

Independent Pricing and Regulatory Tribunal
New South Wales

Approach to determining wholesale ethanol prices

© Independent Pricing and Regulatory Tribunal (2021).

With the exception of any:

- (a) coat of arms, logo, trade mark or other branding;
- (b) photographs, icons or other images;
- (c) third party intellectual property; and
- (d) personal information such as photos of people,

this publication is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Australia Licence.



The licence terms are available at the [Creative Commons website](https://creativecommons.org/licenses/by-nc-nd/3.0/au/):

IPART requires that it be attributed as creator of the licensed material in the following manner: © Independent Pricing and Regulatory Tribunal (2021).

The use of any material from this publication in a way not permitted by the above licence or otherwise allowed under the *Copyright Act 1968* (Cth) may be an infringement of copyright. Where you wish to use the material in a way that is not permitted, you must lodge a request for further authorisation with IPART.

Disclaimer

This report is published for the purpose of seeking feedback on its approach for monitoring the wholesale and retail markets for ethanol fuel, and our proposed approach for determining the wholesale ethanol price from 1 January 2022.

Use of the information in this report for any other purpose is at the user's own risk, and is not endorsed by IPART.

Nothing in this publication should be taken to indicate IPART's or the NSW Government's commitment to a particular course of action.

ISBN 978-1-76049-501-5

The Independent Pricing and Regulatory Tribunal (IPART)

We make the people of NSW better off through independent decisions and advice. IPART's independence is underpinned by an Act of Parliament. Further information on IPART can be obtained from [IPART's website](https://ipart.nsw.gov.au/).

Tribunal Members

The Tribunal members for this review are:

Ms Deborah Cope, Acting Chair
Ms Sandra Gamble
Mr Mike Smart

Enquiries regarding this document should be directed to a staff member:

Jessica Robinson (02) 9290 8405
Joyce Tapper (02) 9290 8464

Invitation for submissions

IPART invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

Submissions are due by 24 May 2021

We would prefer to receive them electronically via our [online submission form](#).

You can also send comments by mail to:

Monitoring of wholesale and retail markets for fuel ethanol
Independent Pricing and Regulatory Tribunal
PO Box K35
Haymarket Post Shop, Sydney NSW 1240

Late submissions may not be accepted at the discretion of the Tribunal. Our normal practice is to make submissions publicly available on our [website](#) as soon as possible after the closing date for submissions. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed above.

We may choose not to publish a submission - for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. However, it could be disclosed under the *Government Information (Public Access) Act 2009* (NSW) or the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW), or where otherwise required by law.

If you would like further information on making a submission, IPART's submission policy is available on our website.

Summary

The NSW *Biofuels Act 2007* (Biofuels Act) requires fuel sellers to ensure that 6% of fuel sold is ethanol.ⁱ Fuel sellers can be **exempt** from this requirement on various grounds. One of these is that the wholesale price of ethanol exceeds the **price determined by IPART**.ⁱⁱ

Our draft decision is that our current wholesale price setting approach remains appropriate

Since we commenced our price determinations in 2017, we have set the reasonable wholesale price for ethanol in line with what it would cost retailers if they had to buy it from overseas (the “import parity price” or “IPP”).

We have reviewed the conditions in the ethanol markets, and our draft decision is that this approach remains appropriate. We are seeking feedback on this decision by 24 May 2021.

After considering stakeholder feedback on our Draft Report, we will release a Final Report in July. In December, we will publish the wholesale price that will apply from 1 January 2022.

Our current approach reflects a high degree of consumer choice between fuels

Our approach to determining wholesale prices depends on the level of competition in the retail and wholesale markets. Where there is effective competition in one or both of these markets, it will protect customers from excessive prices.

Since 2017, our approach reflected a high degree of consumer choice between fuels. Most petrol stations continue to offer a choice between E10, regular unleaded petrol (“U91”), and premium fuels, and the sales of fuels other than E10 continue to increase as a proportion of all sales.

This choice limits the price that suppliers can charge for ethanol. This is because if the wholesale price of ethanol is too high, the retail price of E10 would rise relative to other fuels and customers would switch fuels.

Therefore, we have not imposed an additional constraint on prices through our determined wholesale price. Instead, we set wholesale prices based on the imported price of ethanol, which is a price that is already available to local wholesalers. This approach reduces the risk of the determined wholesale price being set too low, which could impact the financial viability of ethanol suppliers and discourage new entry.

The sharp reduction in fuel prices in 2020 affected the retail and wholesale markets

The COVID-19 pandemic led to a sharp reduction in fuel prices in 2020. As a result, the wholesale price of ethanol exceeded the wholesale price of U91 for the first time since we began our monitoring role.

However, retailers continued to sell E10 at a discount to U91. This discount was an average of 2.2 cents, or 1.8% over the 2020 calendar year.ⁱⁱⁱ Retailers have reported that their margins have reduced as a result.

The fall in retail fuel prices has also made it difficult for ethanol producers to compete with other fuels over 2020. The 3 local producers of ethanol stopped producing fuel ethanol at various stages during early 2020. United Petroleum, which had a market share of 20% has remained closed since June 2020.

Some stakeholders have argued that the reduced competition in the wholesale ethanol market has allowed suppliers to increase their wholesale prices of ethanol. They consider that IPART should set a lower wholesale ethanol price to impose an additional constraint on prices. In particular, they have suggested that we adjust our existing import parity price calculation to include domestic excise rates, instead of excise for imported fuel. This could approximate the cost of producing ethanol in Australia.

Customers are unlikely to require additional protection from a regulated price

Our draft finding is that the low retail fuel prices are continuing to protect consumers from excessive wholesale ethanol prices, and so additional price constraints are not required. Therefore our draft decision is to continue to set wholesale prices using the import parity price (including the excise rates for imported fuel).

We recognise that where wholesale ethanol prices exceed the price of U91 wholesale prices, and retailers are required to sell E10, retailers may face lower margins on fuel sales. Alternatively, consumers may pay more for alternative fuels than they otherwise would. However, we expect wholesale ethanol to regain competitiveness as crude oil prices continue to rebound in 2020-21, so that retailers can set prices to better reflect costs.

[We are seeking feedback on the following, as well as any other relevant issues:](#)

- 1 Does our price setting framework capture all relevant considerations? Does it lead to appropriate outcomes?
- 2 Have there been changes to the retail and wholesale markets that could affect our assessment of the effectiveness of competition? If so, how should we take these into account when we consider how to determine prices?
- 3 If we maintain our approach to setting prices, can we simplify our import parity model to improve transparency and reduce costs?
- 4 How should IPART consider the viability of wholesalers and retailers when determining a reasonable wholesale price?

-
- 5 How should IPART take into account the minimum biofuels requirements when determining a reasonable wholesale price?
 - 6 What additional analysis would help inform our ethanol price determination?

Draft findings

- 1 Sales of fuel ethanol in NSW averaged around 2.1% of total petrol sales in 2020-21. This remains below the 6% required if all fuel retailers were to meet the mandate on average across NSW. 5
- 2 The wholesale price of E10 has exceeded the wholesale price of U91 since March 2020. 8
- 3 The implied wholesale price of ethanol remained significantly below our determined price in 2020. 8
- 4 The price of E10 was 2.2 cents lower than the price of U91 on average over 2020. 9
- 5 Relatively low oil and petrol prices have maintained downward pressure on ethanol prices, since E10 prices must be competitive with prices of regular petrol. 14
- 6 The delivered cost of wholesale ethanol (including excise) for a new entrant is likely to be around 25% than higher in 2021 compared to 2016. This largely reflects the increase in domestic excise from 2.6 c/L to 14 c/L. 19
- 7 Consumers continue to have an effective choice of fuel with widespread availability of E10, U91 and premium unleaded fuels. 87% of fuel stations sell E10, and 76% sell U91. 58% of stations sell both E10 and U91. 24
- 8 Customer choice between fuels is supported by a range of comparison websites and apps including the NSW Government's FuelCheck service. 26
- 9 Low fuel prices over 2020 have reduced the profitability of ethanol suppliers. 28
- 10 United Petroleum closed its Dalby Bio-Refinery in June 2020. There are now only 2 ethanol producers on the East Coast of Australia, down from 3. 28
- 11 It is unlikely that new suppliers will enter the wholesale market in the short term. 29

Draft decisions

- 1 Additional price constraints are not required because low retail fuel prices are continuing to protect consumers from excessive wholesale ethanol prices. 14
- 2 IPART will continue to determine wholesale ethanol prices based on the price of importing ethanol from overseas (the "import parity price"). 15
- 3 We will continue to include the excise rates for imported fuel in our import parity price calculation. 19

Contents

Tribunal Members	ii
Invitation for submissions	ii
Summary	iii
1 Introduction	1
1.1 All NSW retailers are exempt from meeting the mandate in NSW	1
1.2 The mandate supports the development of the biofuels industry	2
2 Scope and timing of this review	3
2.1 Purpose of the review	3
2.2 Timetable for this review	3
3 Recent trends in the fuel markets	4
3.1 The volume of fuel sold has been falling over time	4
3.2 The share of E10 sales has reduced	5
3.3 World crude oil prices collapsed in 2020, although they are slowly increasing	6
3.4 Retail prices of E10 remain lower than U91 prices	8
4 How we set wholesale ethanol prices	11
4.1 Our framework for assessing how we should set prices	11
4.2 We set prices based on a high degree of customer choice	13
4.3 We set the wholesale ethanol price in line with import costs	14
4.4 How the import price compares with viable market prices	17
5 Consumer choice in the retail market	23
5.1 Most petrol stations offer a choice of fuels	23
5.2 E10 is the cheapest fuel on the market	25
5.3 Consumers continue to access fuel information when making fuel purchases	25
6 Competition in the wholesale ethanol market	27
6.1 Market concentration is high	27
6.2 Reduced profitability has further reduced competition	28
6.3 Further new entry is unlikely in the short term	28

1 Introduction

Since 2007, fuel retailers in NSW have been required to sell a minimum percentage of biofuels under the [Biofuels Act 2007 \(NSW\)](#). From 2011, [at least 6%](#) of all petrol sold must be ethanol^{iv} (“the ethanol mandate”), and at least [2% of all diesel sold](#) must be biodiesel.^v

Ethanol is sold in fuel as E10, which is an unleaded fuel mix comprising of 9% to 10% ethanol.^{vi} This means that at least 60% of fuel sold must be E10. However consumers continue to have a choice of the fuel that they buy.

