ministry of Business Innovation and Employment has improved the way the Auckland Regional Fuel Tax is incorporated into the petrol values that make up the weekly fuel monitoring system. This means that the main port price (for petrol) and taxes (for petrol and diesel) and all values for which they are a component are now more accurate. This has been done parallel to adding premium petrol to its [weekly fuel monitoring update](#).

In detail, the change is simply to adjust the main port price for premium petrol and regular petrol using quarterly updated Regional CPI Data and the annual population share for Auckland. This is an improvement upon only using these values as they were at Quarter Three 2018. We also apply the annual population share to the calculation of the effect of the Regional fuel tax to the total taxes and levies applied to petrol and diesel.

Addition of Premium

PREMIUM METHODS ARE THE SAME AS THOSE USED FOR EXISTING FUELS

The premium series will follow the same methodology as existing fuels. The Ministry will produce the same range of estimates and charts for 95 RON premium petrol as for regular petrol and diesel. The Ministry chose to use 95RON because it is the most



common 'premium petrol'. Our new inputs to produce these values are premium equivalents of those inputs we use for regular petrol.

Some important data we rely on to estimate margins:

- **Hale and Twomey (H&T) daily inputs:** H&T monitor retail prices and price components on a daily basis. They provide the Ministry with information to estimate costs, prices and taxes.
 - **H&T's Main Port Price** - The weekly average main port price is a Monday to Sunday average of H&T's daily price data. It is the headline retail price (i.e. what is on the price board) at port. This price should best reflect the cost of product given transport costs are minimal.
 - The price collected is that of regular 95 RON premium petrol.
- **Stats NZ's Consumers Price Index (CPI) weighted average retail price:** The CPI weighted average retail price for premium petrol is an average price of 95, 98 and 100RON from a nationally representative sample of retail fuel outlets during the June 2006 quarter. Most premium prices in the CPI will be 95RON but some will be 98 and a few 100RON.
 - **How a CPI for 95 is calculated:**
To arrive at a CPI estimate for 95RON, the Ministry adjusted the weighted average retail price (CPI) from StatsNZ. Using the mix of price samples¹ and an expected, constant, price difference between 95 and 98 an estimate of the weighted average price for 95 RON was created for all periods between June 2006 and now.

Some important calculations we use, regardless of fuel type, are shown below:

- **Importer Margins** = *Weekly average discounted retail price - Taxes & levies - ETS cost - Importer cost*²
- **Weekly average discounted retail price** = *Weekly average main port price - discount*
- **Discounts** = *Quarterly average main port price - CPI weighted average retail price*

The fuel monitoring methods have some short limitations due to the available data sources.

¹ The weighted average CPI for premium is made up of majorly 95 and 98 samples.

² A more detailed process outline is attached in Annex Three.



POTENTIAL ISSUES:

- **We have estimated a 95RON price from Stats NZ ‘premium’ series**
 - Each quarter after the June 2006 quarter, the CPI average price moves using the petrol price index. This ensures any growth in the number of outlets offering 98 or 100 octane fuels is not shown as a price increase (as they would in a simple ‘volume-weighted’ average price of premium fuel).
 - However, any difference in price movements between 95, and 98 or 100 octane fuels will be reflected to a small degree in the Stats NZ series.
- **We assume a constant price difference between 95 and 98**
 - We are aware that our constant price difference between 95 and 98 does not take into account year to year variation between prices (a weighted average price doesn’t allow for this). However, we tested a constant +/-100 per cent change in this constant difference and this didn’t seem consequential (graph shown in Annex One, below).
 - Subsequent to release of the new premium series, the Ministry is considering an annual review of this price differential. This will ensure that any changes are reflected appropriately.
- **The main port price is not a national price**
 - The Main Port Price is based on prices on price boards close to main ports. The CPI is based on prices in the urban CPI regions. Therefore, while most regional variation in prices faced by consumers is reflected by using the CPI prices, some regional variation is reflected in our estimates of discounts³.
- **Our estimation of discounts includes those offered by supermarkets and fuel retailers**
 - Our margins are an indicator of the costs faced and margins earned by oil companies operating in New Zealand. The Stats NZ data used to calculate these margins includes discounts funded by oil companies but also those funded by supermarkets and loyalty programmes.
 - This means that the estimated discounts will be an overestimate of reality, and therefore the resulting gross importer margins that we calculate may be an underestimate.

