Australian
Competition &
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Commission

Monitoring of the Australian petroleum industry

Report of the ACCC into the prices, costs and profits of unleaded petrol in Australia

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Australian Competition and Consumer Commission
23 Marcus Clarke Street, Canberra, Australian Capital Territory 2601

First published by the ACCC 2010

10 9 8 7 6 5 4 3 2 1

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ISBN is ISBN 978-1-921581-96-0

ACCC 12/10_35224

www.accc.gov.au

Shortened terms

7-Eleven	7-Eleven Stores Pty Ltd
AUD	Australian dollars
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
AIP	Australian Institute of Petroleum
APS	Australian Petroleum Statistics
ASX	Australian Securities Exchange
avg.	average
bl	barrel
BP	BP Australia Pty Ltd
CBA	Commonwealth Bank of Australia
CIA	Central Intelligence Agency
Caltex	Caltex Australia Ltd
Coles Express	Coles Express Pty Ltd
Coogee Chemicals	Coogee Chemicals Pty Ltd
cpl	Australian cents per litre
DSEWPAC	Department of Sustainability, Environment, Water, Population and Communities
E10	see EBP
EBIT	earnings before interest and tax
EBP	ethanol blended petroleum, of which E10 (unleaded petrol with 10 per cent ethanol) is a common blend. E85 is a petrol blend containing 70 per cent to 85 per cent ethanol.
excl.	excluding
FCAI	Federal Chamber of Automotive Industries
FFV	Flex fuel vehicle
FOB	free on board
FuelCC	Fuel Consultative Committee
GST	goods and services tax
Gull	Gull Petroleum Group
IEA	International Energy Agency

Informed Sources	Informed Sources (Australia) Pty Ltd
IPP	import parity price/pricing
JTA	joint terminal arrangement
JV	joint venture
KBD	thousand barrels per day
KL	kilolitre
LHS	left-hand side
Liberty	Liberty Oil Pty Ltd
LPG	automotive liquefied petroleum gas
mbpd	million barrels per day
MMA	McLennan Magasanik Associates Pty Ltd
Marstel	Marstel Terminals Pty Ltd
ML	megalitres
Mobil	Mobil Oil Australia Pty Ltd
Mogas	motor gasoline
MON	Motor Octane Number
MOPS	mean of Platts Singapore (refer to Platts in the glossary)
Neumann	Neumann Petroleum Terminals Pty Ltd
na	not applicable
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
pa	per annum
PSA	Prices Surveillance Authority
PULP	premium unleaded petrol
RBA	Reserve Bank of Australia
RET	Department of Resources, Energy and Tourism
RFS	Renewable Fuels Scheme (United States)
RHS	right-hand side
Rio Tinto	Rio Tinto Ltd
RON	research octane number
RULP	regular unleaded petrol
Saudi CP	Saudi contract price
SEP	Strasburger Enterprises (Properties) Pty Ltd

Shell	Shell Company of Australia Ltd
SMP	Sydney Metropolitan Pipeline Pty Ltd
TGP	terminal gate price
the Act	*Trade Practices Act 1974* (replaced by *Competition and Consumer Act 2010* from 1 January 2011)
Trafigura	Trafigura Services Australia Pty Ltd
United	United Petroleum Pty Ltd
USD	United States dollars
USD/bl	United States dollars per barrel
US EIA	United States Energy Information Administration
Vopak	Vopak Terminals Australia Pty Ltd
Woolworths	Woolworths Ltd
WSFR	World scale flat rate
WTI	West Texas Intermediate

Glossary

2007 ACCC petrol inquiry report	the report of the ACCC's 2007 public inquiry into the price of unleaded petrol – *Petrol prices and Australian consumers: Report of the ACCC inquiry into the price of unleaded petrol,* December 2007.
2008 ACCC petrol monitoring report	the ACCC's 2008 petrol monitoring report – *Monitoring of the Australian petroleum industry: Report of the ACCC into the prices, costs and profits of unleaded petrol in Australia,* December 2008.
2009 ACCC petrol monitoring report	the ACCC's 2009 petrol monitoring report – *Monitoring of the Australian petroleum industry: Report of the ACCC into the prices, costs and profits of unleaded petrol in Australia, December 2009.*
automotive fuel	includes petrol, diesel and automotive LPG.
barrel	traditional measure of quantity used by the oil industry: one barrel is equivalent to 158.987 litres.
benchmark pricing	the practice of pricing to an identified crude or product price; for instance, the Tapis crude oil pricing benchmark.
biodiesel	diesel fuel based on vegetable oil or animal fat, typically made in combination with alcohol.
Brent crude	a type of oil sourced from the North Sea and usually refined in northwest Europe. The Brent crude oil marker, also known as Brent blend, London Brent and Brent petroleum, remains the major benchmark for other crude oils in Europe and Africa.
buy–sell arrangements	arrangements between domestic refinery owners for the purchase and sale of petroleum products.
city–country differential	the difference between the average country retail price of petrol and the average city retail price of petrol.
commission agent	an arrangement whereby an agent receives a commission for selling a product owned by another; in the downstream petroleum sector a commission agent often operates a retail site owned by a petrol refiner or wholesaler.
crude oil	a naturally occurring flammable liquid found in rock and other geological formations, consisting of hydrocarbons and other organic compounds. Common crude oil benchmarks include Tapis (Malaysia), which Australia uses as its benchmark; West Texas Intermediate (US) and Brent (North Sea).
diesel (automotive distillate)	fuel designed to run in diesel engines, widely used in the mining and transport sectors, as well as in some passenger motor vehicles.

distributor	a transport company that picks up petroleum products from refineries, terminals and depots for delivery to retailers and end users.
downstream	the refining, importing, distribution and marketing (retailing) of petroleum products.
earnings before interest and tax (EBIT)	a measure of a company's profits that excludes interest and tax expenses.
EBIT margin	EBIT divided by sales revenue.
exclusive dealing	a type of conduct prohibited in certain circumstances by section 47 of the *Trade Practices Act 1974* broadly involving one trader imposing restrictions on another's freedom to choose with whom, or in what or where it deals.
EBP (ethanol blended petrol)	unleaded petrol that includes a proportion of ethanol (for instance, E10 is an unleaded petrol that includes up to 10 per cent ethanol).
five largest cities	Sydney, Melbourne, Brisbane, Adelaide and Perth.
fixed costs	costs that do not vary with output.
free on board (FOB)	arrangement whereby the seller pays for transportation of goods to the port of shipment, plus loading costs, with the buyer responsible for the cost of marine freight transport, insurance, unloading and transportation from the arrival port to the final destination.
fuel	automotive, aviation, marine and other transport fuels, and non-transport fuels such as butane and heating oil.
fuel quality premium	additional component added to a price benchmark to reflect the higher quality of Australian-grade refined petrol relative to the Singapore benchmark price.
gantry	a facility used to transfer fuel products from a refinery or terminal to trucks or rail tankers.
gas	liquid petroleum gas or LPG, including automotive LPG.
gasoline crack	the difference between the price of refined petrol and the price of a barrel of crude oil, adjusted for volume differences.
gross profit	the difference between the revenue received from the sale of products and the cost of producing or purchasing them.
import parity pricing (IPP)	the setting of a price for domestically refined petrol in the wholesale market at a price comparable to the cost of importing fuel into a given location in Australia.
import terminal	a major terminal with a direct pipeline connection to a port—most fuel at import terminals is received via ship.
independent retailers	retailers (owning single or multiple sites) other than supermarket retailers and refiner marketers. Independent retailers can sell petrol under the brand name of one of the refiner-marketers or under their own brand name.