Alongside the sales requirements, fuel retailers must also meet availability requirements, including ensuring that:

- ▼ a petrol-ethanol blend is [made available](#) at each service station^{vii}
- ▼ a petrol-ethanol blend is made [as accessible](#) to customers as any other type of petrol.^{viii}

Queensland is the only other Australian state that has a biofuels mandate, commencing in January 2017. Since July 2018 it has required that 4% of all fuel sold must be ethanol and 0.5% of all diesel must be biodiesel.^{ix}

1.1 All NSW retailers are exempt from meeting the mandate in NSW

No retailers in NSW are meeting the ethanol mandate. While around 60% of all petrol sold must be E10 to meet the mandate, this level has never been reached. E10 sales across NSW have progressively fallen from a high of around 39% of fuel sales in 2011 down to 25% in 2015 and 21% in the last six months of 2020. The NSW Government has found that the reasons that the ethanol mandate has not been met include the low price differentials between several types of fuel, and customer concerns about ethanol fuels.^x

All retailers have received exemptions from meeting the mandate on various grounds. For example, a retailer can receive an exemption if they have failed to meet the mandate, but a petrol-ethanol blend is available, and made as accessible to customers as any other type of petrol.

One of the grounds for receiving an [exemption](#) is if ethanol producers sell ethanol into the market for more than the price determined by IPART. Since 2017, IPART’s [determined price](#) has been between 111.4 cents per litre (c/L) and 116.7 c/L. It is currently 114.2 c/L. Since IPART began determining wholesale prices, no retailers have applied for exemption on the grounds that the wholesale price of ethanol has exceeded IPART’s determined price.

1.2 The mandate supports the development of the biofuels industry

The purpose of the requirements on the sale of ethanol is to support the development of a sustainable and competitive biofuels industry in NSW. Other objectives include:

- ▼ improving air quality
- ▼ addressing climate change by reducing greenhouse gas emissions (**Box 1.1**)
- ▼ providing consumers with cheaper fuel options
- ▼ reducing the reliance of NSW on imported petroleum products
- ▼ supporting regional development.^{xi}

The NSW Government [reviewed](#) the Act and Regulation and affirmed that these objectives are still valid. It also concluded that the Act and Regulation are still largely appropriate. It made 8 recommendations to reduce regulatory burden and to strengthen the Act's effectiveness.^{xii}

In the future, some of these objectives may be met with the take-up of electric vehicles. Because the electricity is often generated a long way from where the vehicle is used, replacing conventional cars with electric vehicles improves air quality in cities. Depending on the sources of electricity, electric vehicles can also reduce greenhouse gas emissions.

Box 1.1 Biofuels can help reduce greenhouse emissions

The UN climate science reports have found that biofuels represent a potential measure to address climate change.^a However the effectiveness of biofuels in reducing carbon emission depends on the circumstances of production and transportation. To accurately assess the impact of biofuels a 'whole of life cycle' analysis needs to be considered. This includes the energy it takes to grow crops, harvest them, convert them to fuel, transport them to distribution sites and combust them.

In 2008 the CSIRO found that E10 fuel produced under Australian conditions has between 2% to 5% lower CO₂ emissions than U91.^b

a Revi, Aroma de Coninck et al, [Strengthening and implementing the global response](#), Chapter 4, October 2018, p 325.

b NSW Fair Trading, [E10 and the environment](#), accessed 31 March 2021.

2 Scope and timing of this review

This review will cover each of **IPART's functions** under the Biofuels Act. These are:

- ▼ determining and periodically reviewing a reasonable price for wholesale ethanol for use in the production of petrol-ethanol blend
- ▼ monitoring the retail market (including prices) for petrol-ethanol blend, including reporting on the effect of our determined price on the retail market.^{xiii}

The legislation does not specify how often we must undertake our functions. Between 2017 and 2019 we set a reasonable price for ethanol each quarter, and monitored the retail market annually.

In our last market monitoring report completed in December 2019, we decided to reduce the frequency of the report to every 2 years, and move to annual price determinations.^{xiv} This was in response to stability in the market and to reduce the regulatory costs associated with the ethanol mandate.

2.1 Purpose of the review

The purpose of this review is to determine if any changes are required to our current approach to determining wholesale prices. Since we commenced our role determining prices, we have set the ethanol price in NSW at the level it would cost retailers to import ethanol from overseas.

This review will also include our findings on the retail market (including prices) in accordance with our monitoring function under the Biofuels Act. These findings will be considered in our approach to determining a reasonable price for ethanol. As discussed in Chapter 4, our approach to setting ethanol prices has depended on the level of competition in the fuel retail market and the wholesale market for ethanol. Where there is effective competition in one or both of these markets, it will protect customers from excessive prices, and a less intrusive approach to price regulation is needed.

2.2 Timetable for this review

This Draft Report on our approach to setting prices is the first step in our review. Its purpose is to seek input on any changes that have occurred in the retail and wholesale markets, and whether these affect our approach to determining prices.

We will be accepting written submissions until 24 May 2021. We will publish a Final Report in July 2021. After we have finalised our approach, we will publish the determined price of ethanol that will apply from 1 January 2022.

3 Recent trends in the fuel markets

The onset of the COVID-19 pandemic in 2019-20 was a significant shock to the global fuel market. Fuel demand dropped dramatically and the supply of crude oil did not immediately fall in response. This resulted in significant falls in global fuel prices, which are a key determinant of the prices of both U91 and E10.

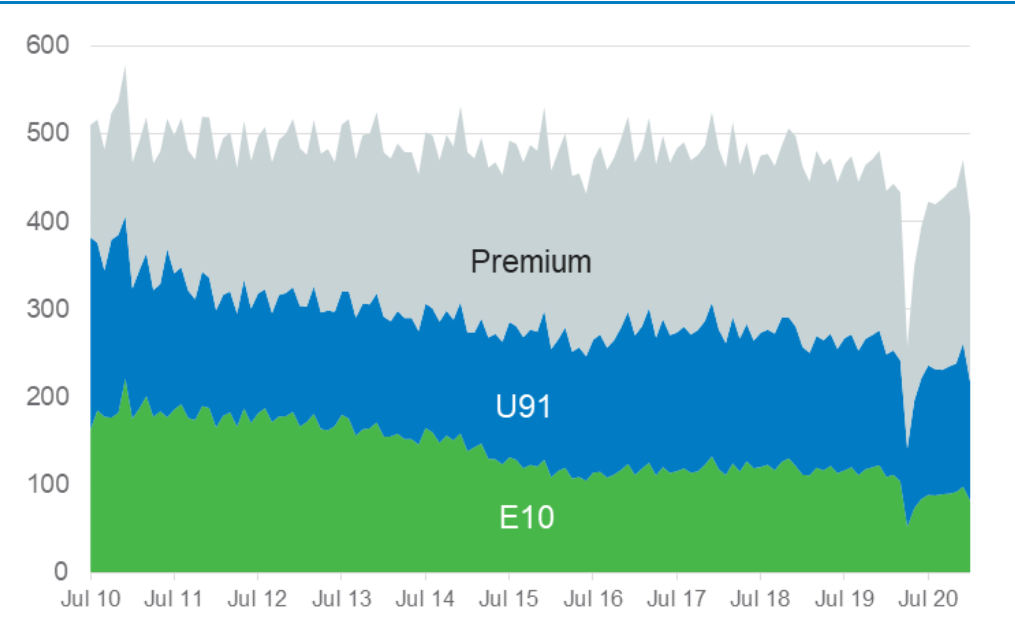
These effects are anticipated to be short term. Global crude oil prices have started to rebound, and are expected to further increase during 2020-21, although still remain low by historic standards.

This chapter provides more detail about recent trends in fuel and ethanol sales and prices.

3.1 The volume of fuel sold has been falling over time

Between March 2020 and April 2020, total fuel sales fell by about 40% in NSW due to the COVID-19 pandemic (**Figure 3.1**). This was primarily driven by the travel restrictions imposed, which substantially reduced the demand for petrol. Fuel sales were at their lowest in April 2020, but recovered by the end of 2020 and into early 2021.

Figure 3.1 Total volume of fuel sold (ML) in NSW



Data source: Australian Petroleum Statistics, [Australian Petroleum Statistics – Issue 294 January 2021](#), Table 3B.

Figure 3.1 also shows that prior to 2019-20, the total volume of fuel sold in NSW has been falling over the last 8 years. Fuel sales fell even though total vehicle kilometres travelled increased as the population and the economy have grown.^{xv} This suggests that consumers are purchasing more fuel efficient vehicles.

Energy efficient hybrid and electric vehicles are also becoming increasingly popular with motorists. The CSIRO forecasts that electric cars will account for at least 30% of sales by 2035, but the take-up could be much higher.^{xvi} Over the next few years the price of electric vehicles is expected to be similar to the price of petrol vehicles.^{xvii} When this occurs there is likely to be a rapid increase in demand for electric vehicles.

3.2 The share of E10 sales has reduced

Figure 3.2 shows that the relative shares of the type of fuel sold have also changed over time. Sales of E10 peaked at around 39% in March 2011, but fell to 25% in July 2019, prior to the onset of the COVID-19 pandemic. In comparison, sales of premium blends of fuel have increased from 25% in July 2010 to 43% in December 2019. Sales of U91 have remained relatively steady over the period and accounted for around 32% of total sales in December 2019.^{xviii}

While total fuel sales recovered by the end of 2020, the share of E10 fell to 21% of total fuel sales in 2020-21 (year to date). This is significantly less than the 60% of fuel sales required by the ethanol mandate.

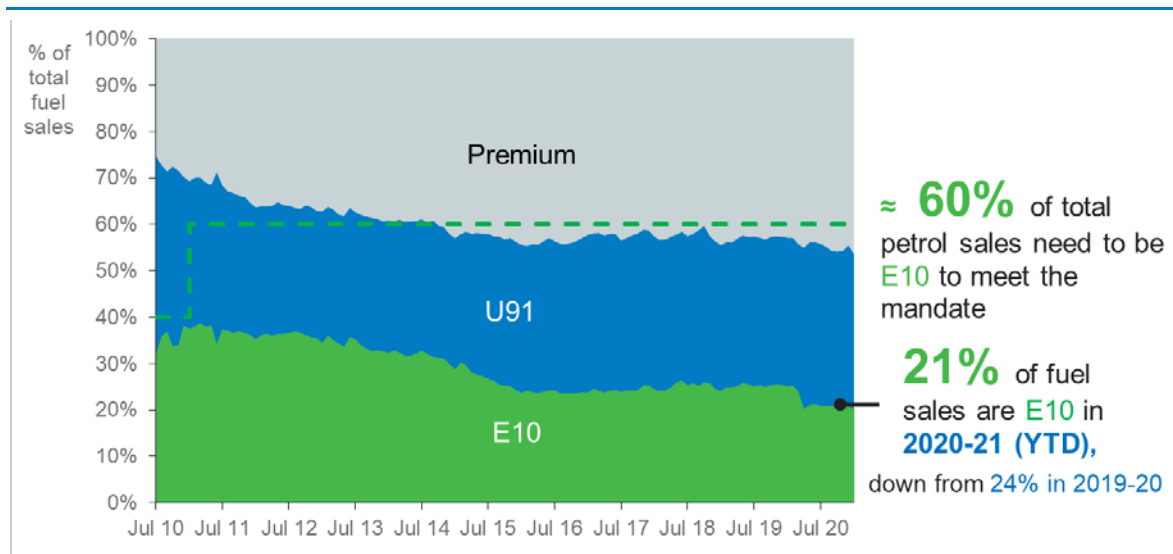
As noted in Chapter 1, the NSW Government considers that the low market share for ethanol reflects the low price differentials between several types of fuel, and customer concerns about ethanol fuels.^{xix} In addition, the further fall in demand for E10 during 2020 could reflect that fuel prices were low by historic standards. When fuel prices are lower in general, the incentive for price sensitive customers to purchase the lowest cost fuel, E10, is not as strong. This is because U91 and premium fuels are relatively more affordable in a lower price environment.