We are happy to discuss solutions to these issues.

³ Given our estimation of discounts, the result will be affected to the degree the main port price differs from regional prices **and** the degree of discounting offered by fuel suppliers. The latter is directly measured by Stats NZ and reflected in its weighted average retail price ([Stats NZ website — Vehicle fuels and lubricants in the CPI](#))



Annex One: Sensitivity analysis of discounts to price differential between 95 and 98RON

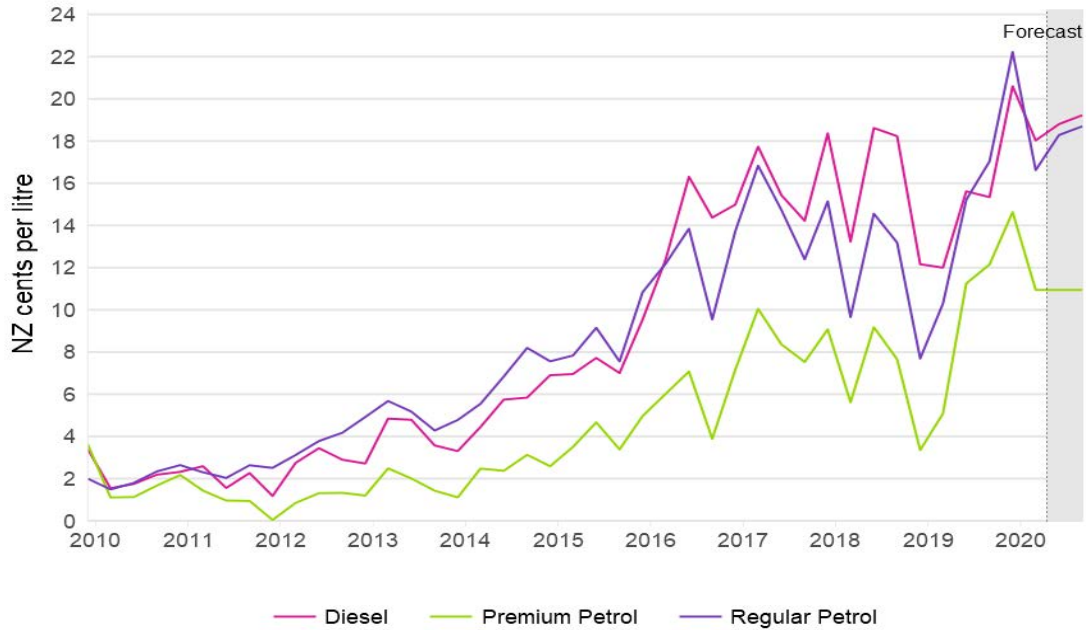


You can see the new data, graphed, in the pages following and the raw data in separate documents attached.



