

## 7 Premium unleaded petrol

### Key points

- The market for premium unleaded petrol (PULP) continued to grow in 2010–11, particularly in NSW where PULP sales increased by over 40 per cent from the previous year.
- The jump in PULP sales in NSW is likely to be driven by the ethanol mandate, which has had the effect of limiting supplies of regular unleaded petrol (RULP) available to NSW motorists.
- The price of PULP is largely determined by the import parity price (IPP) benchmark, which is driven by the international price of refined premium grade unleaded petrol.
- If the demand for PULP continues to expand it may place pressure on both supplies and prices.

### 7.1 Introduction

The product mix in the Australian petrol industry has undergone considerable change in recent years.

Since the commencement of the ACCC petrol monitoring program in 2008, there has been a reduction in demand for regular unleaded petrol (RULP) and an increasing presence of premium and alternative fuels in the marketplace.

With the continued rollout of the ethanol mandates in NSW as well as the growth in motor vehicles recommended to use premium fuels, demand for premium unleaded petrol (PULP) has risen substantially.

This chapter considers the demand, supply and pricing of premium grades of unleaded petrol sold in Australia.

### 7.2 Features of premium unleaded petrol

PULP refers to grades of petrol, which, by virtue of their higher octane, additional refining and additives, may be able to boost the performance of some engines.

According to the quality specifications set out in the Fuel Standard (Petrol) Determination 2001, PULP and RULP must meet certain minimum specifications. For RULP, the specifications are less stringent than for PULP (table 7.1).

**Table 7.1 Product specifications for PULP 95 and RULP**

	PULP 95	RULP
Sulphur content	Less than 50 mg/kg	Less than 150 mg/kg
Research octane number (RON) <sup>a</sup>	Minimum of 95	Minimum of 91
Motor octane number (MON) <sup>b</sup>	Minimum of 85	Minimum of 81

Source: Fuel Standard (Petrol) Determination 2001, compilation prepared 28 June 2008.

Notes: <sup>a</sup> RON is a rating of a fuel's resistance to auto-ignition to the fuel after being tested in an engine simulating road conditions where pure iso-octane has a rating of 100.

<sup>b</sup> MON is a similar rating to RON but with the fuel being tested in an engine simulating conditions of greater stress.

Typically, PULP is produced and made available in two common grades:

- PULP 95: unleaded petrol with a 95 RON
- PULP 98: unleaded petrol with a 98 RON.

In addition, refiners often add detergents and cleaning agents to PULP to minimise wear and tear in the engine. This and other characteristics of PULP, principally the higher octane rating, generally enhance the performance of engines with a higher level of energy output.

However, this does not necessarily mean that PULP is a more economical fuel than RULP. The cost differential compared with RULP must also be taken into account in evaluating the relative cost effectiveness of PULP.

### 7.2.1 Production process

The refining process for PULP is more complex than for RULP, mainly due to the desulphurisation process. However, the desulphurisation process also reduces the octane rating of the fuel. Depending on the feed stock going into refining, PULP may require additional refining in order to achieve a 95 or 98 RON rating.

In addition, further processing may be involved where refiners add a cleaning agent or detergent in order to minimise carbon build-up in the engine.

For these reasons, PULP is a more costly fuel to produce than RULP.

### 7.2.2 Premium unleaded petrol in the marketplace

While RULP is largely identified as a homogenous product regardless of the seller, the PULP market seems to be characterised by a higher degree of product differentiation.

Many PULP products contain the same octane level, and are generally very similar products. Nevertheless, marketers attempt to distinguish their premium fuels from those of their competitors.

Table 7.2 shows the more common RULP and PULP products in the marketplace as well as ethanol blended premium unleaded petrol (EBP 95/98). In contrast to RULP products, most PULP products have an individual brand name.

**Table 7.2 Petrol products and branding as at September 2011**

	Type of petrol					
	RULP	PULP 95	PULP 98	EBP 95	EBP 98	EBP 100
BP	Unbranded	Unbranded	BP Ultimate	—	—	—
Shell	Shell Unleaded	Shell Premium Unleaded	V-Power	—	—	—
Caltex	Unbranded	Vortex 95	Vortex 98	—	—	—
Mobil <sup>a</sup>	Unbranded	Unbranded	Unbranded	—	—	—
United	—	—	Premium 98	Plus ULP	Boost 98	Premium 100
Neumann	—	—	—	E-Gen 95	E-Gen 98	—
Gull	Unbranded	Gull PULP	—	—	—	—

Source: Company websites.

Note: <sup>a</sup> Mobil no longer has retail operations but supply 7-Eleven sites.

PULP 95 and PULP 98 products are generally refined and blended with proprietary additives and then marketed as a company-branded retail product. In the case of ethanol-blended fuels, it is unclear what grade of unleaded fuel is blended with ethanol in order to achieve the relevant octane rating.

With the exception of Mobil, all refiner-marketers appear to have branded their PULP products with distinctive brand names in order to achieve product differentiation from both RULP as well as from other PULP products.

It is not clear how these branded proprietary blends differ from each other in terms of composition or fuel grade; however, they do contain unique patented additives which may give consumers the perception of quality differences, of a different 'feel' while driving.

The refiner-marketers generally promote their branded PULP products on the various benefits over RULP, including:

- that use of premium fuels will have the effect of cleaning the engine
- raise the level of performance
- cause less pollution.

## 7.3 Demand for premium unleaded petrol

The demand for PULP has changed over time and now no longer mirrors the trend in the demand for RULP. While the overall demand for petrol products has decreased marginally over the past four years, the demand for PULP has increased.

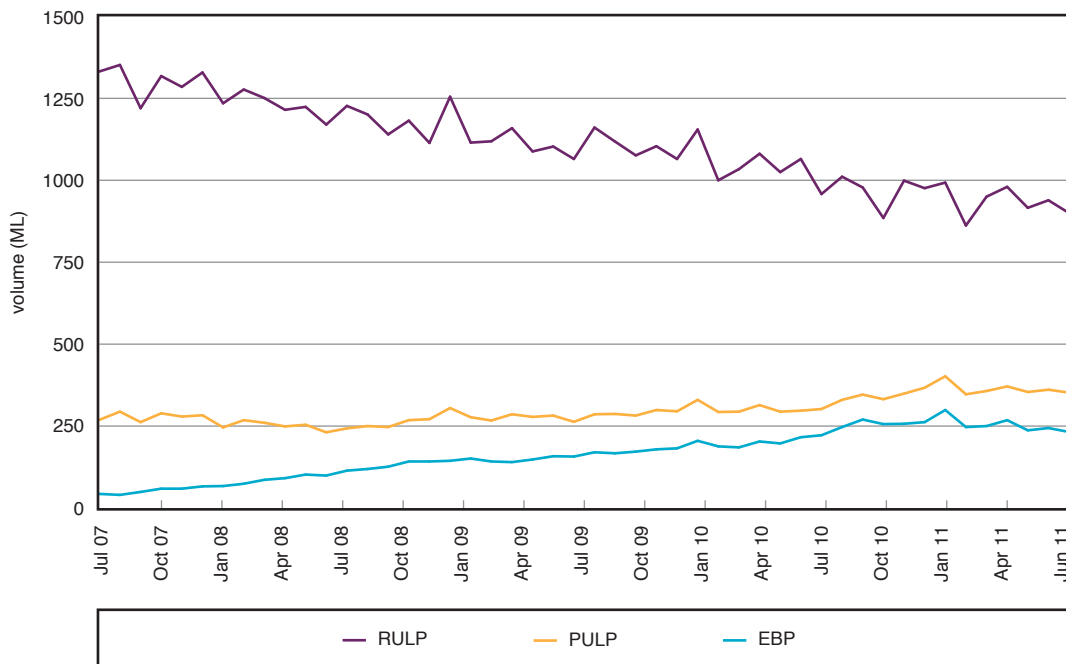
### 7.3.1 Overall demand for premium unleaded petrol