The long term increase in the share of premium fuels could also reflect the increased fuel efficiency of new vehicles. Because these cars require less fuel overall, consumers can purchase more expensive fuel without increasing their total fuel costs.

IPART finding

- 1 Sales of fuel ethanol in NSW averaged around 2.1% of total petrol sales in 2020-21. This remains below the 6% required if all fuel retailers were to meet the mandate on average across NSW.

Figure 3.2 Volume of petrol types sold in NSW since 2010-11 (% of total fuel sales)



Data source: Australian Petroleum Statistics, [Australian Petroleum Statistics – Issue 294 January 2021](#), Table 3B

3.3 World crude oil prices collapsed in 2020, although they are slowly increasing

Fluctuations in the world price of crude oil are passed on to consumers through petrol prices. The price of E10 closely follows the price of U91. This is because E10 is a mix of around 90-91% of U91 petrol, with ethanol comprising the remainder.

The COVID-19 pandemic caused global oil prices to fall significantly. This was due to a surge in global oil production at the same time travel restrictions were introduced. In Australia, this caused the wholesale prices for E10 and U91 to fall by around 35% between January 2020 and April 2020 (**Figure 3.3**).

We use terminal gate prices (TGPs) from Fueltrac as the measure of wholesale prices. Terminal gate prices are the prices at which petrol can be purchased from wholesalers in the market. The terminal gate price reflects the wholesale price of petrol only, and are usually posted on a regular basis on the websites of major wholesalers.^{xx} The difference between the terminal gate price and the retail price includes the cost of transporting fuel, and retail operating costs such as rent, wages and utility costs.

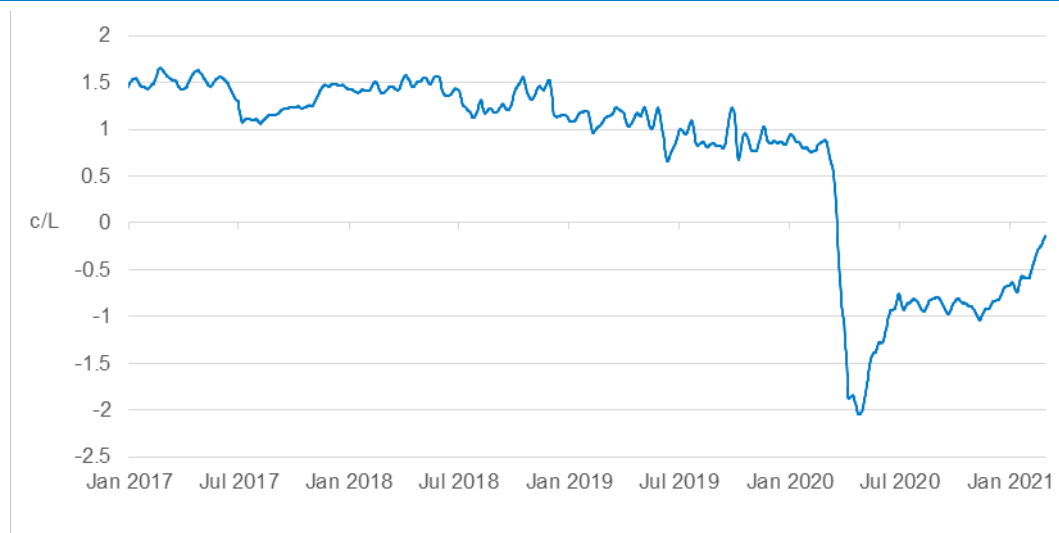
Figure 3.3 U91 and E10 terminal gate prices (7 day rolling averages, ex GST)



Data source: Daily average Sydney TPGs for regular petrol and E10 from FuelTrac

Figure 3.3 shows the wholesale price of E10 was more expensive than the wholesale price of U91 for the first time in March 2020. This is shown more clearly in **Figure 3.4** below. For the 6 months prior to the COVID-19 pandemic, wholesale U91 prices were around 0.9 cents higher than E10 terminal gate prices. But by April 2020, they were around 2 cents lower. This difference reduced over 2020. As at February 2021, the U91 terminal gate price was only 0.3 cents lower than the E10 terminal gate price.

Figure 3.4 Difference between the U91 and E10 terminal gate prices (7 day rolling averages, ex GST)



Data source: Daily average Sydney TPGs for regular petrol and E10 from FuelTrac

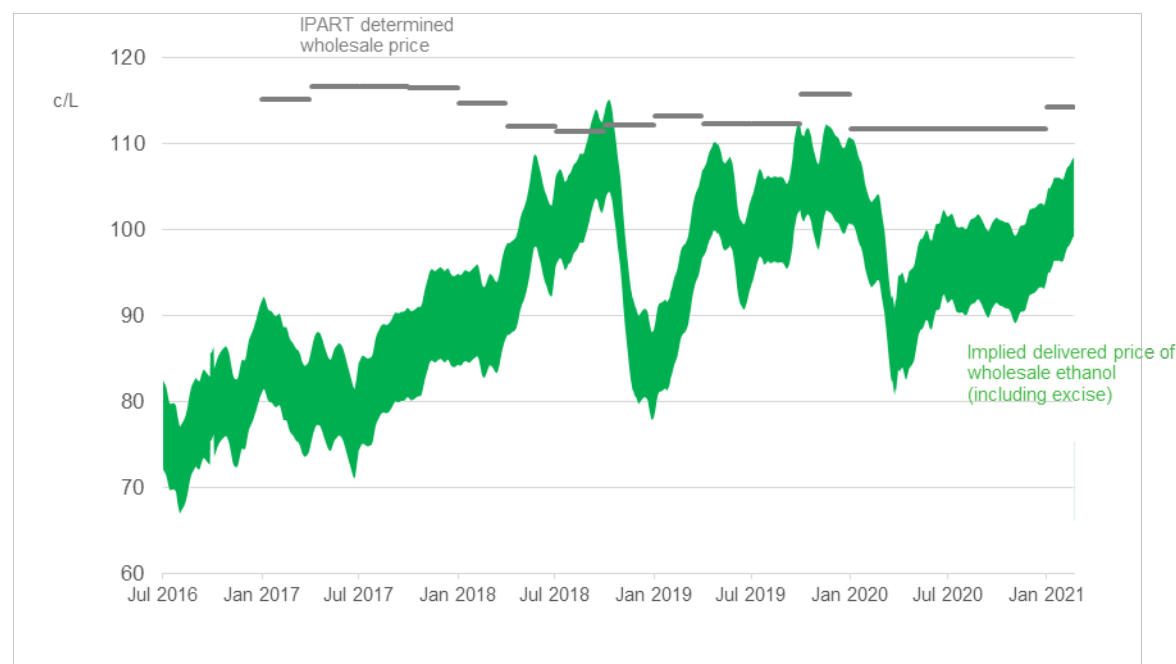
As suggested in **Figure 3.3**, the negative price difference between E10 and U91 is being driven by the significant falls in U91 prices. We used the terminal gate prices to derive an implied wholesale price of wholesale ethanol, which suggests that ethanol prices have remained fairly steady over the period (**Figure 3.5**).

Figure 3.5 also shows that the implied price of wholesale ethanol is significantly lower than our determined price.

IPART findings

- 2 The wholesale price of E10 has exceeded the wholesale price of U91 since March 2020.
- 3 The implied wholesale price of ethanol remained significantly below our determined price in 2020.

Figure 3.5 Implied wholesale price based on Sydney terminal gate prices (c/L)



Note: The range for the implied wholesale ethanol price assumes an ethanol blend in E10 between 9% and 10%, and includes domestic excise on ethanol, but excludes GST. It assumes fuel wholesaler margins (including the costs of blending ethanol with U91) of between 3 and 12 cents per litre of fuel, based on past estimates from ACCC.

Data source: IPART calculations based on daily average Sydney terminal gate prices for U91 and E10 from Fueltrac, Australian Government, [Historical excise rates](#), accessed 16 April 2021.

3.4 Retail prices of E10 remain lower than U91 prices

For many vehicles, the price of E10 needs to be lower than U91 for it to be economic for consumers. The [NSW Fuel for Thought website](#) states that E10 has around 3% less energy than the equivalent amount of U91 petrol, and on average, this can translate to an increase in fuel consumption of around 3%. However, E10 has a higher research octane number¹ (94) compared to U91 (91) which results in a more complete burn of the available fuel to increase engine efficiency.^{xxi}

¹ Octane is a measure of petrol's resistance to igniting prematurely in the engine's combustion chamber when the car is accelerating. The higher the octane rating, the more resistant the petrol is to burning uncontrollably ('knocking' or 'pinging') before it is supposed to.