Informed Sources	company that collects pricing information on various fuels and provides it to subscribers.
large independent chains	companies—other than refiner-marketers or supermarket chains—that import, wholesale and/or retail fuel in Australia; these include Gull, United, Neumann, Liberty and 7-Eleven.
light, sweet crude	crude oil with low viscosity (light) and relatively low levels of sulphur (sweet). These oils are preferred by refiners because of their ease of handling and relatively high yields of high-value products such as petrol, diesel and jet fuel.
major terminal	a fuel storage terminal connected to a port or a refinery by one or more pipelines. There are two broad types of major terminals—import terminals and refinery-pipeline terminals.
marginal cost	the additional cost to produce one extra unit of output.
Mean of Platts Singapore (MOPS)	the average of prices reported by Platts for Singapore traded commodities, for instance Tapis MOPS.
Mogas	motor gasoline (the commonly used international term for petrol). It is used in oil markets as the benchmark for unleaded petrol in the Asia–Pacific region, including Australia.
nameplate capacity	the potential output of a refinery running at optimum utilisation.
notification	a process under the *Trade Practices Act 1974* by which a person who engages in exclusive dealing conduct may obtain prior legal protection from the application of the Act for that conduct.
Oilcode	a prescribed mandatory industry code of conduct under section 51AD of the *Trade Practices Act 1974*. It regulates the conduct of suppliers, distributors and retailers in the downstream petroleum industry.
other fuels	includes kerosene, biodiesel, LPG, lead replacement and aviation fuels.
other oil-based products	includes LPG, aviation fuels, industrial and marine fuels, heating oil, fuel oil, lubricant oils, greases, basestocks and bitumen.
petrol	unleaded petrol—includes RULP (RON 91), PULP (RON 95 and above) and E10. The terms ‘unleaded petrol’ and ‘petrol’ are used interchangeably in this report.
petroleum products	any oil-based products derived from crude oil, as it is processed in oil refineries.
Platts	a provider of energy market information including price benchmarks for the oil, petrol and other energy markets.
Platts assessed price for MOPS	the mean of the high and low components of a Platts assessment for oil cargoes loading from Singapore; a free onboard price for completed deals in a particular commodity, quoted in USD.

PULP	premium unleaded petrol, such as RON 95 and above.
price support	rebate provided to a petrol retailer to compensate for periods of price discounting.
refining	the production of petroleum products from crude oil.
refiner margin	the petroleum product revenues received by a company, less all costs for raw materials (crude oil, catalysts etc.), product input costs and processing costs per barrel of product sold.
refiner-marketer	a company that refines, imports, wholesales and markets fuel; in Australia these are BP, Caltex, Mobil and Shell.
refinery exchange	arrangements between refiner-marketers before July 2002 for the swap of a volume of product in one location for an equivalent volume in another location where they did not operate a refinery.
refinery-pipeline terminal	a major terminal with a direct or indirect pipeline connection to a refinery that supplies most of its fuel.
refinery products	fuel and other oil-based products such as lubricants and bitumen.
regional centres and country towns	the 150 regional centres and country towns for which the ACCC monitors petrol prices.
retail	the sale of petroleum products to the public through retail sites.
retail margin	the difference between the cost of acquiring a product from a wholesaler and the retail selling price of that product. Effectively the retailer's gross margin.
return on assets	figure calculated by dividing net profit by total assets, expressed as a percentage, which shows how effectively a company's assets are being used to generate profit.
return on capital employed	figure calculated by dividing net profit by the sum of total assets minus current liabilities and expressed as a percentage. This measure compares earnings with the capital invested in the company.
return on sales	figure calculated by dividing net profit by total sales, expressed as a percentage, which shows how much profit is being produced per dollar of sales.
RULP	regular unleaded petrol—RON 91; includes low-aromatic unleaded petrol.
RON	research octane number, a measure of the efficiency of petrol at resisting engine knocking. In Australia, grades of petrol typically include RON 91 (regular) and RON 95 and higher (premium grades).
shopper docket	a discount offer on fuel for consumers that have spent a certain amount in one purchase from a nominated supermarket or retailer.
smaller capital cities	Darwin, Hobart and Canberra.

supermarket retailer	supermarkets that sell fuel under their own name/brand.
supply sector	the fuel industry sector that imports and exports petroleum products and purchases petroleum products from Australian refineries. This sector also imports crude oil for use by refineries.
Tapis crude	a light, sweet crude oil from Malaysia; it is used in oil markets as the benchmark for crude oil in the Asia–Pacific region.
terminal	a storage facility from which fuel is received via ship and/or refinery and distributed to retailers, distributors and end users.
terminal gate price (TGP)	price for a spot purchase of petrol from a terminal; used as a benchmark price; the TGP is the price a purchaser expects to pay, usually in cash, when they arrive at a wholesaler's terminal wanting to purchase a tanker load of 30 000 litres of petrol.
terminal throughput	the annual volume received and then distributed by a refinery or terminal via truck or rail gantry.
terminal turnover	the number of times a terminal is effectively filled and emptied during a year (that is, annual throughput divided by physical capacity).
third line forcing	a form of exclusive dealing conduct prohibited by section 47 of the *Trade Practices Act 1974*. It involves the supply of goods or services on the condition that the purchaser acquires goods or services from a particular third party, or a refusal to supply because the purchaser will not agree to that condition.
unleaded petrol	see 'petrol'—the terms 'unleaded petrol' and 'petrol' are used interchangeably in this report.
vertical integration	the undertaking by a single company of successive stages in the process of production and/or supply.
wholesale	the sale and movement of petroleum products from a wholesaler to other wholesalers, to retailers or to end users such as transport, agricultural and mining companies.
West Texas Intermediate (WTI) crude	a type of crude oil of high quality, for refining a high proportion of petrol; also known as Texas Light Sweet. WTI crude is traded on the New York Mercantile Exchange through futures contracts.
Worldscale	a provider of shipping freight price and other freight market information. Freight rates are quoted by ship and port combination. The freight rate for a given ship and port combination reflects market demand and the availability of shipping.

Key findings

Petrol prices in 2009 –10

Over the course of 2009–10, retail petrol prices were relatively stable.[1]

Average retail petrol prices (seven-day rolling averages[2]) across the five largest cities ranged between:

- **a low of 116 cents per litre (cpl)** in October 2009 and a **high of 130 cpl** in May 2010, a range of only 14 cpl.