Chart 7.1 shows sale volumes for PULP, RULP and ethanol blended petrol (EBP) in Australia over the four years to June 2011.

The monthly volume of PULP sold in Australia has steadily increased from about 270 megalitres (ML) in July 2007 to about 350 ML in June 2011. On the other hand, RULP sales have decreased from 1332 ML in July 2007 to 900 ML in June 2011.

In 2010–11, the increase in PULP volumes was counter to the trend in the sales of RULP: while sales of RULP decreased by 432 ML, PULP sales increased by 81 ML. The volume of EBP sales has increased significantly from a small base.

**Chart 7.1** Monthly sale volumes of PULP and RULP and EBP, all states and territories:  
July 2007 to June 2011



Source: RET, *Australian Petroleum Statistics*, various issues.

Accordingly, the proportion of PULP sold in Australia has increased substantially in recent years. In 2007–08, PULP sales of 3186 ML constituted about 17 per cent of total petrol demand. In 2010–11, PULP sales had reached 4267 ML or 23 per cent of petrol sales (table 7.3).

There has been a marked decline in the proportion of RULP sales and a clear increase in sales of EBP over the same period, primarily in NSW as a result of the state government mandate on fuel ethanol sales.

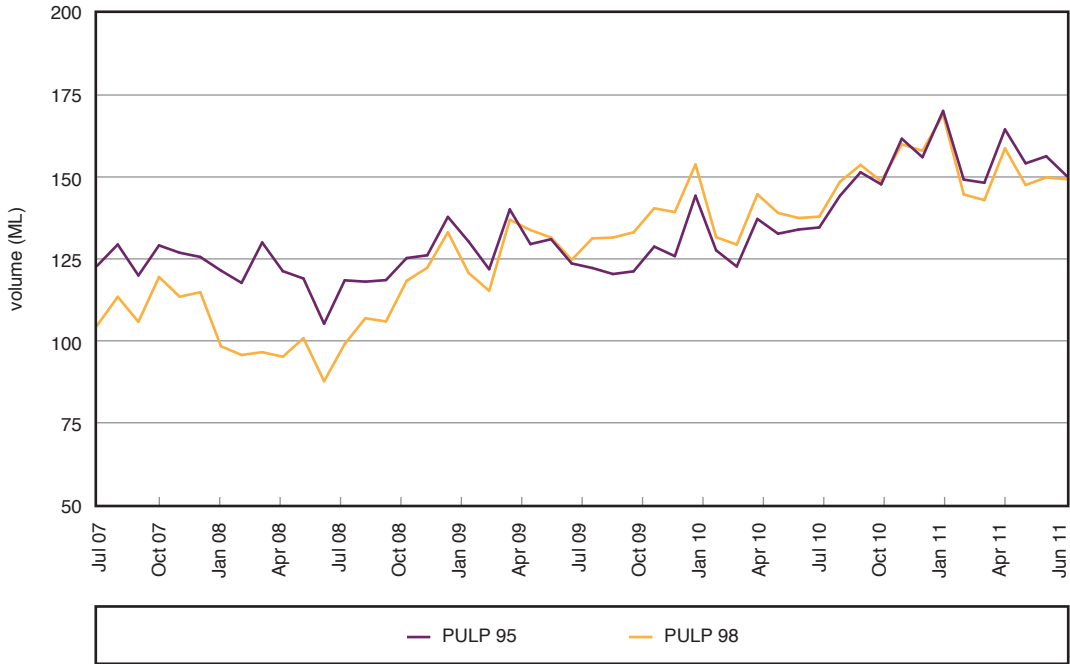
**Table 7.3** Proportion and volume of annual sales of PULP, RULP and EBP, all states and territories:  
2007–08 to 2010–11

	%	RULP ML	%	EBP ML	RULP and EBP %	RULP and EBP ML	%	PULP ML
2007–08	79	15 209	4	835	83	16 044	17	3 186
2008–09	74	13 768	9	1 682	83	15 450	17	3 236
2009–10	69	12 841	12	2 288	81	15 129	19	3 573
2010–11	61	11 388	16	3 069	77	14 458	23	4 267
<b>Change in proportion</b>	<b>18 ▼</b>		<b>12 ▲</b>		<b>6 ▼</b>		<b>6 ▲</b>	

Source: RET, *Australian Petroleum Statistics*, various issues.

In 2010–11, demand for the two main grades of PULP, that is, PULP 95 and PULP 98, was split relatively evenly, despite the price differential. Data on wholesale volumes provided to the ACCC indicate that over the four-year period to June 2011, demand for PULP 98 has grown faster than PULP 95 and now represents about half of total demand for premium fuel (chart 7.2).

**Chart 7.2** Monthly wholesale sale volumes of PULP 95 and PULP 98, all states and territories:  
July 2007 to June 2011



Source: ACCC analysis based on data obtained from firms monitored through the ACCC’s monitoring process.

### 7.3.2 State demand for premium unleaded petrol

The demand for PULP across most states and territories in Australia has not varied significantly, with most states showing a steady increase in the volume of PULP sales over recent years.

In New South Wales, however, the volume of PULP sold has increased substantially, particularly over the 2010–11 financial year.

Table 7.4 presents data on volumes of RULP, PULP and total petrol sold from 2007–08 to 2010–11 in each state and the Northern Territory.

In 2010–11, the volume of PULP sales in NSW increased by over 40 per cent, from 1316 ML to 1849 ML. The second largest increase occurred in VIC where PULP sales increased from 804 ML to 896 ML, or about 11 per cent.