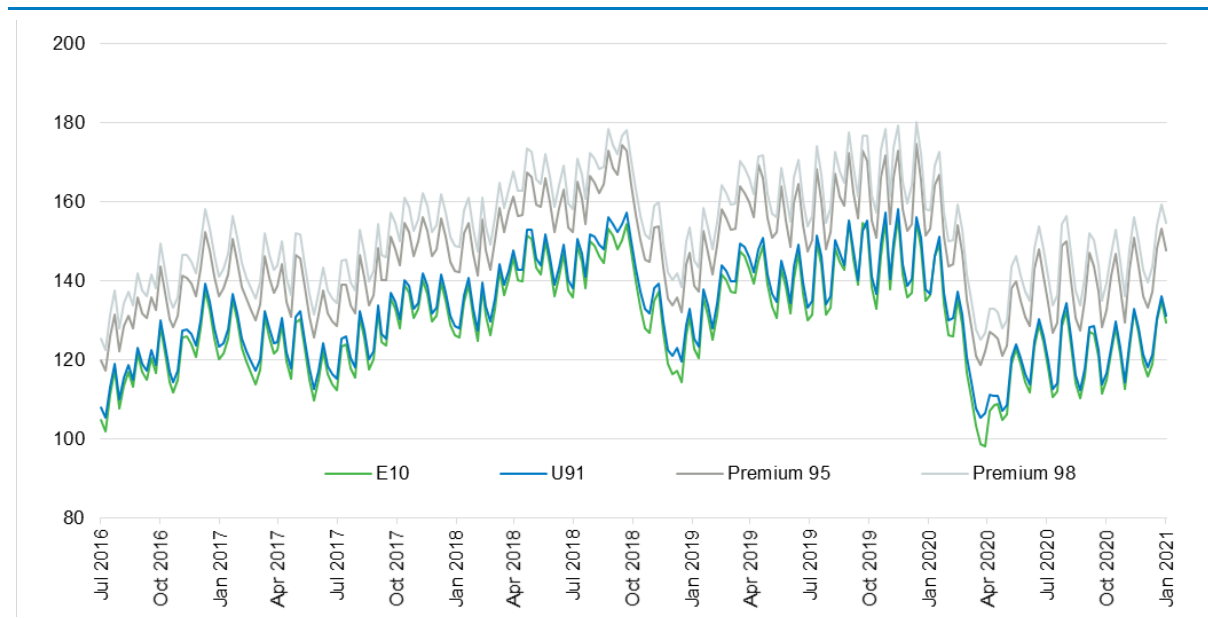
Figure 3.6 shows that since 2016, E10 has been sold at a 2 to 3 cent discount to U91. Over 2020, E10 remained the cheapest fuel for consumers, even though E10 wholesale prices were higher than wholesale prices of U91. In 2020, this discount dipped below 2 cents at times, but the average discount over the calendar year remained at 2.2 cents (or 1.8%) (**Figure 3.7**).

Since 2017 the average price difference between E10 and premium fuels has been slowly increasing. For premium 95, the price difference has increased by 0.8 cents to be 15.2 cents higher than E10 in 2020, while for premium 98 the price difference has increased by 1.6 cents to be 22.4 cents higher than E10.² While the prices of premium fuels tend to follow the prices of E10 and U91, there is less variation in the price difference between premium fuels and E10. This is shown in the bottom chart of **Figure 3.7**.

IPART finding

4 The price of E10 was 2.2 cents lower than the price of U91 on average over 2020.

Figure 3.6 Weekly average petrol prices in NSW – August 2016 to January 2021 (c/litre)

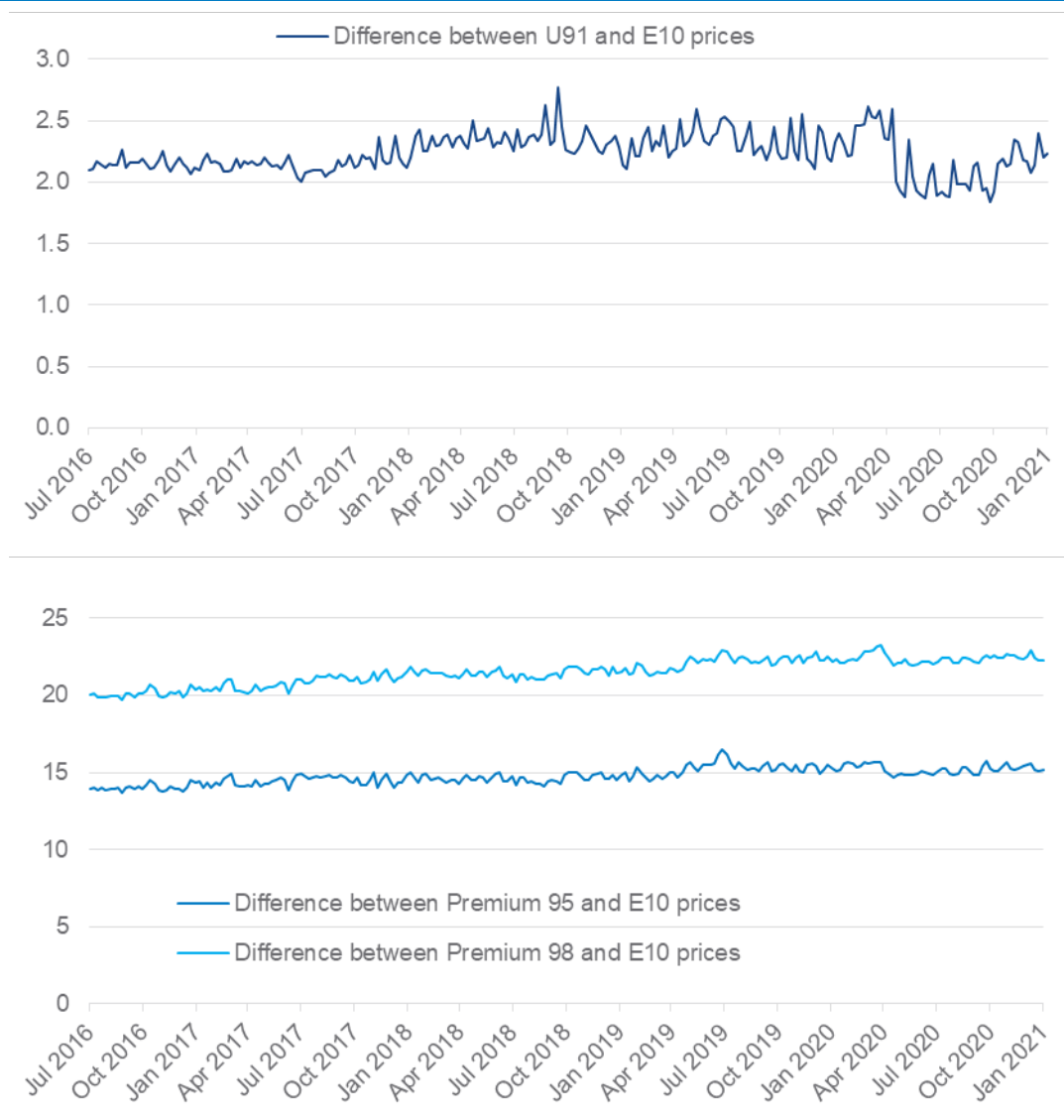


Note: We calculate average prices for the hours between 6 am and 10 pm, since very little petrol is sold outside these hours. As a check we also calculate the average prices and price difference across all 24 hours of the day and the results are very similar.

Data source: NSW Government Open Data Portal, Datasets, [FuelCheck](#), accessed on 19 March 2021.

² These calculations are the average prices for the calendar year.

Figure 3.7 Weekly difference in U91 and E10 prices and premium and E10 prices in NSW – August 2016 to January 2021 (c/litre)



Data source: NSW Government Open Data Portal, Datasets, [FuelCheck](#), accessed on 19 March 2021.

4 How we set wholesale ethanol prices

Since IPART commenced its roles under the Biofuels Act in 2017, we have determined the wholesale price of ethanol in line with what it would cost for retailers to import it from overseas (at the “import parity price” or IPP).

Import prices are a constraint that already exist in the market – that is, retailers could choose to import wholesale ethanol from overseas – and therefore our determined wholesale ethanol price doesn’t distort market prices.

There have been mixed views on our price setting approach since it was introduced in 2017. There is one dominant producer in NSW, Manildra, and one remaining supplier in Queensland. Some fuel retailers hold the view that these producers have been able to increase wholesale prices because they do not face competitive pressure in the wholesale market. Therefore they have argued that our determined price should be lower to put downward pressure on ethanol prices. Manildra has told us that its recent price increase reflects increasing costs.

Some stakeholders consider that we should set wholesale prices using the import parity price, but that we should include excise costs for ethanol produced domestically, rather than for imported ethanol. A price set on this basis could impose an additional constraint on prices, because this is not a price that already exists in the market.

This Chapter explains and seeks feedback on:

- ▼ our framework for determining our approach to setting prices
- ▼ how we calculate the cost of importing ethanol from overseas
- ▼ how our determined price compares with the prices that are required for the viability of wholesalers and retailers.

4.1 Our framework for assessing how we should set prices

In any market, the need for government intervention depends largely on the extent of competition in the market. Where competition exists, it protects customers from higher prices and government intervention is not required. Intervening in the market creates a risk that the government (or regulator) will set prices too low, impacting the financial viability of producers and discouraging new entry. This can reduce the supply of a good, resulting in consumers purchasing less than they would otherwise wish to. In the longer term, less competition can also lead to higher prices.

As part of our 2016 review of the wholesale market for fuel ethanol, we developed a framework to assess the need for price regulation for wholesale ethanol. A schematic of the framework is presented in **Figure 4.1**.

The framework reflects that the markets for petrol and for wholesale ethanol are affected by fluctuating supply and demand conditions, as well as regulatory changes. Under this framework, the appropriate approach to determining the reasonable wholesale price, or whether any regulation is needed, depends on two key factors – the degree of consumer choice in retail fuels and the extent of competition in the wholesale ethanol market. In addition, when there is a high degree of consumer choice in retail fuels, a low petroleum price imposes a market constraint on the price of wholesale ethanol.

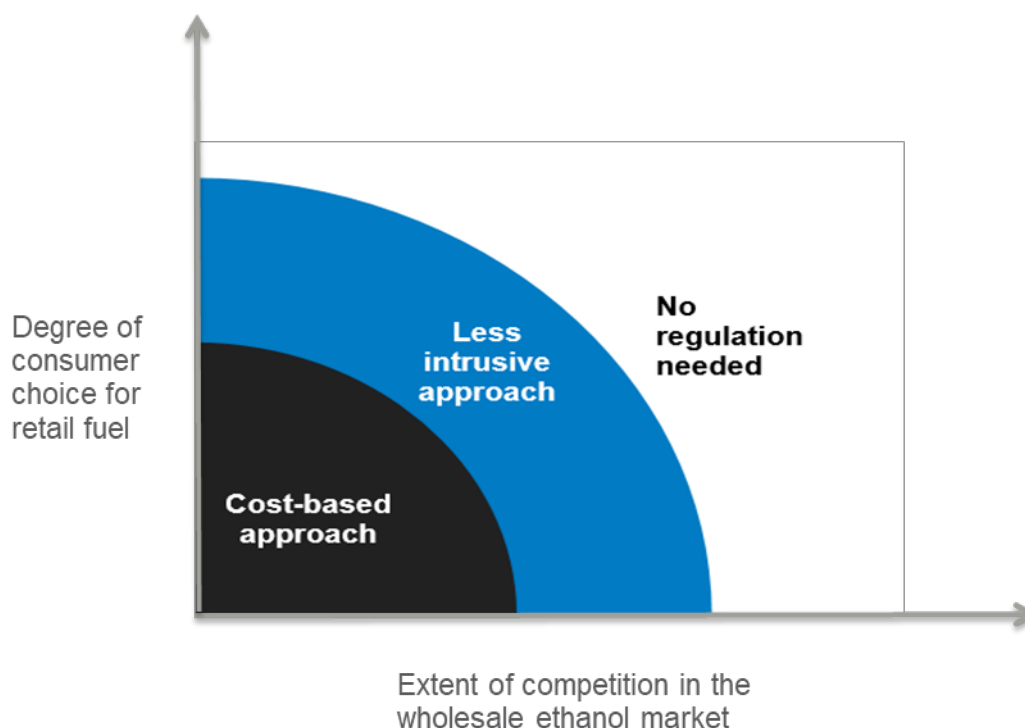
This framework assists us in determining whether ethanol producers' market power is such that:

- a) cost-based price regulation is required
- b) a less intrusive approach to price regulation is needed, or
- c) no price regulation is needed.