The relative stability of prices in 2009–10 is in contrast to price movements over the previous year – petrol prices reached a peak of 162 cpl in July 2008 and fell to a low of 101 cpl in December 2008.

Determinants of retail petrol prices

ACCC analysis has shown that the major determinants of retail petrol prices have been:

- the **international price of refined petrol** (Singapore Mogas 95), which is largely driven by the international price of crude oil. The ACCC has determined that the Australian dollar price of Singapore Mogas 95 along with taxes accounts for around 88 per cent of average retail prices.
- the **exchange rate** of the Australian dollar against the US dollar (a stronger Australian dollar reduced some of the effects of higher crude oil prices on Australian retail petrol prices).
- the established **weekly retail price cycles** that operate in the largest capital cities and affect the day-to-day prices of petrol.

The regular weekly price cycles have continued to be clearly evident in the largest capital cities. However this year these cycles were less stable than in 2009 with a number of instances where the price cycle failed in one or more cities. In addition, shifts in the weekly price cycle made the cheapest day on which to buy petrol less predictable.

In 2009–10 Australia had the fourth lowest retail petrol prices in the OECD.[3]

1 Unless otherwise stated prices refer to the price of regular unleaded petrol (RULP).

2 Seven-day rolling average prices are used to reduce the impact of daily price fluctuations caused by regular weekly price cycles and show the underlying price.

3 RET comparison of OECD retail prices June 2010.

Profits

Based on analysis of the data obtained through the monitoring program, the ACCC has estimated that for the supply, wholesale and retail of petrol the **amount that motorists paid as profits to the petrol companies was 2.9 cpl in 2009–10.**

Over the past eight years the aggregated net profit on petrol for the supply, wholesale and retail sectors has typically been in the range of 2 cpl to 4 cpl.

This year the industry made a return on sales of 2 per cent (net profit of approximately $1.2 billion on sales of approximately $59 billion). In 2008-09, the downstream petroleum industry made a loss of $945 million. This year's profit is below the $1.5 billion average net profit over the past eight years.

Ethanol and premium unleaded petrol

During 2009–10 there has been a substantial increase in sales of E10, primarily as a result of the scaling up of the NSW government ethanol mandate and in anticipation of an ethanol mandate in Queensland (the introduction of which was suspended in October 2010).

There has also been a related increase in sales of premium unleaded petrol. This has been due, in part, to the reduction in availability of RULP in NSW and to some extent in Queensland as retailers move to become compliant with the existing and proposed mandates.

Given the increasing demand for E10, limited domestic production capacity for ethanol and a tax treatment that favours domestic production over imports, there are concerns in the short to medium term regarding the supply and price of ethanol used for automotive fuel and therefore ethanol blended fuel.

Structural changes in the fuel industry

This year saw a number of important developments in the Australian fuel industry including:

- Mobil effectively withdrawing from the Australian retail market. This appears part of a broader global movement of integrated oil companies moving out of retailing to concentrate on more profitable oil and gas exploration and extraction.
- By buying the retail assets of Mobil, 7-Eleven and Peregrine Corporation (which owns the On The Run chain) significantly increased their retail fuel presence. This continues a trend in the Australian market of specialist retailers, including supermarkets, increasing their involvement in fuel retailing.

Independent imports

In 2009–10 independent imports of total petroleum products increased substantially. The proportion of independent imports to total imports has more than doubled to over 10 per cent in the past two years.

Summary

The ACCC monitored and analysed the prices, costs and profits of petrol in accordance with the ministerial direction of 17 December 2007 (see appendix A). This summary highlights the findings of the ACCC's analysis. More in-depth analysis of each of the topics covered in this summary can be found in the relevant chapters of the report.

Retail petrol prices follow international benchmark prices and are influenced by the exchange rate

ACCC analysis has shown that Australian retail prices for petrol have closely followed international benchmark prices of refined petrol. These international benchmark prices have in turn been driven by international prices for crude oil. The value of the Australian dollar also drives changes in domestic petrol prices.

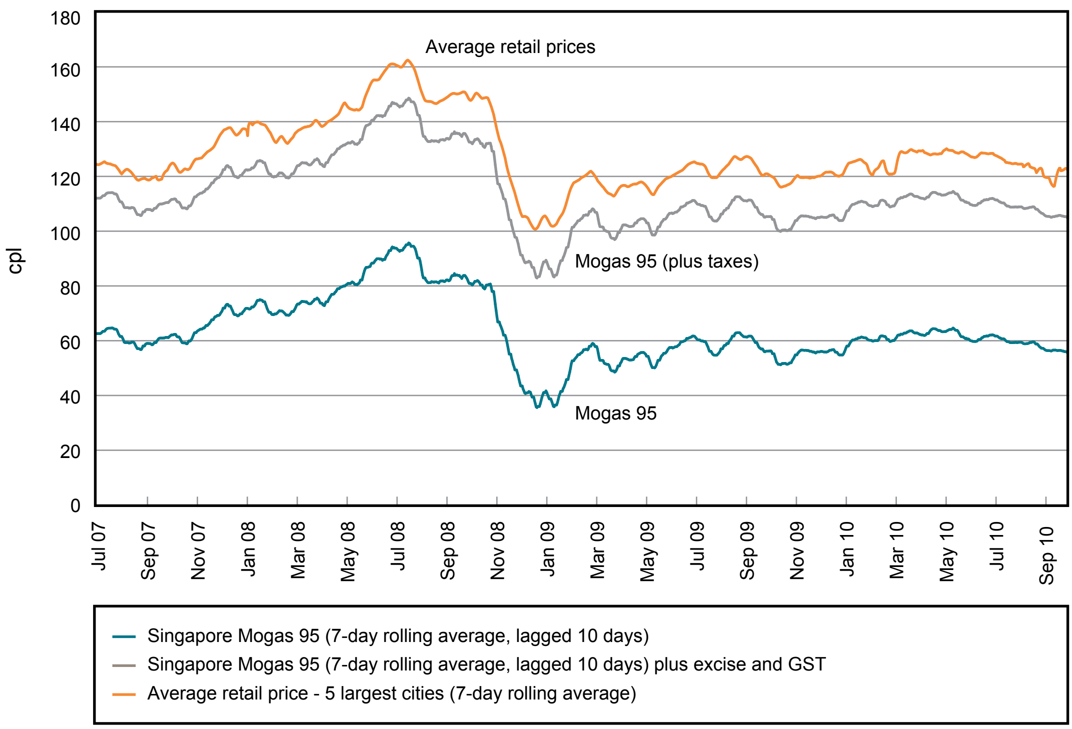
The central role of the Mogas 95 petrol benchmark and international crude oil prices

The international refined petrol benchmark for Australia is the price of Singapore Mogas 95 Unleaded (Mogas 95). Singapore is the regional hub for the sale of a variety of petroleum-based products into Australia and most local petrol companies use Mogas 95 as a basis for calculating the price of petrol in Australia.