**Table 7.4 Annual volumes and proportion of sales of RULP, PULP and total petrol (including EBP): 2007–08 to 2010–11**

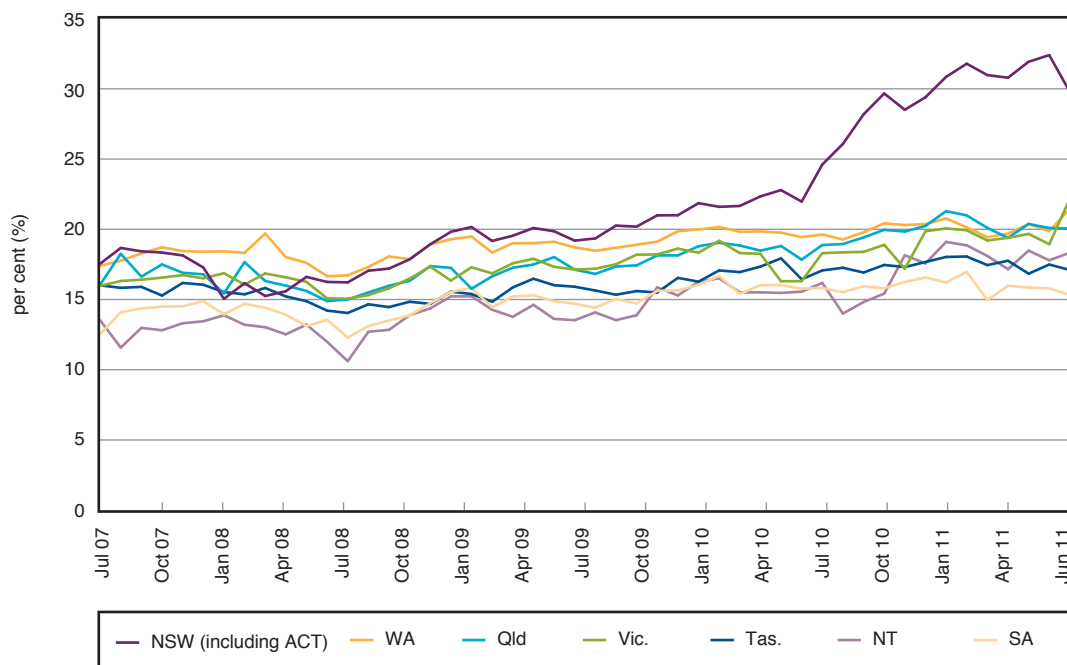
		2007–08		2008–09		2009–10		2010–11	
		ML	%	ML	%	ML	%	ML	%
NSW (incl. ACT)	RULP	4666	77	3981	66	3508	57	2160	35
	PULP	1030	17	1124	19	1316	22	1849	30
	<b>Total</b>	<b>6072</b>		<b>5995</b>		<b>6112</b>		<b>6108</b>	
Vic.	RULP	3998	84	3684	82	3572	79	3612	77
	PULP	783	16	751	17	804	18	896	19
	<b>Total</b>	<b>4787</b>		<b>4502</b>		<b>4496</b>		<b>4685</b>	
Qld	RULP	3282	73	2855	66	2590	61	2515	61
	PULP	740	17	715	17	772	18	828	20
	<b>Total</b>	<b>4475</b>		<b>4296</b>		<b>4243</b>		<b>4122</b>	
SA	RULP	1139	86	1117	86	1111	84	1090	84
	PULP	186	14	189	14	205	16	206	16
	<b>Total</b>	<b>1325</b>		<b>1306</b>		<b>1316</b>		<b>1296</b>	
WA	RULP	1610	82	1629	81	1583	81	1576	79
	PULP	357	18	370	19	383	19	398	20
	<b>Total</b>	<b>1967</b>		<b>1999</b>		<b>1966</b>		<b>1987</b>	
Tas.	RULP	384	85	370	85	351	84	331	83
	PULP	71	16	67	15	69	16	70	17
	<b>Total</b>	<b>454</b>		<b>437</b>		<b>420</b>		<b>401</b>	
NT	RULP	131	87	133	86	126	85	104	83
	PULP	19	13	21	14	23	16	21	17
	<b>Total</b>	<b>150</b>		<b>154</b>		<b>148</b>		<b>126</b>	

Source: RET, *Australian Petroleum Statistics*, various issues.

Note: 'Total' category includes EBP. Percentages may not add to 100 in states with EBP sales.

Chart 7.3 illustrates the rapid increase in PULP sales through 2010–11 in NSW. Throughout 2010–11 PULP sales continued to increase and at the end of June 2011 PULP represented over 30 per cent of total petrol sales. In contrast, while other states and territories have also shown an upward trend in PULP sales over the four-year period to June 2011, PULP sales in these locations averaged between 15 and 20 per cent of total petrol sales in 2010–11.

**Chart 7.3 Monthly PULP sales as a percentage of total unleaded petrol sales in each state and the Northern Territory: July 2007 to June 2011**



Source: RET, *Australian Petroleum Statistics*, various issues.

### 7.3.3 Drivers of demand for premium unleaded petrol

The demand for PULP can be linked to a variety of factors which are likely to play a significant role in consumers' purchasing decisions.

The major influences on the demand for PULP include:

- an increasing proportion of vehicle manufacturers either recommending or requiring that PULP be used
- consumer perceptions and marketing about the quality of PULP and the associated benefits
- the NSW Government's ethanol mandate resulting in the reduced availability of PULP in that state.

#### Vehicle manufacturers' recommendations and specifications

Vehicle manufacturers are increasingly recommending the use of PULP in some of their vehicles. Generally, vehicle manufacturers recommend using premium fuels for a larger proportion of new, luxury and high performance vehicles.<sup>179</sup> ABS data indicates that around 60 per cent of registered passenger vehicles were manufactured after the year 2000.<sup>180</sup>

Manufacturers of most European brands are also likely to recommend the use of premium fuels as most countries in Europe specify 95 RON as the minimum grade of petrol to be offered for sale.

<sup>179</sup> Many vehicles will operate on a lower grade of petrol; however, PULP 95 is sometimes specified as the minimum grade of petrol for some vehicles while other high performance engines require a minimum grade of 98 RON.

<sup>180</sup> ABS, *Motor vehicle census*, 31 January 2011, p. 15.

While Australian and Asian manufacturers account for the greatest number of passenger vehicles, over the past few years there has been an increasing number of European vehicles on Australian roads. For example, the recent motor vehicle census conducted by the ABS indicates that over the period from 2006 to 2011 there has been a notable increase in sales of several European brands, far exceeding the relative increase in sales of most comparable non-European brands.<sup>181</sup>

### Consumer perceptions and marketing

In addition to recommendations of car manufacturers to use premium fuel in newer and high performance vehicles, petrol companies also engage in marketing strategies to promote the advantages of using their specific premium blends.

### State government mandates on petrol

Mandates on the use of ethanol in fuel can also impact on the demand for PULP through its overall effect on the mix of petrol products supplied in the marketplace.

In NSW, the current ethanol mandate requires that volume fuel sellers ensure the volume of ethanol sold makes up a minimum of 6 per cent of the total volume of petrol sales.

The mandate was set to increase to 6 per cent on 1 January 2011 but was postponed in December 2010, and then postponed for a further three months in June 2011. On 1 October 2011 the mandate was increased to 6 per cent and from 1 July 2012 all RULP sales will have to be E10.