Under our framework:

- ▼ If there was very limited consumer choice of retail fuel (for example, if E10 was the only fuel available) **and** little or no competition in the wholesale ethanol market (for example, if there was only one producer that could supply NSW and there were high barriers to entry), our approach for recommending a maximum price would appropriately be based on the cost of a new entrant producer.
- ▼ If there was unrestricted consumer choice of retail fuel (for example, if the ethanol mandate was removed completely), there would be no need for intervention in the pricing of wholesale ethanol, even if there was little or no competition in the wholesale ethanol market. The price of substitute fuels limits the price that E10 can be sold into the market, placing a constraint on the price of wholesale ethanol.
- ▼ If the wholesale ethanol market was competitive or there was a strong threat of competition with low barriers to entry, this would ensure that wholesale ethanol prices reflected the efficient costs of production regardless of the degree of consumer choice, and no intervention in the pricing of wholesale ethanol would be needed.
- ▼ In other cases, the approach for recommending a maximum wholesale price would be less intrusive than a cost-based approach, to avoid distorting the wholesale ethanol market and encourage the development of more competition.

Figure 4.1 Framework for assessing the level of pricing intervention required in the wholesale fuel ethanol market



Note: This is a schematic representation and the regions within this figure are indicative only.

4.2 We set prices based on a high degree of customer choice

Since we have been applying our framework, we have considered that the level of competition is within the blue region where a less intrusive approach applies. This is based on our assessment that although there is limited competition in the wholesale market, there is a high degree of consumer choice for retail fuel. However the ethanol mandate had the effect of placing some restrictions on this choice, as some retailers replaced their U91 bowsers with E10.

The current market conditions continue to support this assessment. Most petrol stations continue to offer a choice between E10, U91, and premium fuels, and the sales of fuels other than E10 have increased as a proportion of all sales. The price of U91 has remained competitive with E10, and many consumers are using the NSW Government's FuelCheck app to assist them in making cost-effective choices.

Competition in the wholesale market reduced in 2020 with the exit of United Petroleum in Queensland, which had 20% market share on the East Coast of Australia. This has been driven by low fuel prices which have constrained the price of ethanol, reducing its profitability.

These low fuel prices have also protected consumers from excessive wholesale prices of ethanol. Therefore, as long as there is a high level of choice for consumers, decreasing

competition in the wholesale market does not affect our assessment of the level of pricing intervention required.

In addition, we note that if conditions change and fuel prices increase in the future increasing the profitability of ethanol, there is potential for new entry which poses a continuing threat of competition.

We discuss the level of competition in the retail and wholesale markets in detail in the following chapters.

Draft finding

- 5 Relatively low oil and petrol prices have maintained downward pressure on ethanol prices, since E10 prices must be competitive with prices of regular petrol.

Draft decision

- 1 Additional price constraints are not required because low retail fuel prices are continuing to protect consumers from excessive wholesale ethanol prices.

4.3 We set the wholesale ethanol price in line with import costs

To date we have assessed that less intrusive price regulation is required and have set prices in line with how much it would cost to import ethanol from overseas. Since 2017, this has been between 111.4 c/L and 116.7 c/L. It is currently [114.2 c/L](#).

The price of imported ethanol is a price that is already available to local wholesalers. Therefore it avoids distorting the ethanol market. It reflects the upper bound for what a local purchaser would be willing to pay to a domestic ethanol producer.

Fuel importers and wholesalers also use an import parity price to determine contract prices for petroleum, reflecting the price faced by wholesalers for fuel delivered to their terminals. Our import parity price is similar, except we calculate an annual price instead of a daily price. It is based on a nine-month average (to one month prior to the commencement of the pricing period) of weekly import parity price estimates based on the lowest cost origin for ethanol from either the US or Brazil.

The import parity price includes the following cost components:

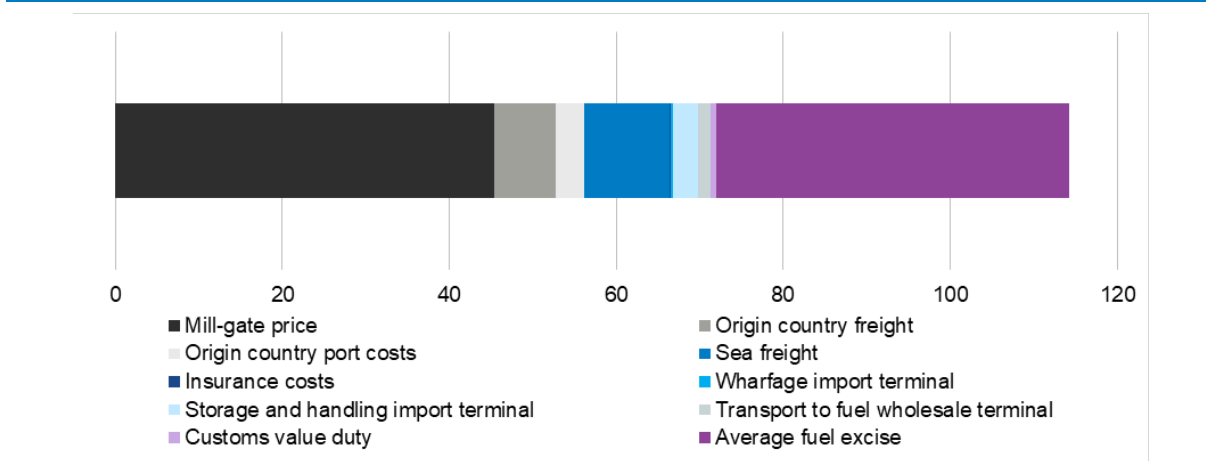
- ▼ the international market price of wholesale ethanol
- ▼ transport costs
- ▼ landing costs in Australia, including relevant excise tax and customs value duty on imported ethanol
- ▼ storage and handling costs in Australia.

The two largest components of the import parity price are mill-gate prices for ethanol and the Australian fuel excise (**Figure 4.2**). The exchange rate also has a significant effect on the price.

Draft decision

- 2 IPART will continue to determine wholesale ethanol prices based on the price of importing ethanol from overseas (the “import parity price”).

Figure 4.2 Components of the import parity price (2021) (c/L)



Source: IPART, Import price parity model.

4.3.1 We are reviewing our model of import parity prices

We calculate the import parity price in an excel model, which is available on our [website](#).^{xxii} In developing this model, we had regard to simplicity, transparency and minimising regulatory and administrative costs. However, the model is complex, because there are a large number of inputs to the model that come from a range of sources (**Table 4.1**).

Some of the inputs are freely available. For example, we source the mill gate prices from the Brazil ESALQ³ price index and the US Department of Agriculture. These are indicative of the average price of ethanol exported from these counties.

We purchase other inputs, which costs just over \$10,000 each year. To estimate the costs of land transportation from the factory to the port, as well as any relevant port costs, we purchase the following data from the University of Sao Paul for Brazil:

- ▼ a factory to port cost based on monthly average transport costs from ethanol producing zones to Port of Santos averaged over 12 months
- ▼ port costs of exporting ethanol at the Port of Santos.

³ ESALQ stands for 'Escola Superior de Agricultura Luiz Queiroz', which translates to Luiz de Queiroz College of Agriculture. This index is published by the Centre for Advanced Studies on Applied Economics within Sao Paulo University.

We also purchase data about sea freight costs. Ethanol is transported in specialist ships called chemical carriers. These ships are smaller than oil tankers and as such shipping costs are more expensive per litre for ethanol than for petrol. There is currently limited chemical trading on the Brazil to Australia and US to Australia shipping routes. We obtain data from ICIS Market Intelligence to estimate sea freight costs based on tariffs for a 2,000 metric tonne (MT) chemical shipment (approx. 2.5ML) for the Brazil to Asia-Pacific and US Gulf to Asia-Pacific chemical shipping routes.

We are considering whether the level of complexity in the model is necessary. The purpose of the import parity price is to estimate a price constraint that already exists in the market (the cost of buying ethanol from overseas). As explained in the next section, this has been significantly higher than local prices, largely because imported ethanol incurs around 30 c/L more excise than ethanol that is produced domestically. No retailers have sought an exemption to meeting the ethanol mandate because the wholesale price has exceeded IPART's determined price.