Chart 1 shows the movements in the average retail price of RULP in Australia's five largest cities and the price of Mogas 95 in Australian cpl (these are seven-day rolling average retail prices to smooth out the effect of the regular weekly price cycles and seven-day rolling average lagged 10 days price for Mogas 95). For comparison purposes also included is a calculation with excise and GST (equivalent to that applied to retail) added to the Mogas 95 series.

From this chart it can be seen that Australian retail prices have followed the international benchmark price for refined petrol very closely. Movements (both up and down) in the international price of refined petrol over the past three years have been passed on to Australian motorists.

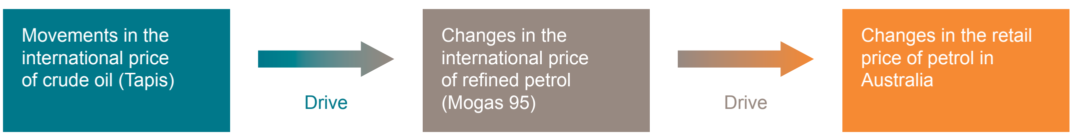
Chart 1 Weekly movements in retail petrol prices and Singapore Mogas 95 prices: 1 July 2007 to 30 September 2010



Source: ACCC calculations based on Platts, RBA and Informed Sources data

While Mogas 95 is the principal reference point for retail petrol prices in Australia, movements in Mogas 95 have primarily been influenced by movements in the international price of crude oil. Movements in the international price of oil (Tapis is commonly used as the benchmark for crude oil prices in South-East Asia), drive changes in the price of Mogas 95 which plays a central role in setting retail petrol prices in Australia (see figure 1).

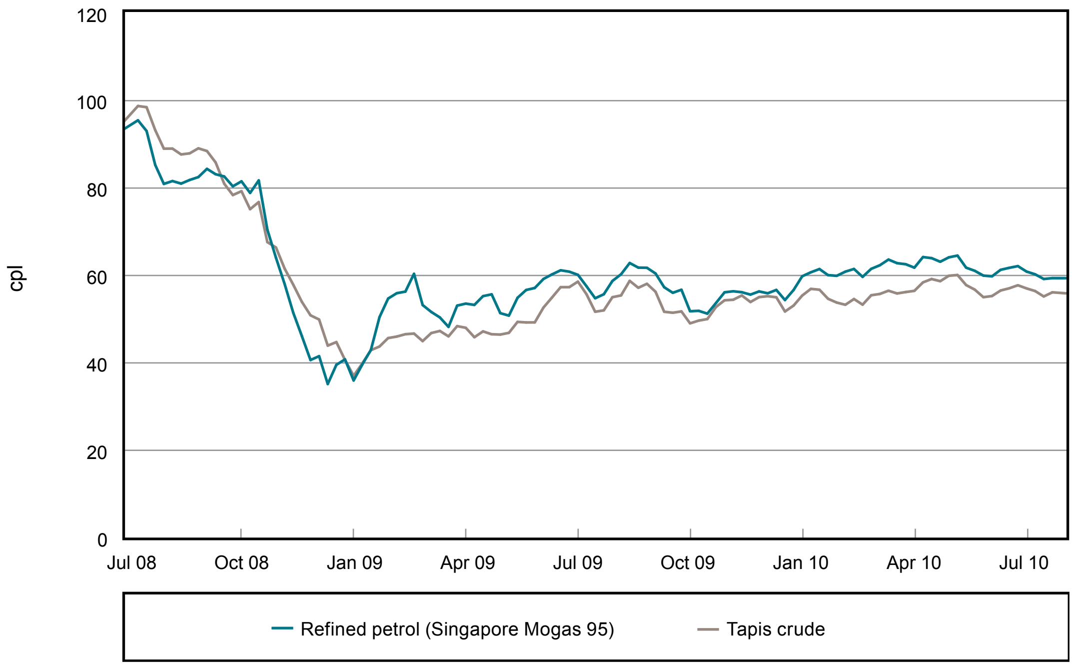
Figure 1 The influence of movements in the price of crude oil



ACCC analysis has shown that the underlying movements in the overall level of retail prices in Australia are strongly influenced by movements in the Australian dollar value of the international prices of crude oil.

Chart 2 shows the close relationship between movements in Tapis crude oil prices and the Mogas 95 refined petrol benchmark. This is expected as crude oil is used to produce refined petrol.

Chart 2 Weekly movements in international benchmark prices of refined petrol (Mogas 95) and crude oil (Tapis): 1 July 2008 to 30 September 2010

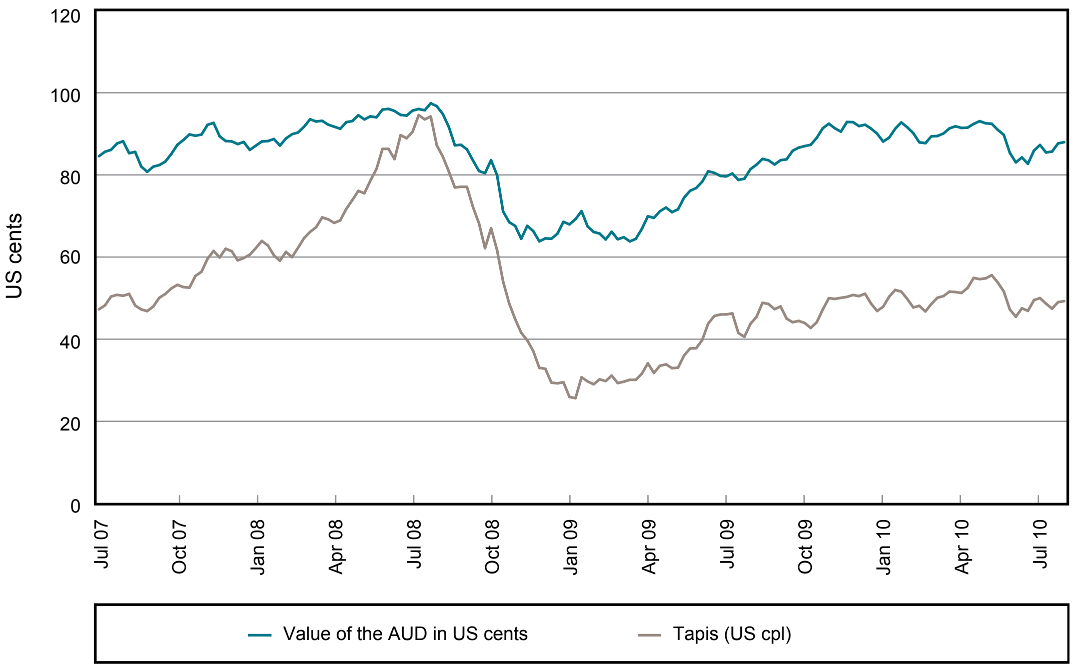


Source: ACCC calculations based on Platts and RBA data

Effect of the exchange rate

In the past two years movements in the value of the Australian dollar relative to the US dollar have been in a similar direction to movements in the US dollar price of oil (as shown in chart 3).