The impacts of these mandate expansions are likely to reduce the availability of RULP, as more and more regular unleaded fuel is mixed with up to 10 per cent ethanol and sold as ethanol blended petrol or E10. From July 2012, RULP will be effectively unavailable in NSW as all RULP will need to be mixed with ethanol in order to meet the proposed target.

Analysis in chapter 6 shows that over the four years to June 2011 there has been a gradual decline in the number of retail sites in Sydney offering RULP for sale and a steady increase in the number of sites only selling E10.

The restriction, and ultimate removal of RULP from the marketplace is likely to drive demand for PULP in NSW for two key reasons:

- some motor vehicles are not compatible with ethanol fuel blends
- a proportion of motorists prefer to use traditional unleaded petrol rather than an ethanol mix.

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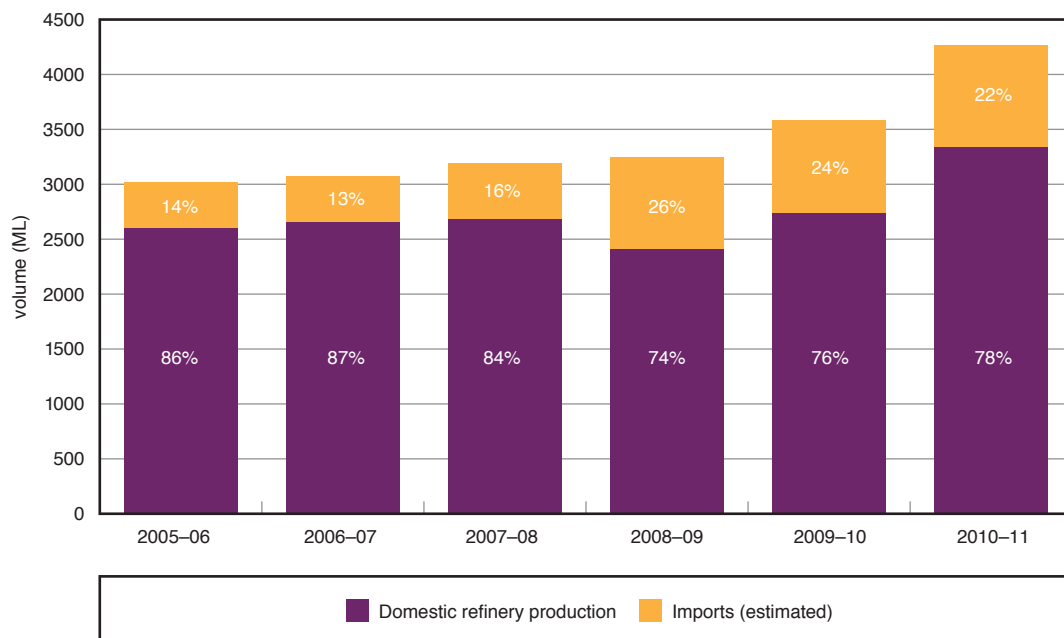
<sup>181</sup> Australian Bureau of Statistics, *Motor vehicle census*, 31 January 2011, cat. no. 9309.0, p. 12, ABS, Canberra.



## 7.4 Supply of premium unleaded petrol

A substantial proportion of the supply of PULP is being met by imports from various countries. Chart 7.4 shows the volumes of total PULP sales that were supplied through domestic refinery production and imports.

**Chart 7.4** Sale volumes and proportions of PULP by domestic production and imports, all states and territories: 2005–06 to 2010–11



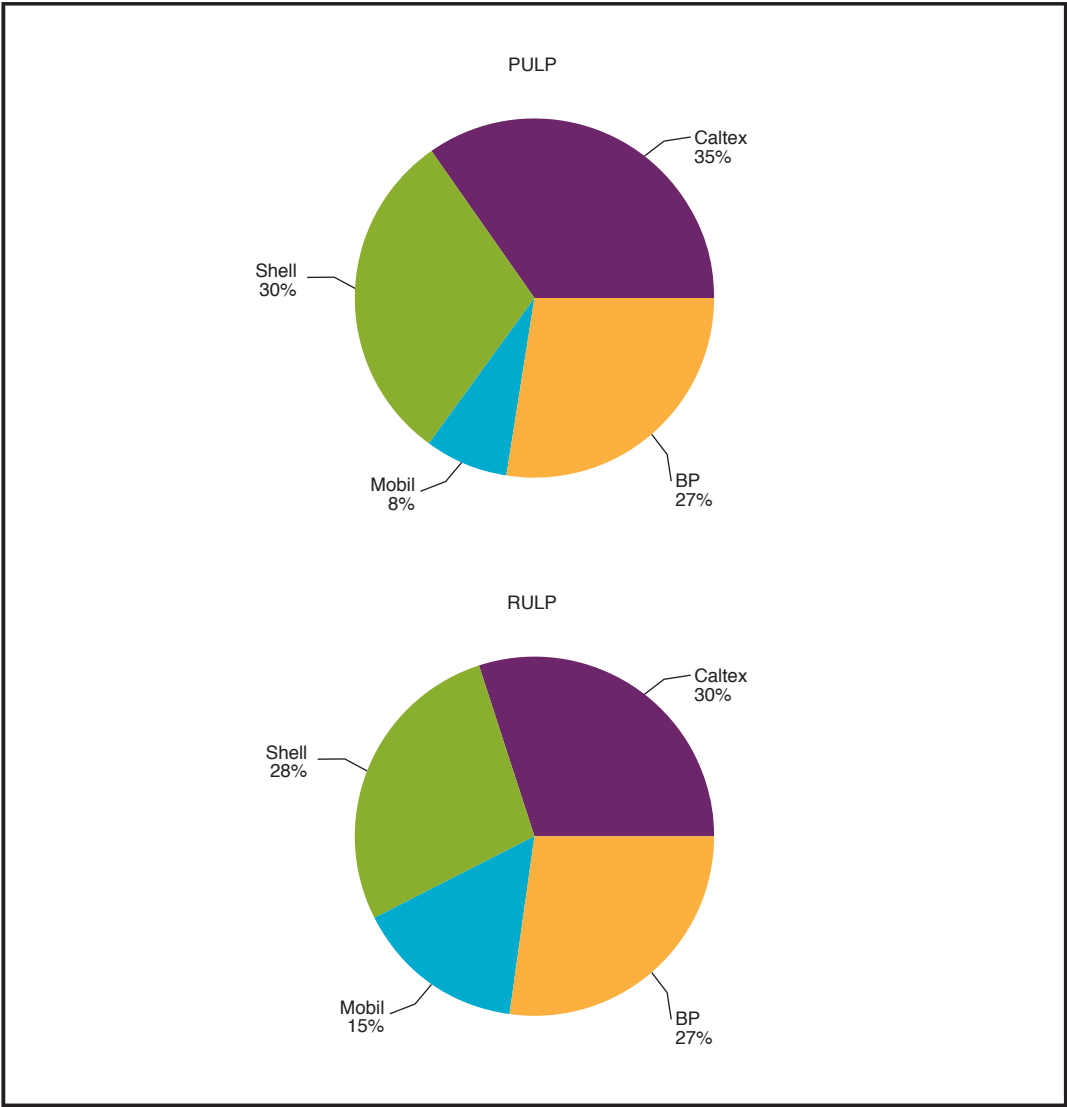
Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process. RET, *Australian Petroleum Statistics*, various issues.