Table 4.1 Import parity price components

Component	Data sources	
	<i>Brazilian ethanol</i>	<i>US ethanol</i>
Free On Board (FOB) price		
▼ International benchmark price	▼ University of Sao Paulo College of Agriculture (ESALQ) ethanol price index	▼ US Department of Agriculture (USDA) national daily ethanol report
▼ Freight from mill-gate to export port in origin country	▼ University of Sao Paulo ESALQ research unit into agro-industrial logistics	▼ USDA Agricultural Marketing Service transport research and analysis datasets.
▼ Origin country port costs	▼ University of Sao Paulo ESALQ research unit into agro-industrial logistics	▼ Port of Houston Authority Tariff schedule for chemical exports
Other components		
▼ Sea freight from origin country to Australia	▼ ICIS Market Intelligence sea freight rates from Brazil to Asia Pacific	▼ ICIS Market Intelligence sea freight rates from the US to Asia Pacific
▼ Insurance and loss	▼ Quotes from sea freight insurance brokers	
▼ Australian wharfage (Botany)	▼ Pricing information published by NSW Ports	
▼ Australian landing costs (taxes)	▼ Australian customs tariff rates for fuel ethanol imports	
▼ Storage and handling at Australian import terminal	▼ Estimate by IPART based on confidential information	
▼ Transport costs from port to fuel terminal	▼ Estimate by IPART based on confidential information	
▼ Conversion factor to convert ethanol from kilograms to litres (g/cm ³)	▼ 0.7848 at 15°C to align with standard Australian contracts	

4.4 How the import price compares with viable market prices

In determining a reasonable wholesale price for ethanol, we are [required to](#):

- ▼ consider the price at which ethanol would need to be sold by wholesalers for the **wholesale market** for ethanol and petrol-ethanol blend to be economically viable
- ▼ consider the price at which ethanol would need to be sold by wholesalers for the **retail market** for petrol-ethanol blend to be economically viable
- ▼ take into account the minimum biofuel requirements and disregard any exemptions from those requirements.^{xxiii}

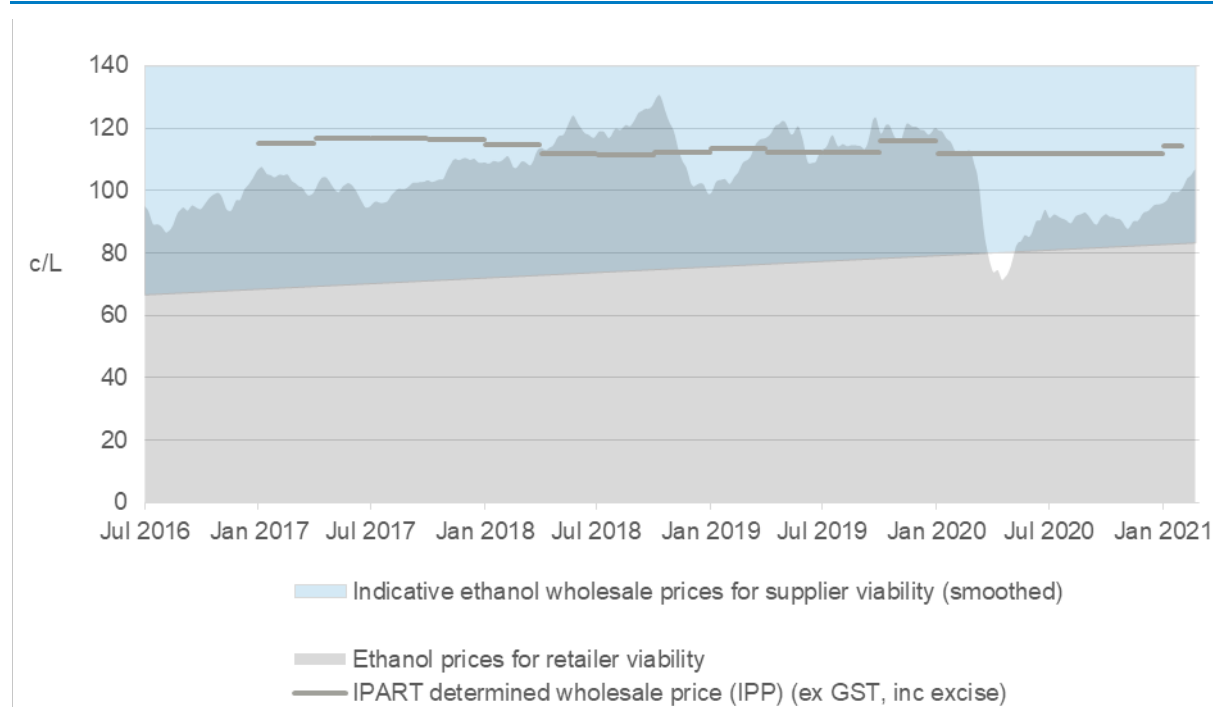
For the wholesale market for ethanol to be viable, the wholesale price of ethanol needs to cover the delivered costs of producing ethanol over the medium term.

For the retail market to be viable, E10 needs to be sold at a discount to U91. For a discount to be cost reflective, the wholesale price of ethanol should be lower than the U91 wholesale price (measured by the terminal gate price excluding GST). Where wholesale ethanol prices exceed the price of U91 terminal gate price, retailers may face lower margins on fuel sales. Alternatively, customers may pay more for alternative fuels than they otherwise would.

These indicative wholesale prices are shown in **Figure 4.3**. It shows that the prices required for suppliers to be viable is higher than it was in 2016. Over 2020, the price required for retailer viability fell significantly relative to IPART's determined price. The following sections explain these prices in more detail.

In determining the wholesale ethanol price, we considered whether we should set it equal to either the wholesale costs of ethanol, or a price that could increase demand for E10 while maintaining retailer viability. These are more intrusive price setting approaches. Under our framework, our assessment that competition is sufficient to protect customers from abuse of monopoly power means that the costs associated with these approaches would outweigh the benefits.

Figure 4.3 Import price versus viable market prices (excluding GST, including excise)



Data source: IPART calculations based on daily average Sydney terminal gate prices for U91 and E10 from Fueltrac, AECOM, Efficient Cost of New Entrant Ethanol Production - Spreadsheet Model, AWB, Daily grain prices, Australian Government, Historical excise rates, accessed 16 April 2021

4.4.1 Delivered cost of ethanol

In 2016, we engaged AECOM to consider the delivered costs of ethanol production. It found that the cost of producing ethanol varies significantly, depending on the feedstock used in production (for example, molasses, wheat or sorghum), and production size. It found that the lowest cost method of production in NSW would be using wheat starch in an integrated facility that primarily produces gluten. This is the method used by Manildra, which is the largest producer in NSW.^{xxiv}

AECOM estimated that the minimum efficient costs of a new entrant producer with an integrated wheat starch facility was 67 c/L in 2016, including excise.^{xxv} However, the costs of feedstock (by far the largest cost component) can fluctuate over time.^{xxvi} For example, AECOM used wheat contract price of \$200 per tonne from AWB to estimate the efficient ethanol production cost based on integrated wheat in 2016.^{xxvii} The same data source indicates the wheat contract prices are likely to have increased since then. As of 14 April, the prices were around \$230 to \$240 per tonne.^{xxviii}

We have updated AECOM's efficient ethanol production cost (integrated wheat based), which is reflected in **Figure 4.3**. We have found that the efficient cost has increased from 67 c/L in 2016 including excise to 83 c/L in 2021 including excise, which is an increase of around 25%. The updated efficient production cost is based on updated:

- ▼ excise on domestic ethanol: from 2.6 c/L to around 14 c/L
- ▼ feedstock costs: we used wheat price of \$235 per tonne, which is the average daily wheat price (APW1) across different storage locations in Southern New South Wales
- ▼ cost of capital: we used the same industry specific parameters as in 2016 (i.e., equity beta of 1 and gearing of 25%), but updated the market based parameters to 31 January 2021
- ▼ other costs: we used the CPI to adjust other costs, such as other production costs, maintenance and other indirect costs.

As shown in **Figure 4.3** the price of importing ethanol is significantly higher than the estimated costs of production. This is mainly because a much lower rate of excise applies to domestically produced ethanol (**Box 4.1**).

Since we have been determining prices, there have been some stakeholders who consider that our international parity price should be set using excise costs for ethanol produced domestically, rather than for imported ethanol. This would become more similar to a cost-based approach. It would impose a constraint on the market that does not already exist. As explained in previous sections, our view has been that more intrusive price regulation is not needed to protect consumers, and would pose risks to the market.

In contrast, including the full excise and customs duties means that the international parity price reflects the commercial realities faced by potential ethanol importers. It allows local competition in ethanol production to continue to develop and deliver increasingly competitive prices over time.

Draft finding

- 6 The delivered cost of wholesale ethanol (including excise) for a new entrant is likely to be around 25% higher in 2021 compared to 2016. This largely reflects the increase in domestic excise from 2.6 c/L to 14 c/L.

Draft decision

- 3 We will continue to include the excise rates for imported fuel in our import parity price calculation.

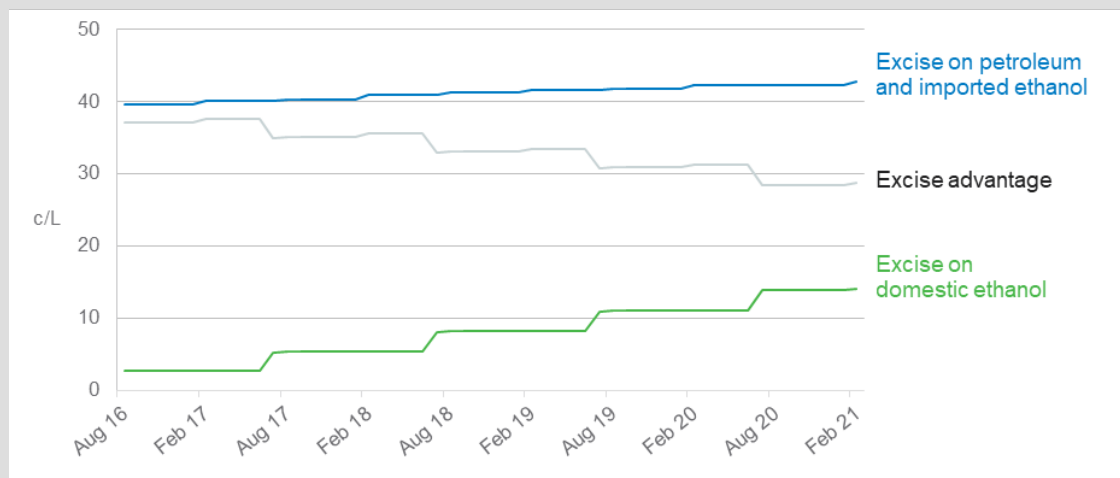
Box 4.1 Excise applied to fuel

Our import parity price includes the customs fuel import duty that applies to ethanol imported to Australia. The fuel excise tax for imported ethanol is currently 43 c/L. This excise increases bi-annually in February and August each year in line with CPI.

Ethanol imported from Brazil also incurs a 4% import duty, levied on the FOB price of the ethanol.^a Ethanol imported from the US is not subject to this duty.

In contrast, the domestic excise on ethanol is only around 14 cents (up from around 2.6 c/L in 2016-17). This means that domestically produced ethanol receives an excise advantage of 29 c/L compared with petroleum and imported ethanol (**Figure 4.4**).

Figure 4.4 Domestic ethanol excise and excise advantage (c/L)



^a Customs Tariff Act 1995, Schedule 3 – Item 2207.20.10, DSC rates.

Source: Excise Tariff Act 1921, section 6H, Australian Government Taxation Office, [Excise duty rates for fuel and petroleum products](#), accessed 13 April 2021.

4.4.2 Wholesale price of U91

E10 is U91 blended with 9% to 10% wholesale ethanol. For E10 to be sold at a discount to U91, and for this discount to reflect costs, the wholesale ethanol price needs to be cheaper than the U91 wholesale price (the terminal gate price excluding GST) minus the wholesale margin on E10.