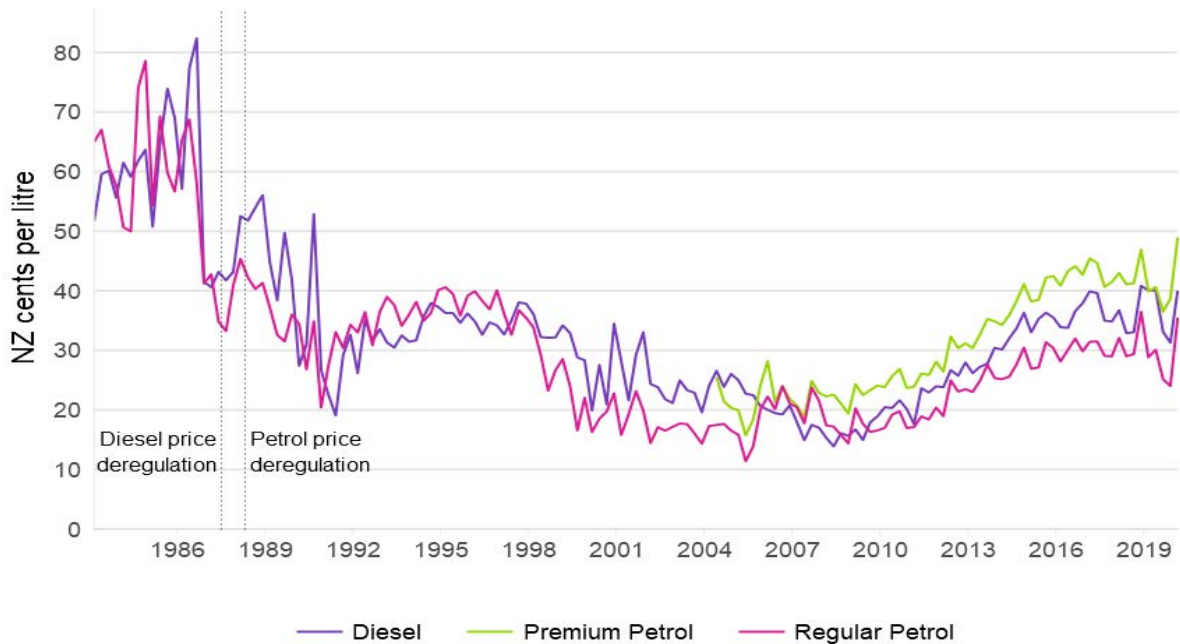
Annex Two: Updated and new charts

Estimated Quarterly Retail Price Discounts



Source: Ministry of Business, Innovation and Employment - 2020

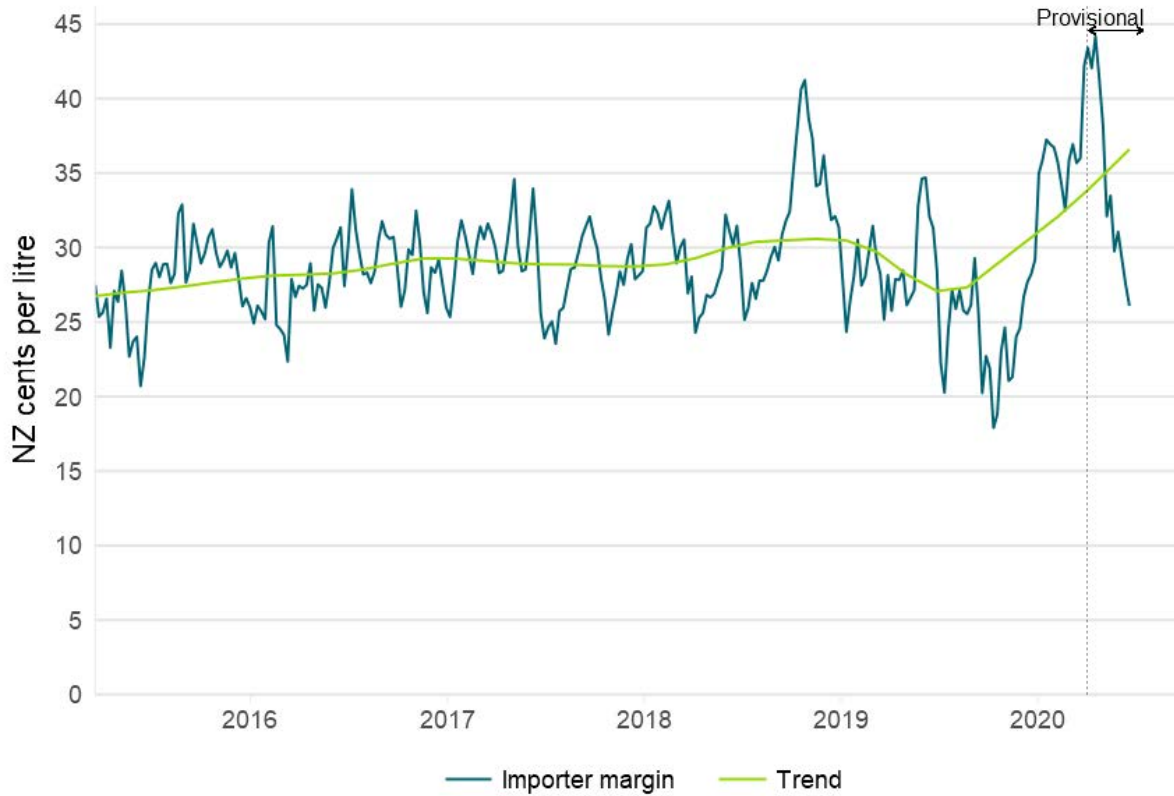
Quarterly Regular Petrol, Premium Petrol and Diesel Importer Margin
(Real March 2020 prices)