Imports of PULP more than doubled between 2005–06 and 2010–11, while refinery production grew by more than 28 per cent. In 2010–11 refinery production of PULP was 3337 ML, or about 78 per cent of total PULP sales, while imports were 930 ML, or 22 per cent of total PULP sales.

Chart 7.5 illustrates refiner-marketers' shares of refinery production of both PULP and RULP in 2010–11.

BP has approximately equal shares of PULP and RULP refinery production. Mobil has a smaller share of PULP production than RULP and the smallest shares of refinery production of both products. Caltex's share of PULP production is the largest share held by any of the refiner-marketers in the production of these products.

Chart 7.5      Shares of domestic production PULP and RULP: 2010–11



Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process.

## 7.5 Pricing of premium unleaded petrol

Prices of PULP are largely built up on the same basis as regular unleaded petrol. The import parity price (IPP) is the key building block of the price of PULP and represents the notional cost of importing PULP into the Australian market.

Another commonly observed benchmark in the pricing of PULP is the terminal gate price (TGP). The PULP TGP represents the spot price of purchasing PULP from a wholesaler at the terminal gate.

### 7.5.1 Import parity price of premium unleaded petrol

As imports represent the marginal source of supply for PULP, the notional cost of importing, or IPP, acts as the basis for the price of PULP. The price paid for imported premium petrol places a competitive constraint on prices that can be charged by local producers.

The IPP is applied to establish prices for both PULP 95 and PULP 98 (as it is with RULP). The IPP used as the basis for RULP is discussed further in chapter 8.

All four refiner-marketers calculate an IPP for PULP 95 while only one refiner calculates an IPP for PULP 98.

The IPP for PULP 95 contains a number of components including:

- the benchmark price of refined premium petrol in Singapore
- a quality premium
- a breakdown of other transportation costs.

Three out of four refiner-marketers base the benchmark price on the Platts Singapore quote for refined premium petrol of RON 97 (Mogas 97). This quoted price can also be referred to as MOPS 97 (Mean of Platts Singapore for Mogas 97).<sup>182</sup> The quality premium provides an indication of the difference between the benchmark price for refined premium petrol in Singapore and the price of PULP 95 refined to Australian specifications.

While the calculation of IPP differs among refiners, the general construction of the IPP for PULP 95 is shown as:

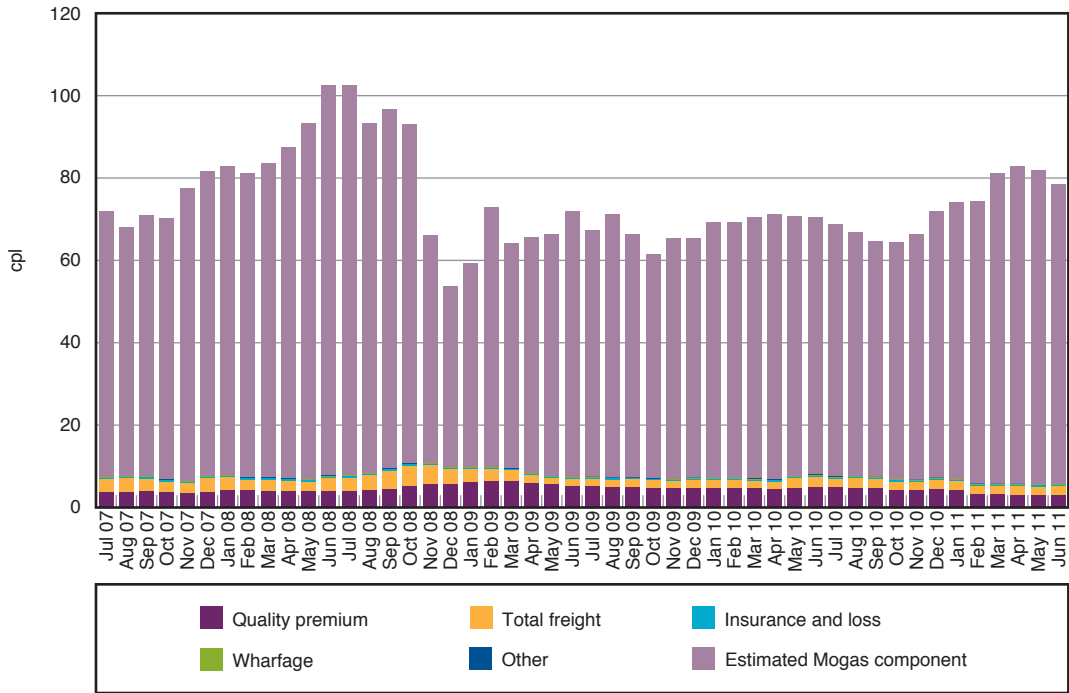
$$\text{IPP (PULP 95)} = \text{Benchmark price of refined premium petrol (Mogas 95/97)} + \text{Quality premium} + \text{Freight} + \text{Insurance and loss} + \text{Wharfage} + \text{Other costs} (+ \text{PULP margin})$$

Chart 7.6 shows the average components of the IPP for PULP 95 each month over the four years to June 2011. The Mogas component is clearly the largest element of the IPP and is the main factor driving changes in the level of the IPP.

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<sup>182</sup> One refiner calculates their IPP for PULP 95 slightly differently, using the quote for refined premium petrol of RON 95 (Mogas 95) and then adding an extra 'PULP' margin.

**Chart 7.6**      **Components of monthly average IPP for PULP 95 in the five largest cities:**  
**July 2007 to June 2011**



Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process.

Note: The data in chart 7.6 is not comparable with RULP IPP data due to the fact that one refiner-marketer calculates its PULP 95 IPP differently from the others. Components shown in chart 7.6 have been adjusted to reflect this.

On average, the Mogas component made up over 87 per cent of the IPP in 2010–11, slightly more than the previous two years due to higher benchmark prices.

Table 7.5 provides further detail on the components of the PULP 95 IPP in 2010–11.