Chart 3 Weekly Australian/US dollar exchange rate and Tapis (US cpl): July 2007 to July 2010



Source: ACCC calculations based on Platts and RBA data

The recent correlation between movements in the Australian/US dollar exchange rate and crude oil (and thus of refined petroleum) has meant that recent oil, petrol and diesel price movements have had less impact on Australian consumers.

Retail prices and the exchange rate

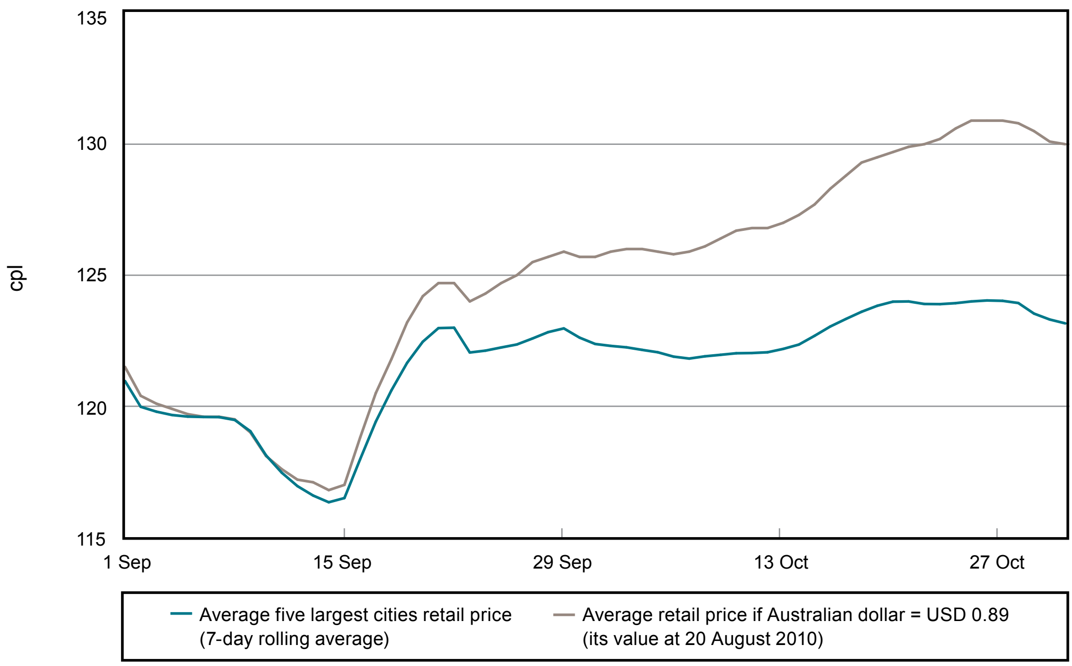
As Mogas 95 is priced in US dollars, changes in the value of the Australian dollar against the US dollar affect the domestic price of petrol. The higher Australian dollar over the past year has meant retail petrol prices in Australian dollars were cheaper than they would otherwise have been.

The effect of the exchange rate can be seen in chart 4, which shows for the period 1 September to 31 October 2010 actual retail prices in the five largest cities (on a seven-day rolling average basis) as well as estimated retail prices if the Australian dollar had remained constant at US 89 cents (its value at 20 August 2010[4]). If the Australian dollar had been constant at US 89 cents at the end of October 2010 Australian motorists would have been paying an average of 130 cpl. The strengthening of the Australian dollar during this period meant that motorists in Australia actually paid an average of 123 cpl.

4 This is the relevant Australian/US dollar exchange rate for 1 September once the 10 day lag is taken into account.

In October 2010 higher international oil and Mogas 95 prices were offset by the strengthening Australian dollar so that domestic prices remained relatively stable.

Chart 4 Comparison of average retail petrol prices with actual and constant exchange rates: 1 September to 31 October 2010



Source: ACCC calculations based on Platts, RBA and Informed Sources data

Price cycles

Retail prices in the larger cities tend to move in regular weekly price cycles. These cycles are a cause of concern for many motorists. The regularity of weekly price cycles has enabled the refiner-marketers[5] and other major retailers to understand and predict the likely response to changes in their own behaviour.

What is a price cycle?

The regular pattern of these cycles is clearly evident in chart 5. It shows daily prices in Sydney (where the price cycle has failed), Melbourne, Brisbane, Adelaide and Perth in March to May 2010. The price cycle has two distinct phases over the week:

- a relatively sharp increase in prices generally over one or two days
- a more prolonged phase of gradually decreasing prices over the rest of the week.

The price increases have generally been led by the refiner-marketers.
In the discounting phase the most active retailers have usually been Woolworths, 7-Eleven, other independents (for example, United), and, to a lesser extent, Coles Express.

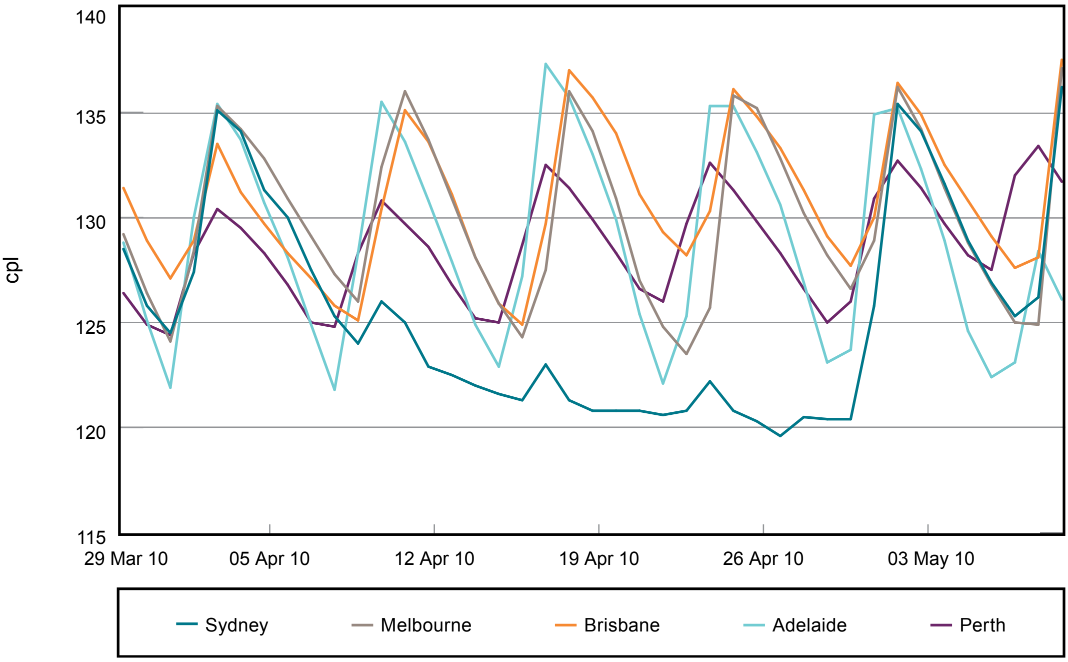
5 'Refiner-marketers' is the traditional term referring to the four integrated fuel companies (BP, Shell, Caltex and Mobil) which used to refine, wholesale and retail fuel in the Australian market. Given this historical use the term refiner-marketer is used throughout this report. However, now that Mobil and Shell, while still marketing proprietary fuels, have effectively withdrawn from direct retailing of fuel while BP and Caltex continue to directly retail, the use of this collective term may be less appropriate in the future.