Source: Ministry of Business, Innovation and Employment - 2020

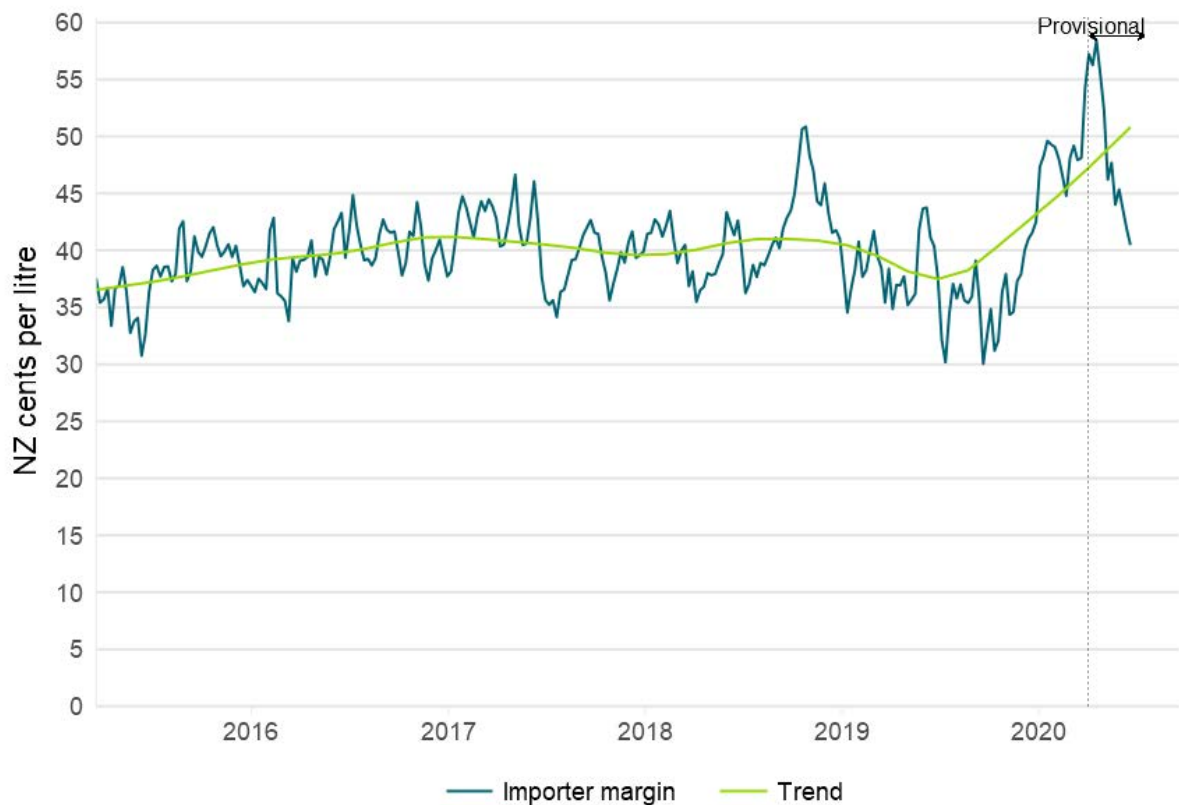


Weekly Average Regular Petrol Importer Margin