**Table 7.5 Components of monthly average IPP for PULP 95 in the five largest cities:  
July 2010 to June 2011**

	Exchange rate AUD1 = USD	Mogas cpl	Quality premium cpl	Total freight cpl	Insurance and loss cpl	Wharfage cpl	Other (IPP) cpl
Jul 10	0.87	61.26	4.91	1.97	0.28	0.25	0.10
Aug 10	0.90	59.36	4.74	2.25	0.27	0.26	0.00
Sep 10	0.92	57.31	4.63	2.16	0.27	0.26	0.00
Oct 10	0.98	57.75	4.37	1.83	0.26	0.26	0.00
Nov 10	0.99	59.80	4.34	1.77	0.27	0.26	0.00
Dec 10	0.98	64.79	4.38	2.21	0.29	0.26	0.00
Jan 11	1.00	67.36	4.26	1.96	0.29	0.25	0.00
Feb 11	1.00	68.69	3.24	1.92	0.29	0.25	0.00
Mar 11	1.01	75.57	3.24	1.85	0.32	0.25	0.00
Apr 11	1.05	77.14	3.08	1.99	0.32	0.25	0.00
May 11	1.07	76.25	3.00	2.00	0.32	0.25	0.00
Jun 11	1.06	72.94	3.03	1.99	0.31	0.25	0.00
<b>2010–11 average</b>	<b>0.99</b>	<b>66.50</b>	<b>3.94</b>	<b>1.99</b>	<b>0.29</b>	<b>0.25</b>	<b>0.01</b>

Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process.

Note: The data in table 7.5, including exchange rates, is not comparable with data in table 8.1 in chapter 8 on RULP IPP data due to the fact that one refiner-marketer calculates its PULP 95 IPP differently from the others. Components shown in table 7.5 have been adjusted to reflect this.

## 7.5.2 Components of IPP in premium and regular unleaded petrol

Although the concept of IPP is used in the pricing of many fuel types, the value of the components in the build-up of prices vary for different fuels.

The most notable differences in the build up of IPP for PULP 95 and RULP are:

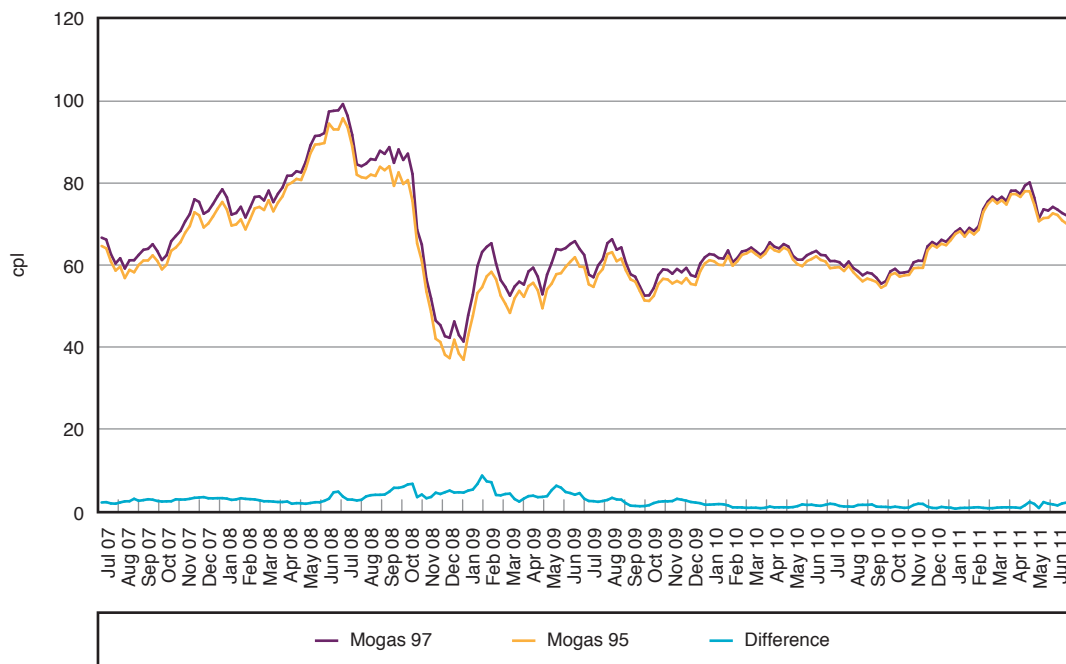
- the refined product benchmark
- the quality premium component.

While most refiner-marketers use the benchmark price of Mogas 97 in the build up of a PULP 95 IPP, the build-up of the RULP IPP uses the price of Mogas 95. Typically, the price of Mogas 97 is higher than that of Mogas 95 reflecting the additional processing required. The markets for Mogas 95 and Mogas 97 are, however, separate and movements in the price of one are not necessarily always reflected in the price of the other.

Chart 7.7 shows the weekly movements of Mogas 97 and Mogas 95 over the four years to June 2011 as well as the difference between the two. Overall, the two benchmark prices have tracked each other very closely, with Mogas 97 priced slightly higher over the period.

The difference between the two benchmark prices, however, appears to have narrowed since January 2010 and throughout 2010–11. During 2010–11, the average differential was 1.12 cpl. This compares with average differentials of 1.62 cpl in 2009–10, 4.39 cpl in 2008–09 and 2.61 cpl in 2007–08.

Chart 7.7 Weekly average Mogas 95 and Mogas 97 prices: July 2007 to June 2011



Source: ACCC calculations based on Platts and RBA data.

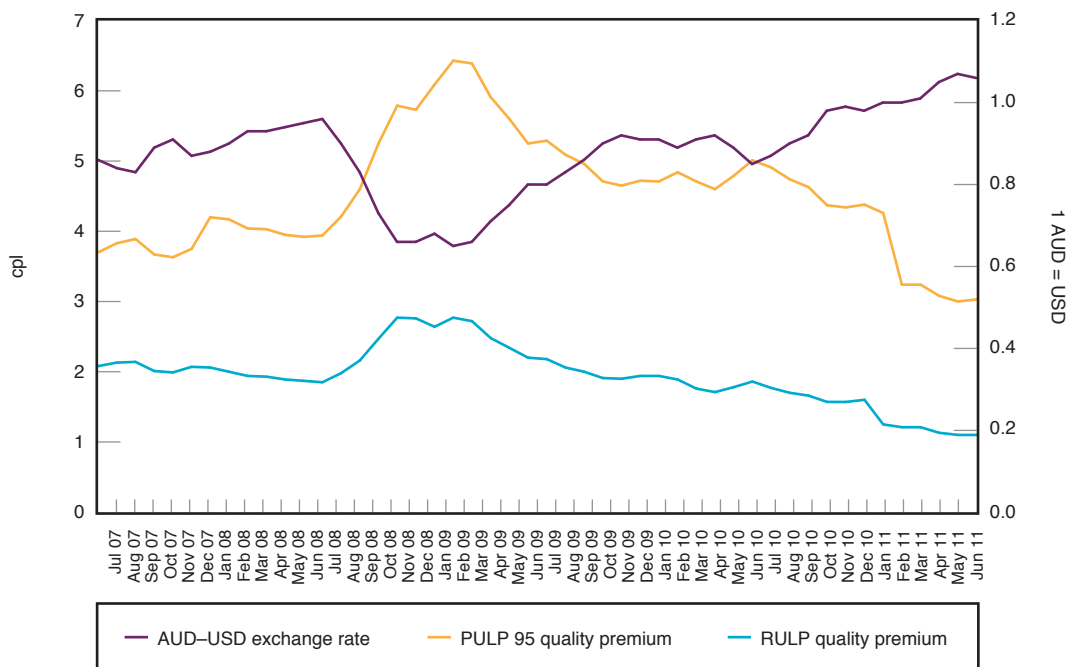
The close relationship of Mogas 97 and Mogas 95 can be partly explained by the increased refining capacity and more sophisticated refining infrastructure now available in the Asia-Pacific region. This allows production of higher quality products in the region placing downward pressure on prices.