Regular weekly price cycles do not occur in international benchmark prices or Australian wholesale prices; they are due to the pricing policies employed by the local petrol companies in the domestic market. Petrol price cycles do occur in other countries but those in Australia tend to be larger in amplitude and more consistent.

The existence of the price cycle suggests that many of the major players are actively partaking in this cyclical pricing behaviour, albeit with slightly different strategies.

Where one or more of the major players does not follow the typical pattern, the price cycle can break down. In chart 5 there is an example of the price cycle breaking down in Sydney in April 2010.

Chart 5 Daily average retail prices in the five largest cities: 29 March to 8 May 2010



Source: ACCC based on Informed Sources data

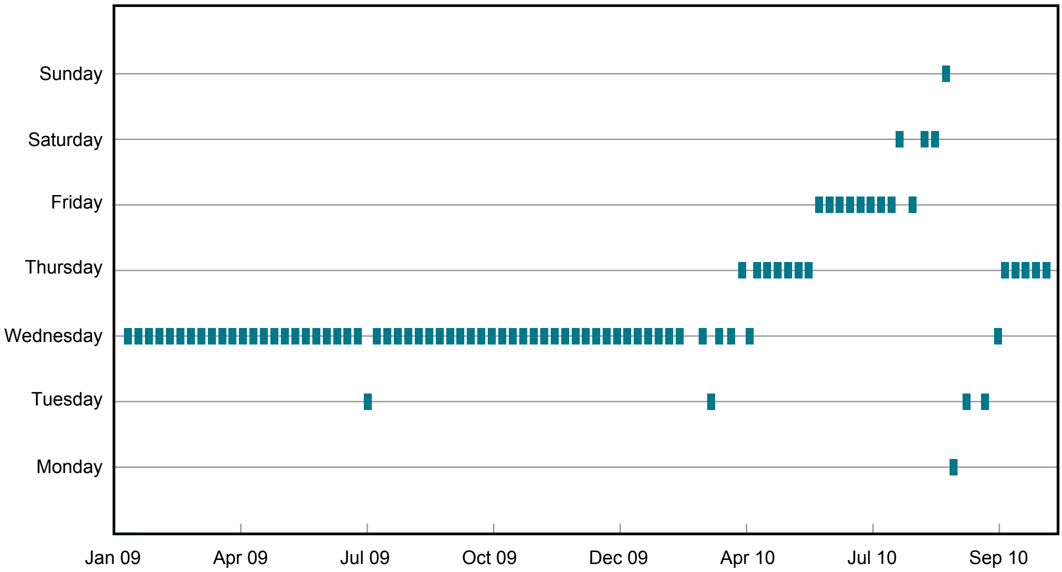
Unstable cycles and movement of the cheapest days

Retail pricing policies affect the size and shape of price cycles. A few years ago the trough of the price cycle occurred on Tuesdays in most of the largest cities – the so called ‘Cheap Tuesdays’. However more recently the day of the week on which prices at the bowser were lowest has moved.

In January 2009, the cheapest day of the week in most of the largest capital cities was a Wednesday and this was fairly constant over 2009. In early 2010, the cheapest day started moving through the week.

Chart 6 shows the day of the week on which each trough occurred in Brisbane in the period from 1 January 2009 to 31 October 2010. Each dot in the charts depicts a price cycle trough.

Chart 6 Day of price cycle trough, Brisbane: 1 January 2009 to 31 October 2010



Source: ACCC analysis based on Informed Sources data

Note: Each dot depicts a price cycle trough.

It is clear from chart 6 that after relative stability in 2009, from early 2010 the day of the week on which prices troughed was changing regularly (and largely moving later in the week). A similar pattern was evident for the day of the week on which prices peaked. Similar patterns occured in all the larger capital cities.

The instability in price cycles in 2010 (reflected in both movements in the cheapest/most expensive days of the week as well as the increase in the number of failed price cycles) may be due in part to uncertainty amongst retailers amid the changing structure of the market. The ACCC's decision in December 2009 to oppose the sale of Mobil assets to Caltex may have contributed to this uncertainty.

The ACCC regularly monitors and analyses petrol price cycles and provides consumers with information on past cycles and the previous week's cheapest day on the ACCC website.

Coordinated pricing in the petrol industry

The 2009 ACCC petrol monitoring report noted that the degree of coordination observed in price cycles is a source of concern for Australian consumers and for the ACCC.[6]

Retail petrol markets in Australia are conducive to coordinated conduct. The high level of retail price transparency, mainly through the Oil Pricewatch system provided by Informed Sources, assists retailers to quickly signal price moves, monitor competitor's responses and react to them.

While price cycles in 2010 were less stable than in the previous 12 months, price cycles were still very evident in the largest cities for most weeks of the year.

The degree of coordination exhibited in the weekly price cycle remains a concern for the ACCC.

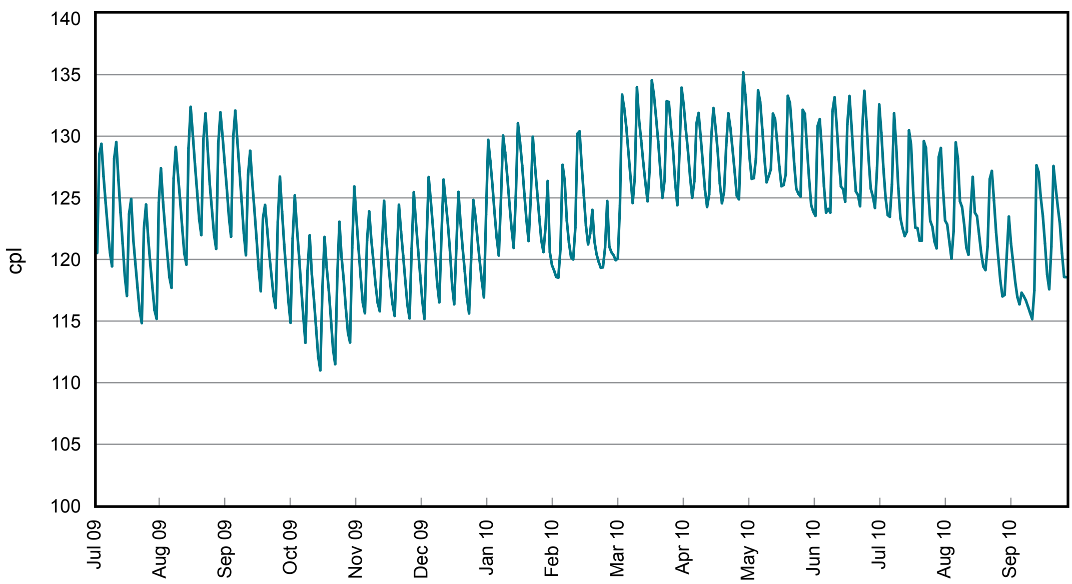
6 ACCC, *Monitoring of the Australian petroleum industry,* December 2009, page xxiii.