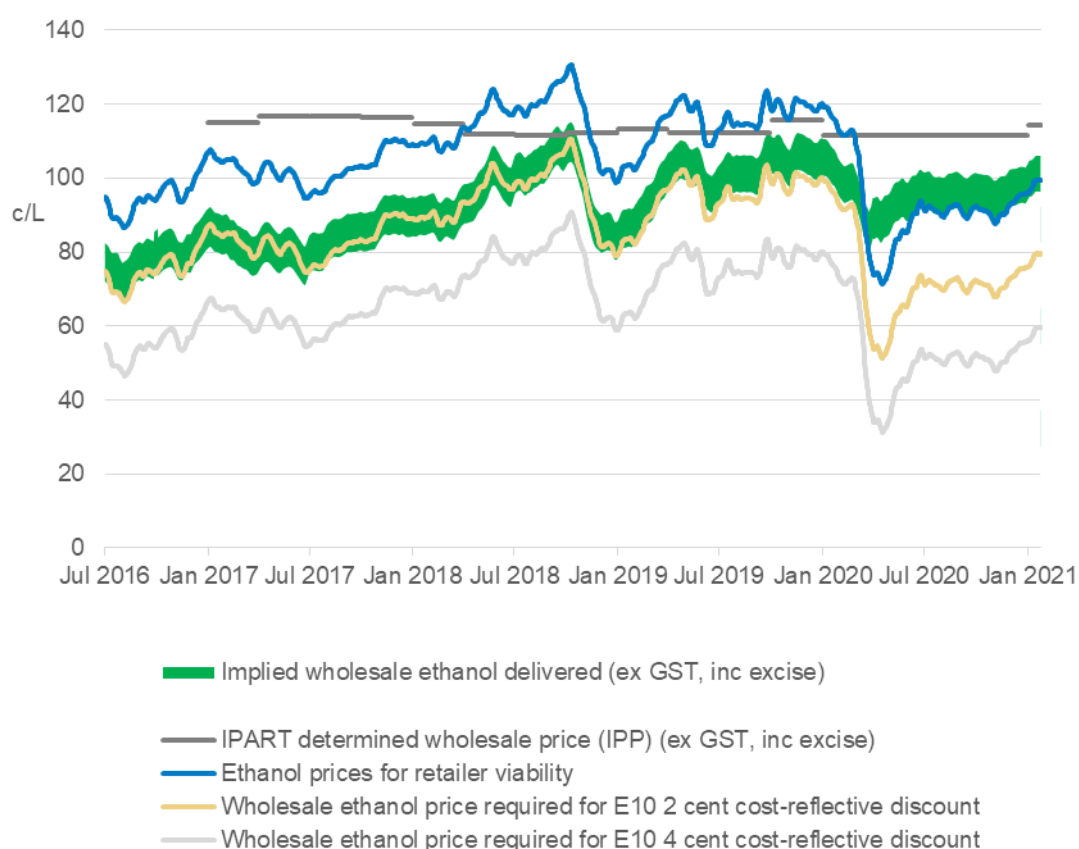
As discussed in Chapter 3, over 2020 the wholesale price of E10 was higher than the wholesale price of U91 for the first time since we began monitoring prices. This means that a discount on E10 is not cost reflective. To maintain their margins, retailers would need to charge more for U91 in the retail market to make up for this difference (all else being equal).

Given these outcomes, we have heard in our initial conversations with stakeholders that IPART should cap the determined ethanol price at the lower of the import parity price and the U91 wholesale price (minus the wholesale margin on E10). **Figure 4.5** shows that this would have meant a determined price of around 90 c/L in 2020 (assuming a 3 cent wholesale margin on E10), compared to our import parity price of 111.7 c/L. The U91 wholesale price is on the low end of the range of the implied price wholesale ethanol prices for this period.

Chapter 3 showed that E10 has been consistently sold at a 2% discount to U91 since we have been determining ethanol prices. **Figure 4.5** shows the wholesale prices that would allow this 2% discount to be cost reflective. It shows that the 2% discount was reasonably cost reflective until 2020. However, for this discount to have remained cost reflective in 2020, wholesale ethanol prices would have needed to be an average of 25% lower between March and December.

With a 2% discount, E10 has accounted for around 25% of all fuel sales, falling well short of the ethanol mandate. To increase the demand for E10, it would need to be discounted by more than 2% relative to the U91 price. **Figure 4.5** shows that for E10 to be sold at a cost-reflective 4 cent discount to U91 in 2020, the wholesale price of ethanol would have needed to be around 45% lower between April and December.

Figure 4.5 Implied wholesale price versus wholesale prices that would support cost reflective discounts



Note: The range for the implied wholesale ethanol price assumes an ethanol blend in E10 between 9% and 10%, and includes domestic excise on ethanol, but excludes GST. It assumes fuel wholesaler margins (including the costs of blending ethanol with U91) of between 3 and 12 cents per litre of fuel, based on past estimates from ACCC.

Data source: IPART calculations based on daily average Sydney terminal gate prices for U91 and E10 from Fueltrac.

Even with a much higher discount, it is unlikely that the ethanol mandate would be met. Premium fuels now make up more than 40% of fuel sales in NSW. Consumers buying these fuels are already paying around 15 to 25 cents more than customers buying E10. They are likely to be less price sensitive than other consumers.

In addition, some consumers would avoid E10 regardless of any price differential, because they are concerned about adverse impacts to their engines. Most petrol cars sold in Australia since 1986 were designed to run on U91, and these are compatible with E10. However, neither E10 or U91 should be used in vehicles where the manufacturer recommends premium unleaded petrol.^{xxix}

In its [review of the Biofuels Act](#) completed last year, the NSW Government recommended an education campaign to help overcome consumer aversion to or uncertainty about E10.^{xxx}

5 Consumer choice in the retail market

As explained in previous chapters, our price setting approach depends on the level of competition in the wholesale and retail markets.

To assess the level of competition in the market we consider factors that affect consumers' choice of which fuel to buy, as well as their ability to identify and access these choices. This includes:

- ▼ whether there is a choice of fuels available at petrol stations
- ▼ how the prices for different fuel types compare
- ▼ the ease of access to information about prices and the locations of fuel types sold, which assists consumers to make informed choices in the market.

Since 2017 we have found that consumers generally have a relatively high degree of choice between U91 and E10. We also found the use of apps and websites which provide prices of available fuels at each service station (in close-to-real-time) helps consumers make informed decisions.

Our assessment of these factors based on the latest available information continues to show the retail market for fuel is competitive. This continues to support a less intrusive approach to price regulation of the wholesale ethanol market.

5.1 Most petrol stations offer a choice of fuels

Under the Biofuels Act, fuel retailers must meet E10 availability requirements. These include ensuring that a petrol-ethanol blend is **made available** at each service station and that a petrol-ethanol blend is made as accessible to customers as any other type of petrol.^{xxx}

Making E10 accessible means that:

- ▼ E10 nozzles must be available across the forecourts of service stations, in comparable numbers to the other most available petrol being offered^{xxxii}
- ▼ reasonable steps must be taken to market E10, including advertising the price of E10 on their main price board along with other fuel prices.^{xxxiii}

Consistent with these requirements, there are slightly more nozzles across NSW dispensing E10 compared to U91. Of all E10 and U91 nozzles, 53% are E10. This has remained steady over the past 3 years (**Figure 5.1**).^{xxxiv} 87% of fuel stations now offer E10.

As the share of E10 nozzles grew slightly since 2016, there have been slightly fewer petrol stations offering U91. However, around 76% of stations continue to sell U91, with 58% selling both E10 and U91. This has remained largely unchanged over the last 5 years.^{xxxv}

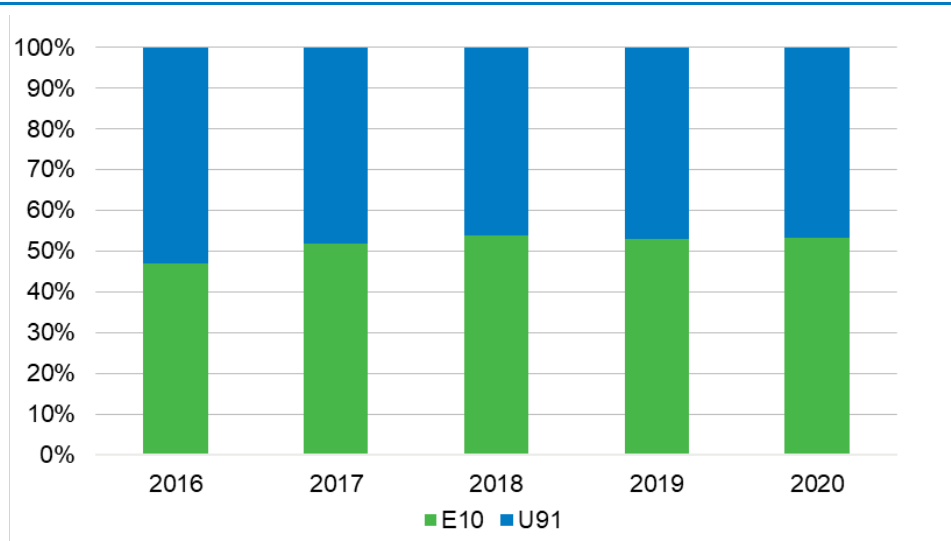
We have also previously found that of the stations that do not sell U91, 90% are located within 5 minutes' drive of one that does. 99.7% of petrol stations that do not sell E10 are located within a 10 minutes' drive of one that does.^{xxxvi}

The availability of U91 as a substitute for E10 remains strong, so we expect unleaded petrol prices to constrain ethanol prices.

IPART finding

- 7 Consumers continue to have an effective choice of fuel with widespread availability of E10, U91 and premium unleaded fuels. 87% of fuel stations sell E10, and 76% sell U91. 58% of stations sell both E10 and U91.

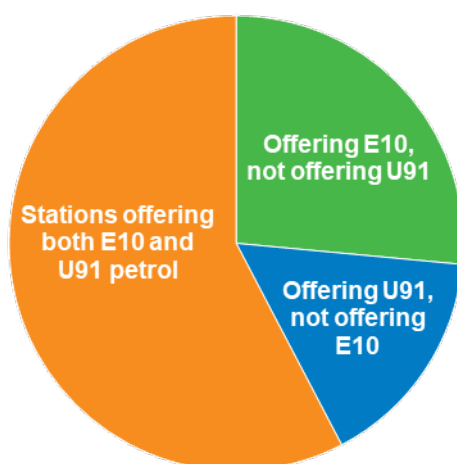
Figure 5.1 Nozzles dispensing E10 and U91 (NSW)



Notes: 2016 data is as at March quarter, 2017 is at September quarter, 2018 is at June quarter, 2019 data is at September quarter and 2020 is at December quarter.

Data source: Information provided by NSW Fair Trading. Nozzle data relates to stations operated by Volume Fuel Retailers.