The quality premium component is the other key factor which differentiates the IPP for PULP 95 compared to the IPP for RULP.

In theory, the RULP and PULP quality premiums should take into account the difference between the respective benchmark prices of fuel, that is, Mogas 95 and Mogas 97, and the respective prices of RULP and PULP refined to Australian standards. In practice, the differential also reflects differences in the relative bargaining strengths and market conditions for the two fuels.

Chart 7.8 shows the monthly average quality premiums for PULP 95 and RULP across the five largest cities over the four years to June 2011. While the quality premiums for both products move in similar trends, the premium for PULP 95 is clearly higher than the premium for RULP. Over the four years to June 2011 the differential averaged 1.93 cpl but has narrowed, particularly in 2011.

**Chart 7.8 Monthly average PULP 95 and RULP quality premiums in the five largest cities, USD–AUD exchange rate: July 2007 to June 2011**



Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process.

Note: The quality premium data shown in chart 7.8 has been adjusted to reflect the fact that one refiner-marketer calculates its PULP 95 IPP differently from the others.

### 7.5.3 Wholesale prices of premium unleaded petrol

Comparing the prices paid for PULP at the wholesale level with IPP provides an indication of the extent to which wholesale prices reflect their notional import cost. Wholesale prices represent the average prices paid by retailers, distributors and other wholesalers who purchase premium fuels in the wholesale sector.

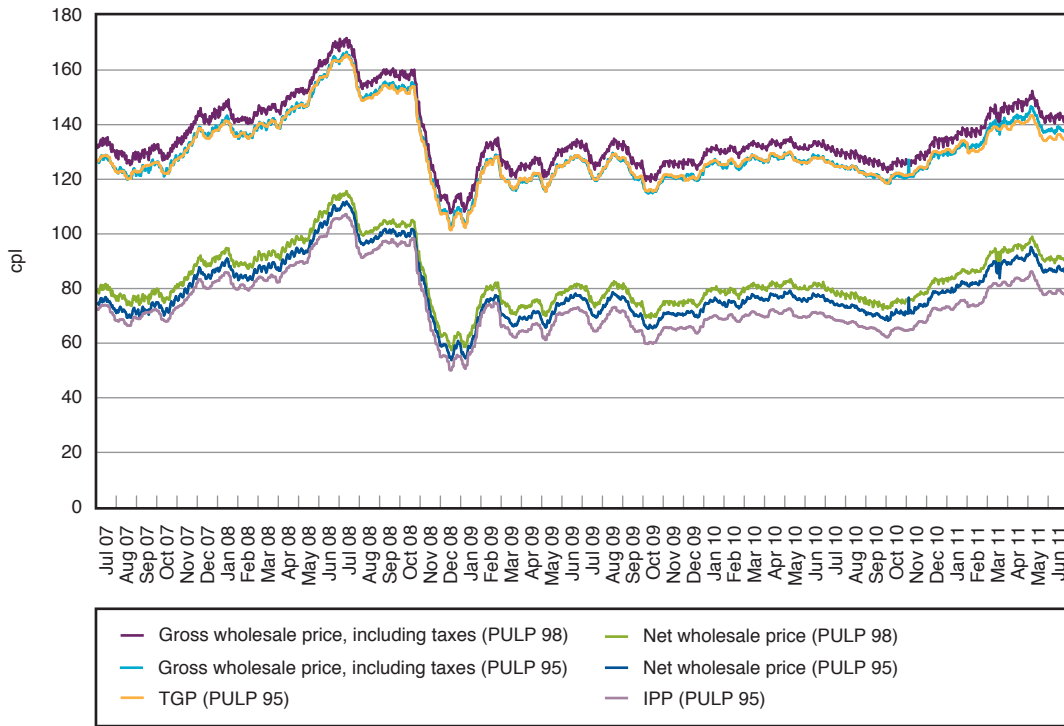
Chart 7.9 shows the two commonly observed benchmark prices for PULP 95: IPP and TGP. The chart also plots monthly average gross and net wholesale prices paid for PULP 95 as well as for PULP 98 from July 2007 to June 2011.

Overall the chart indicates that over the four year period to June 2011:

- average net wholesale prices for PULP 95 have tracked the IPP benchmark very closely
- net wholesale prices for PULP 95 (excluding taxes) have averaged about 4.96 cpl higher than IPP, representing a combination of other operating costs incurred by wholesalers as well as a profit margin
- average gross wholesale prices for PULP 95 and TGPs (which also include taxes) have followed a similar path.

Similar to the market for RULP, few PULP transactions are actually made at the terminal gate with most transactions negotiated in advance with prices struck slightly above or below TGP depending on volumes and additional services.

**Chart 7.9** Daily average wholesale prices and IPP and TGP benchmark prices for PULP in the five largest cities: July 2007 to June 2011



Source: ACCC analysis based on data obtained from firms monitored through the ACCC’s monitoring process.

Note: The data in chart 7.9 is not comparable with RULP data due to the fact that one refiner-marketer calculates its PULP 95 IPP differently from the others. Averages shown in chart 7.9 have been adjusted to reflect this.