Retail price movements

In 2009–10 retail petrol prices moved in a more narrow range than in recent years. Daily average retail petrol prices across the five largest cities (on a seven-day rolling average basis) ranged from a low of 116 cpl in October 2009 to a high of 130 cpl in May 2010. This stability is in contrast with prices in 2008-09 which reached a high of 162 cpl (in July 2008) and a low of 101 cpl (in December 2008).

Chart 7 shows average petrol prices across the five largest cities on a daily basis between 1 July 2009 and 30 September 2010. The regular weekly price cycle is clearly evident.

Chart 7 Daily average retail RULP prices across the five largest cities: 1 July 2009 to 30 September 2010

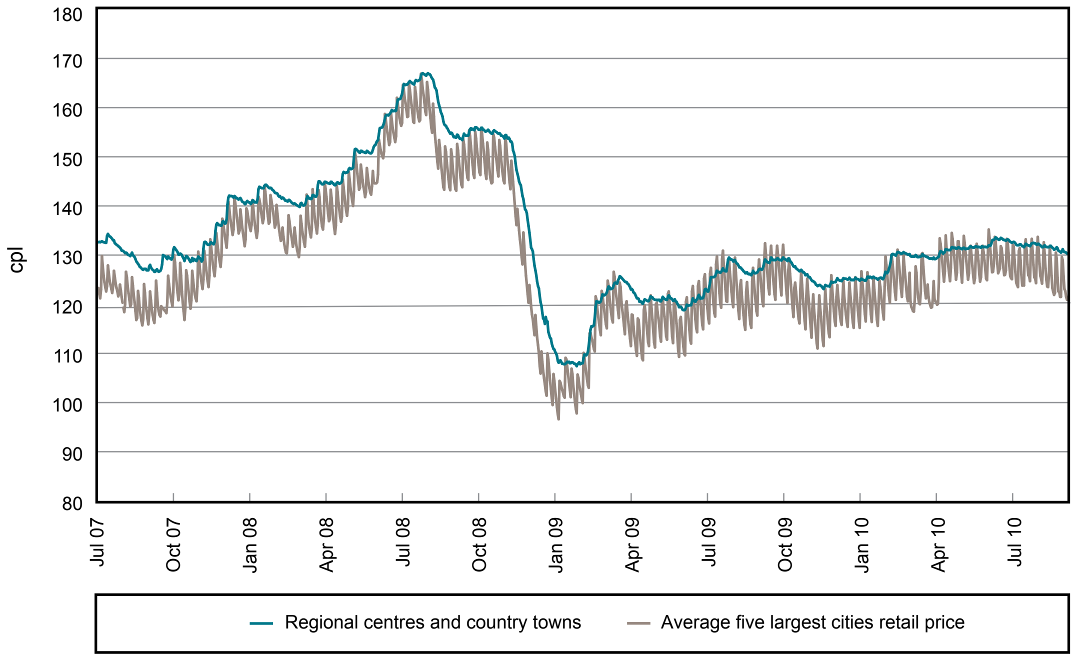


Source: ACCC calculations based on Informed Sources data

Chart 8 shows average daily petrol prices across the five largest cities and the regional centres and country towns monitored by the ACCC daily over the past three years. This chart shows that while price cycles do not operate in most regional centres and country towns, prices generally move in line with those of the largest capital cities.

Chart 8 also shows that, compared with previous years, in 2009-10 petrol prices in the capital cities as well as the regional centres and country towns were far more stable than in the previous two years.

Chart 8 Average daily retail prices in the five largest cities and the regional centres and country towns monitored by the ACCC: 1 July 2007 to 30 September 2010



Source: ACCC calculations based on Informed Sources data

Retail prices in regional centres and country towns are, like capital city prices, largely driven by international benchmark prices and the exchange rate. However, country service stations tend to sell lower volumes than city service stations and so it takes longer for product to move through the supply chain. Thus regional petrol prices tend to be more stable and price changes, both up and down, tend to lag price movements in the largest capital cities.

Prices in regional centres and country towns also tend to be somewhat higher than those in the largest cities for a number of reasons including:

- lower volumes of fuel sold; this can lead to higher costs per litre of fuel sold
- distance/location factors; for example, there may be greater freight charges for delivery of fuel and other storage costs, especially for more isolated country towns
- number of service stations; this can affect the degree of local competition
- lower convenience store sales; these may be important for some retailers in achieving adequate returns.

These factors may also explain differences in fuel prices between retail sites in different regional centres and country towns.

Profits

The ACCC has collected extensive financial information from the four refiner-marketers and major wholesalers and retailers. This information has been analysed to estimate the profitability of the supply (including refining), wholesale, and retail sectors. The financial performance of the domestic petroleum industry has been compared with other industries operating in Australia and with petroleum companies operating overseas.

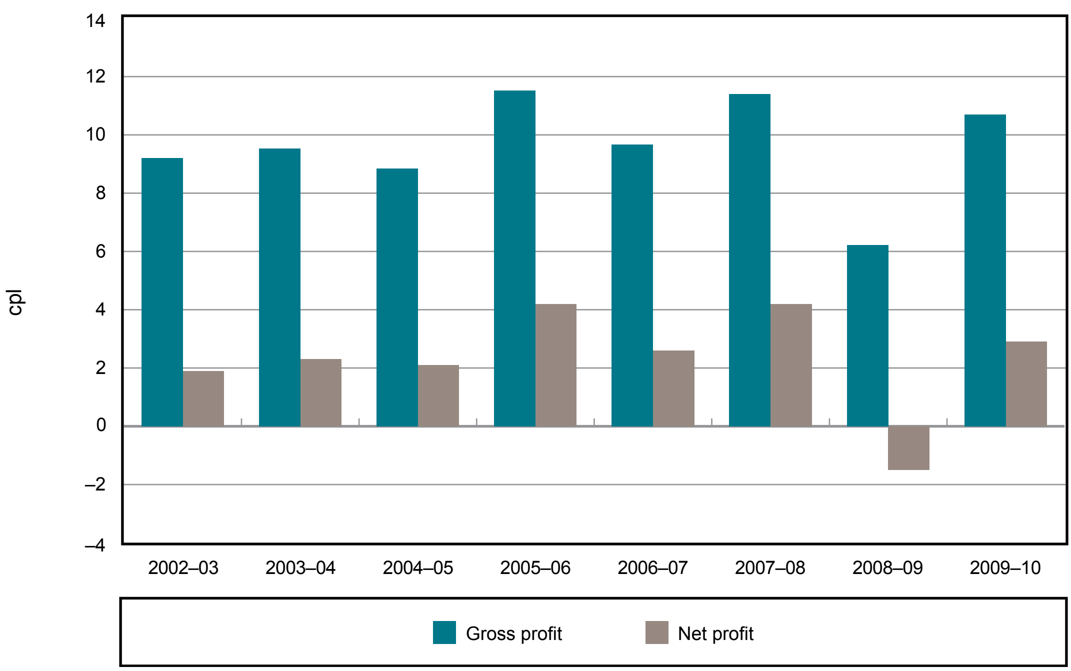
Petrol industry profits have been a small proportion of retail prices