Source: Ministry of Business, Innovation and Employment - 2020

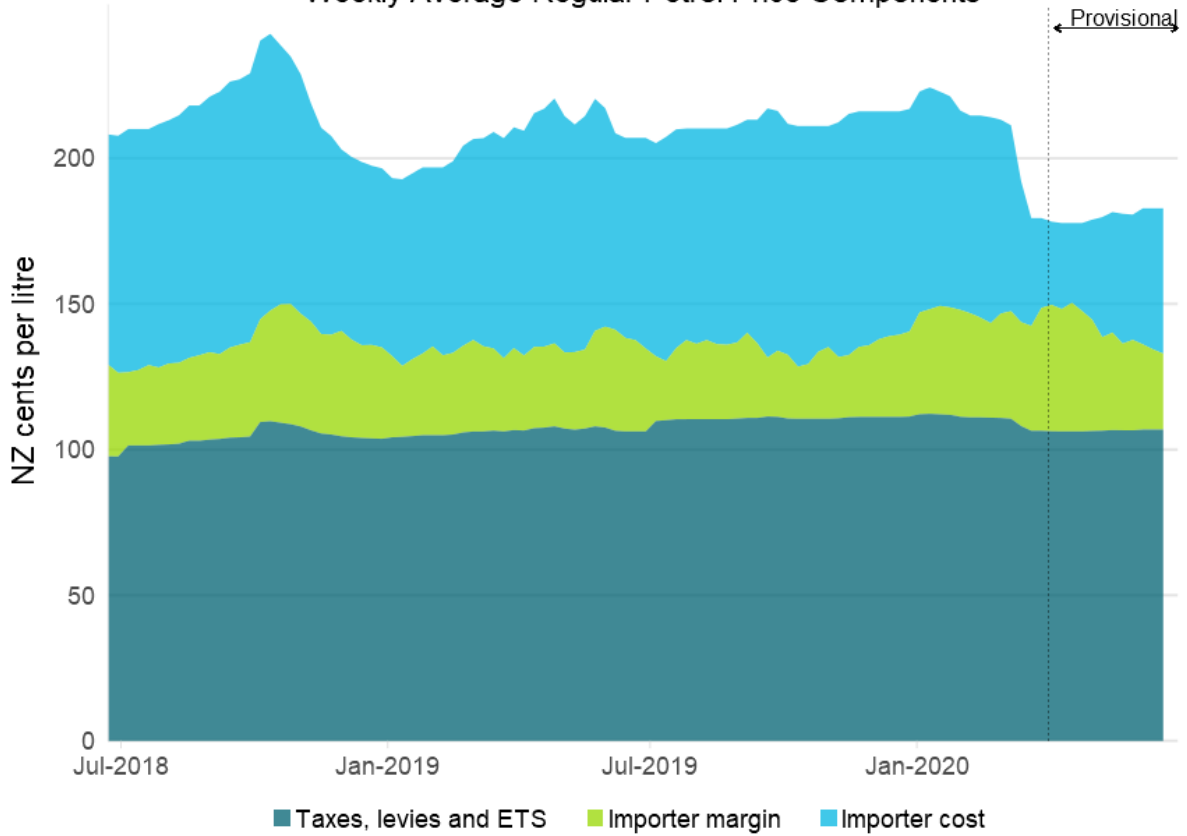
Weekly Average Premium Petrol Importer Margin