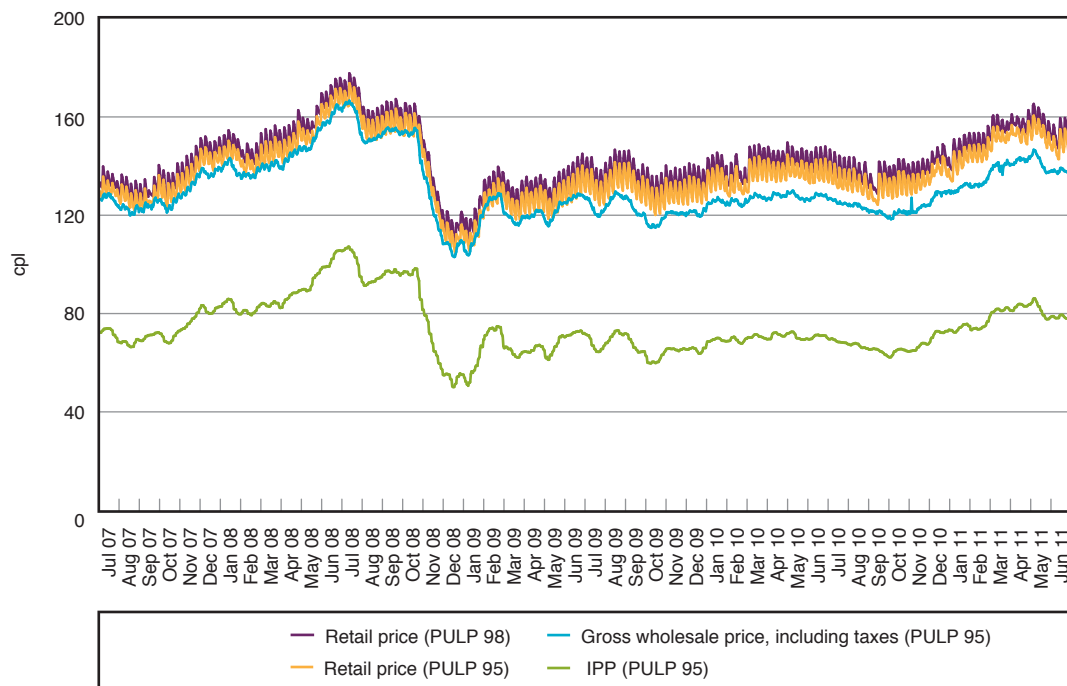
Wholesale prices for PULP 98 are also shown in chart 7.9. While the benchmark prices included in the chart are based on the 95 RON grade, it is clear that wholesale prices of the higher octane 98 RON grade have followed a similar trend albeit at a slightly higher price overall. The additional premium on PULP 98 reflects the additional processing to achieve the higher octane levels as well as margins resulting from the marketing strategies used by various companies.

### 7.5.4 Retail prices of premium unleaded petrol

Retail prices of PULP have also tracked their benchmark prices relatively closely. Chart 7.10 shows the daily average retail price of both PULP 95 and PULP 98 alongside benchmark prices for PULP 95 in the five largest cities.



**Chart 7.10 Daily average IPP, gross wholesale and retail prices for PULP in the five largest cities: July 2007 to June 2011**



Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process, Informed Sources data.

Note: The data in chart 7.10 is not comparable with RULP data due to the fact that one refiner-marketer calculates its PULP 95 IPP differently from the others. Averages shown in chart 7.10 have been adjusted to reflect this.

While the short-term cyclical nature of retail prices in Australia's large cities is clearly evident in chart 7.10, the general trend in retail prices has followed the trend in both IPP and TGP benchmarks. Again, the retail price of PULP 98 is consistently higher than the price of the lower octane PULP 95.

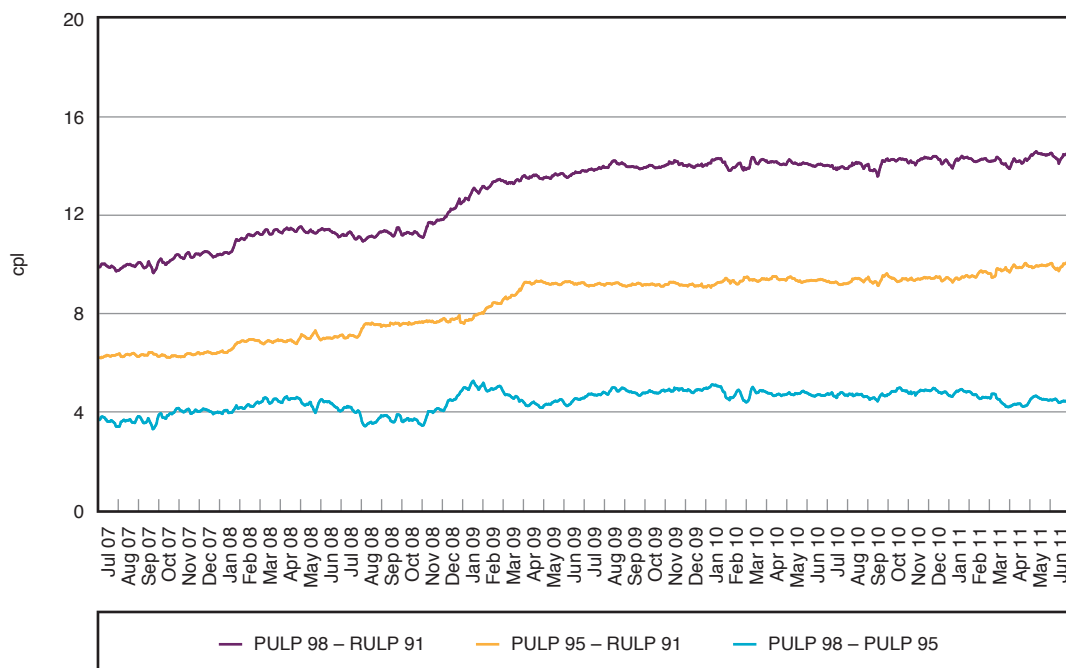
The differential between wholesale and retail prices comprises non-fuel costs incurred by retailers as well as a margin on the fuel sold to motorists.

Despite the overall trends in retail, wholesale and benchmark prices appearing to be very similar, there seems to be a gradual widening in the difference between wholesale and retail prices beginning around July 2009 and then again evident in March 2010. This appears to coincide with significant events which have occurred in the industry, such as the removal of fuel subsidies in Queensland and New South Wales in mid-2009 and the expansion of the NSW ethanol mandate in January 2010.

### 7.5.5 Retail prices across grades of premium and regular unleaded petrol

The previous charts indicate that the retail price of the two common grades of PULP, 95 RON and 98 RON, seemed to maintain a relatively consistent differential over time. Chart 7.11 considers the retail price differential of the premium grades with respect to regular unleaded petrol.

**Chart 7.11 Differential between average daily PULP and RULP retail prices in the five largest cities, seven-day rolling averages: July 2007 to June 2011**



Source: ACCC analysis based on Informed Sources data.

Over the period from July 2007 to June 2011, the differential between the retail prices of PULP 95 and RULP, and between PULP 98 and RULP have both increased:

- The PULP 95–RULP differential increased by 3.9 cpl to about 10.1 cpl in June 2011.
- The PULP 98–RULP differential increased by 4.6 cpl to about 14.5 cpl as at June 2011.

The differential between the two PULP blends had only increased marginally over the same period.

## 7.6 Key observations on premium unleaded petrol

In 2010–11, the market for PULP continued to grow in Australia, particularly in NSW where PULP sales increased by over 40 per cent from the previous year.

While a number of factors play a role in the supply and demand of PULP in the market, the distinct jump in PULP sales in NSW is likely to be driven by the ethanol mandate in effect in that state. This growth in demand for PULP is likely to continue into the future as the NSW ethanol mandate expands further in 2012.

Similar to RULP, IPP is a key benchmark and the major determinant in the pricing of PULP. The major component of the PULP IPP is the Mogas price which is the driver of movements in the IPP. Wholesale and retail prices of PULP appear to track the PULP IPP as well as the PULP TGP relatively closely.

The supply of PULP is currently being met through a mix of refinery production and imports. A continuation of the recent growth in PULP sales may put pressure on the supplies and prices of PULP going forward.