Figure 5.2 Availability of different fuel types by petrol station – March 2021



Data source: Data from NSW Fair Trading, received 5 March 2021.

5.2 E10 is the cheapest fuel on the market

Differences in price between types of fuel affects consumers' choice between the different fuel types. The ACAPMA, [2019 Monitor of Fuel Consumer Attitudes](#) found that 56% of consumers indicate that the price of fuel is the most important driver of their decision about where to purchase fuel.^{xxxvii}

As explained in Chapter 3, for E10 to be competitive, it needs to be priced at a discount to U91 because it has a lower energy content. This means that customers have to buy slightly more fuel to travel the same distance. This discount has been maintained at around 2% compared to U91. However, lower fuel prices have meant that this discount reduced from around 2.3 cents to around 1.8 cents. This may increase the perceived competitiveness of U91 relative to ethanol.

The lower fuel prices overall are also likely to improve the competitiveness of other fuels, as customers are less price sensitive overall. This could be one driver of the higher fuel sales of fuels other than E10 shown in Chapter 3.

5.3 Consumers continue to access fuel information when making fuel purchases

Websites and apps which provide information such as the prices of different fuel and where each type of fuel is sold support consumer choice. These tools make it relatively easy for consumers to purchase their fuel of choice even when every type of fuel is not available at every petrol station.

As at March 2021, the cumulative number of visits to the NSW FuelCheck website was 16 million, while the FuelCheck app has been downloaded 1.4 million times.^{xxxviii}

IPART finding

- 8 Customer choice between fuels is supported by a range of comparison websites and apps including the NSW Government's FuelCheck service.

6 Competition in the wholesale ethanol market

The ethanol fuel production industry is highly concentrated, with Manildra supplying almost all retailers in NSW. This chapter explains the conditions in the wholesale market that result in a highly concentrated ethanol production industry in NSW.

In particular, low fuel prices have reduced the profitability of ethanol because they limit the price at which ethanol can be sold into the market. However, if the conditions change, there is the potential for new entry, which poses a continuing threat of competition.

6.1 Market concentration is high

Prior to 2020, there were three ethanol producers on the East Coast of Australia, with stable market shares over the past 5 years:

- ▼ Manildra (NSW) (60%)
- ▼ Wilmar Sugar (Queensland) (20%)
- ▼ United Petroleum (Queensland) (20%).^{xxxix}

United Petroleum exited the market in June 2020.^{xl}

The small number of producers reflects:

- ▼ that locally produced ethanol has relatively high production costs, which are higher than the costs of producing U91 and premium fuels^{xli}
- ▼ the scale required to efficiently produce ethanol, even with discounts to excise and subsidies.

The local manufacturers produce ethanol alongside other activities, such as food manufacturing. These participants produce ethanol as a means of creating revenue from products left over from other processes.

The industry has substantial excess productive capacity and competition is mainly based on price. Economies of scope exist with local producers sourcing feedstock for ethanol production from upstream activities. This contributes to the industry's high market share concentration as operators with related processing operations have a strong competitive advantage in ethanol production. This is expected to continue as industry assistance is reduced.

6.2 Reduced profitability has further reduced competition

Over the past 5 years revenue in ethanol production has fluctuated widely with global oil prices, while feedstock costs and industry wages have increased, along with the excise payable on locally produced ethanol.

Feedstock is the industry's largest cost. Rising feedstock costs reflect the upward trend in the domestic price of wheat and sugar along with shortages of sorghum after the drought in Queensland. The cost of wheat starch used in ethanol production has been affected by production shortages in the eastern states.

The price of substitute fuels limits the price that E10 can be sold into the market, placing a constraint on the price of wholesale ethanol. The slump in global crude oil prices during 2019-20 meant it was more difficult for ethanol producers to recover their costs of production.^{xlii}

All 3 producers temporarily ceased production of ethanol fuel at some stage during early 2020. Local refiners were encouraged to divert ethanol production away from fuel to ethanol based hand sanitisers and disinfectants to combat COVID-19. However, after reopening in April 2020⁴, United Petroleum's Dalby Bio-Refinery has now been closed since June 2020.^{xliii}

United's Dalby facility was not a significant operator in the NSW wholesale ethanol market. It largely supplied E10 to United Petroleum's vertically integrated chain of retail petrol stations.^{xliv}

It is expected that the industry's performance will rebound during 2020-21 as global crude oil prices trend upwards.^{xlv} Our understanding is that the Dalby production facilities have not been disassembled and so production could potentially be restarted if market conditions and prices improve.

IPART findings

- 9 Low fuel prices over 2020 have reduced the profitability of ethanol suppliers.
- 10 United Petroleum closed its Dalby Bio-Refinery in June 2020. There are now only 2 ethanol producers on the East Coast of Australia, down from 3.

6.3 Further new entry is unlikely in the short term

The existing ethanol producers are currently operating with substantial excess production capacity. This may discourage the proposed entry of several new competitors in the short-term.^{xlvi}

There is one potential new entrant in the proposed Ethtec Biorefinery pilot plant in Hunter region in NSW. It is possible that this plant may develop into an industry competitor over the next 5 years.^{xlvii}

⁴ Due to shortages of grain and sorghum feedstocks during the drought in Queensland, United Petroleum closed its Dalby Bio-Refinery temporarily between February 2020 to late April 2020.

There are several other major export-orientated developments that have been in the planning stage for some time and are unlikely to proceed over the next 5 years, due to the industry's current excess production capacity. This includes an ethanol production plant in North Queensland (Pentland Bioenergy Project), and another facility in Deniliquin in NSW, which is delayed due to issues with funding.^{xlvi}

Draft finding

11 It is unlikely that new suppliers will enter the wholesale market in the short term.

-
- i [Biofuels Act 2007 \(NSW\)](#), s 6 (2)(c)
ii [Biofuels Act 2007 \(NSW\)](#), s 9B, 17A.
iii NSW Government Open Data Portal, Datasets, [FuelCheck](#), accessed on 19 March 2021.
iv [Biofuels Act 2007 \(NSW\)](#), s 6 (2)(c)
v [Biofuels Act 2007 \(NSW\)](#), s 7.
vi NSW Government - -E10 Fuel For Thought, [The facts](#), accessed 23 March 2021.
vii [Biofuels Act 2007 \(NSW\)](#), s 8.
viii [Biofuels Regulation \(No 2\) 2016](#), cl 8.
ix Queensland Government, Business Queensland, [Queensland biofuels mandates](#), accessed 23 March 2021.
x NSW Government, [Statutory Review –Biofuels Act 2007](#), August 2020, p 2, accessed 31 March 2021.
xi NSW Government, [Statutory Review –Biofuels Act 2007](#), August 2020, p 4, accessed 31 March 2021.
xii NSW Government, [Statutory Review –Biofuels Act 2007](#), August 2020, pp 2-3, accessed 31 March 2021.
xiii [Biofuels Act 2007 \(NSW\)](#), s 17A (1).
xiv IPART, [IPART monitors the retail and wholesale market for fuel ethanol](#), Final Report, December 2019.
xv IBISWorld, [Ethanol Fuel Production in Australia](#), August 2020.
xvi Graham, P.W and Havas, L, 2020, [Projections for small-scale embedded technologies](#), CSIRO, Australia, p 70.
xvii See, Sydney Morning Herald, [Energy sector readies for Australia's electric car 'tipping point'](#), 29 March 2021.
xviii Australian Petroleum Statistics, [Australian Petroleum Statistics – Issue 294 January 2021](#), Table 3B.
xix NSW Government, [Statutory Review –Biofuels Act 2007](#), August 2020, p 2, accessed 31 March 2021.
xx ACCC, [Financial performance of the Australian downstream petroleum industry 2002 to 2018](#), April 2020, p 7.
xxi NSW Government - -E10 Fuel For Thought, [The facts](#), accessed 23 March 2021.
xxii IPART, [Spreadsheet Model – Wholesale price for fuel ethanol – 2021](#).
xxiii [Biofuels Act 2007 \(NSW\)](#), s 17A (2).
xxiv AECOM, [Efficient costs of new entrant ethanol producers](#), October 2016, p 41.
xxv IPART calculation, based on AECOM, [Efficient costs of new entrant ethanol producers](#), October 2016, p 37.
xxvi IPART calculation, based on AECOM, [Efficient costs of new entrant ethanol producers](#), October 2016, p i.
xxvii AECOM, [Efficient costs of new entrant ethanol producers](#), December 2016, p d-2
xxviii [AWB Daily Grain Prices](#)
xxix NSW Government - -E10 Fuel For Thought, [The facts](#), accessed 23 March 2021.
xxx NSW Government, [Statutory Review –Biofuels Act 2007](#), August 2020, p 15, accessed 31 March 2021.
xxxi [Biofuels Regulation \(No 2\) 2016](#), cl 8.

-
- xxxii NSW Fair Trading, [Biofuels Act 2007 – Statement of Regulatory Intent](#), December 2016, accessed on 10 October 2018.
- xxxiii [Biofuels Regulation \(No 2\) 2016](#), cl 9(1)(d).
- xxxiv Email from NSW Fair Trading, received 5 March 2021
- xxxv Email from NSW Fair Trading, received 5 March 2021
- xxxvi IPART, [IPART monitors the retail and wholesale market for fuel ethanol](#), 2018-19 Final Report, December 2019, p 3.
- xxxvii Australian Convenience and Petroleum Marketers Association (ACAPMA), [2019 Monitor of Fuel Consumer Attitudes](#), November 2019, p 13.
- xxxviii Email from NSW Fair Trading, received 5 March 2021
- xxxix IBISWorld, [Ethanol Fuel Production in Australia](#), August 2020, pp 31, 33 and 34.
- xl Robbie Katter, Member for Traeger, [Labour's Triple failure closes Dalby Bio-Refinery](#), Media Release, 25 June 2020.
- xli IBISWorld, [Ethanol Fuel Production in Australia](#), August 2020, p 12.
- xlii IBISWorld, [Ethanol Fuel Production in Australia](#), August 2020, p 12.
- xliii Robbie Katter, Member for Traeger, [Labour's Triple failure closes Dalby Bio-Refinery](#), Media Release, 25 June 2020.
- xliv IBISWorld, [Ethanol Fuel Production in Australia](#), August 2020, p 22.
- xlvi IBISWorld, [Ethanol Fuel Production in Australia](#), August 2020, p 4.
- xlvi IBISWorld, [Ethanol Fuel Production in Australia](#), August 2020, p 15.
- xlvi IBISWorld, [Ethanol Fuel Production in Australia](#), August 2020, p 16.
- xlvi IBISWorld, [Ethanol Fuel Production in Australia](#), August 2020, p 16.