Source: Ministry of Business, Innovation and Employment - 2020

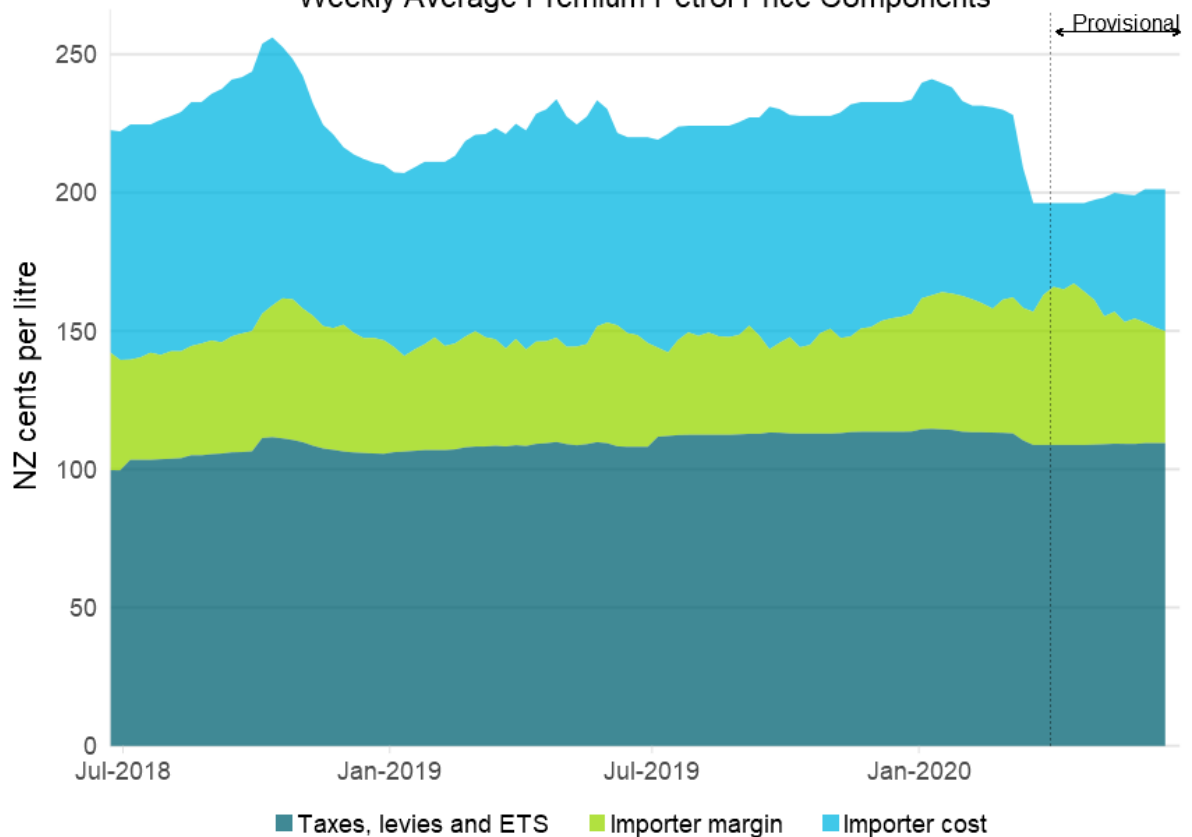


Weekly Average Regular Petrol Price Components



Source: Ministry of Business, Innovation and Employment - 2020

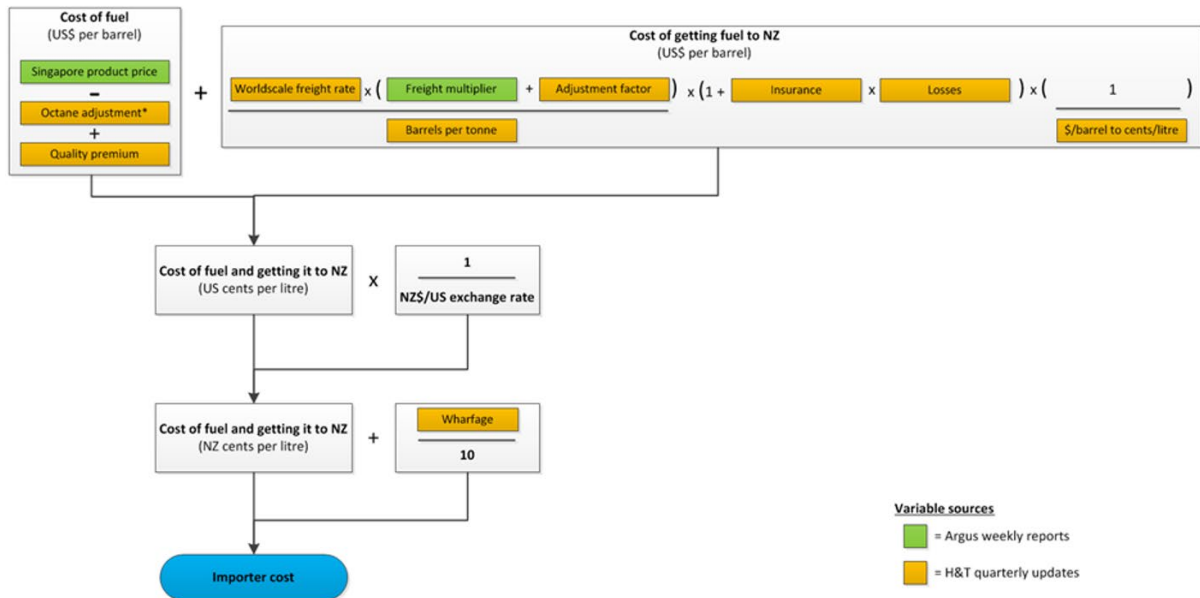
Weekly Average Premium Petrol Price Components



Source: Ministry of Business, Innovation and Employment - 2020



Annex Three: Importer cost calculation



* Octane adjustment is only used in the calculation of regular petrol importer costs