A small proportion of the final bowser price has been retained in profits by the supply, wholesale and retail sectors. The ACCC has estimated that over the past eight years the aggregated gross profit on the sale of petrol across the supply, wholesale and retail sectors has averaged approximately 10 cpl (see chart 9).

Gross profit is a measure of profit calculated by deducting the cost of goods from sales revenue. The petrol companies do not keep the entire gross profit; they need to cover other operating expenses out of this profit, including some wages, rent and maintenance.

After subtracting costs, the ACCC has estimated that in 2009–10 the amount that motorists paid as profits to the petrol companies was 2.9 cpl on the sale of petrol. In recent years, this measure of profit for the combined supply, wholesale and retail sectors has typically been in the range of 2 to 4 cpl.

Chart 9 Petrol profits paid by motorists to the petrol companies: 2002–03 to 2009–10

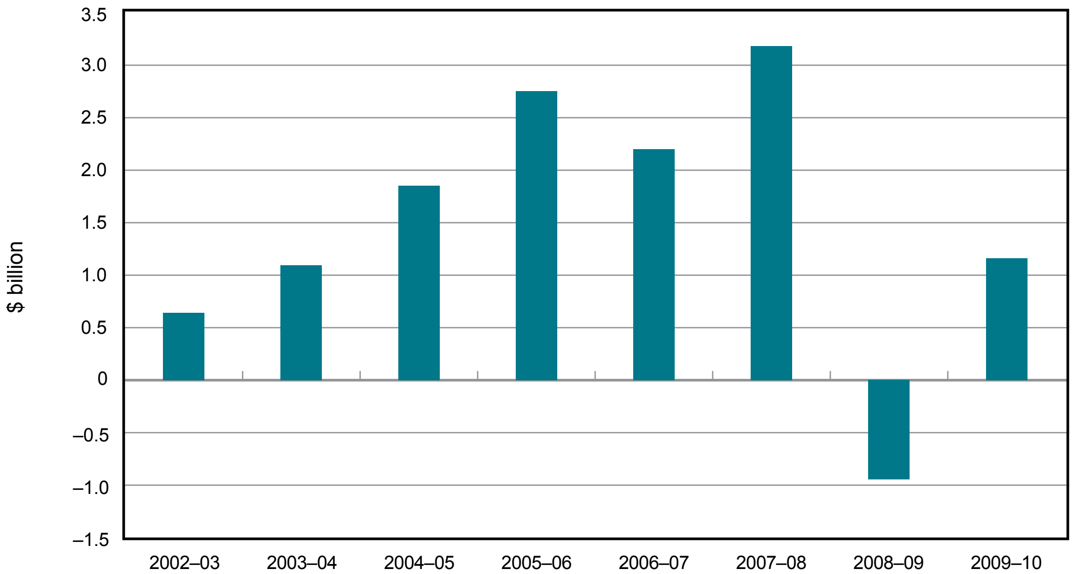


Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process

Profits have been volatile over the past eight years

The downstream petroleum industry profits over the past eight years have been mixed. The petrol companies made losses in 2008–09 of approximately $1 billion. In 2009–10 the industry made a net profit of approximately $1.2 billion, which was well below the peak profit of $3.2 billion in 2007–08 (see chart 10).

Chart 10 Downstream petroleum net profit (adjusted EBIT): 2002–03 to 2009–10



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

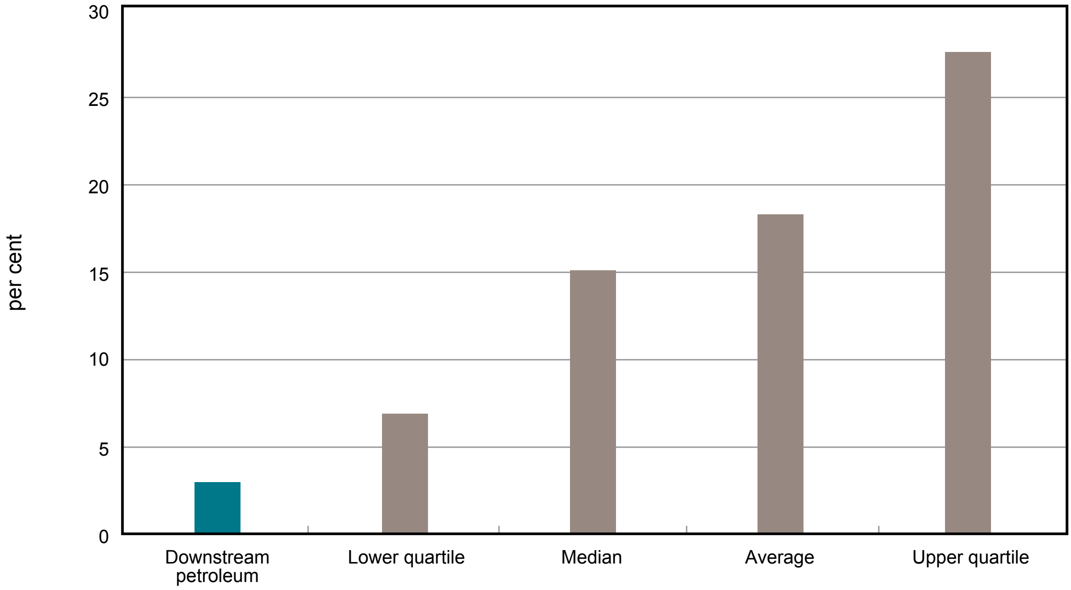
Petrol industry profits have been in line with other sectors

The ACCC has examined a range of profit measures or key performance indicators (KPIs) for the local petrol companies and has also compared these with other industries.

The common KPIs for the downstream petroleum industry improved in 2009–10. Return on sales was 2.0 per cent, return on assets was 6.4 per cent and return on capital employed was 9.4 per cent. All three KPIs were negative in 2008–09.

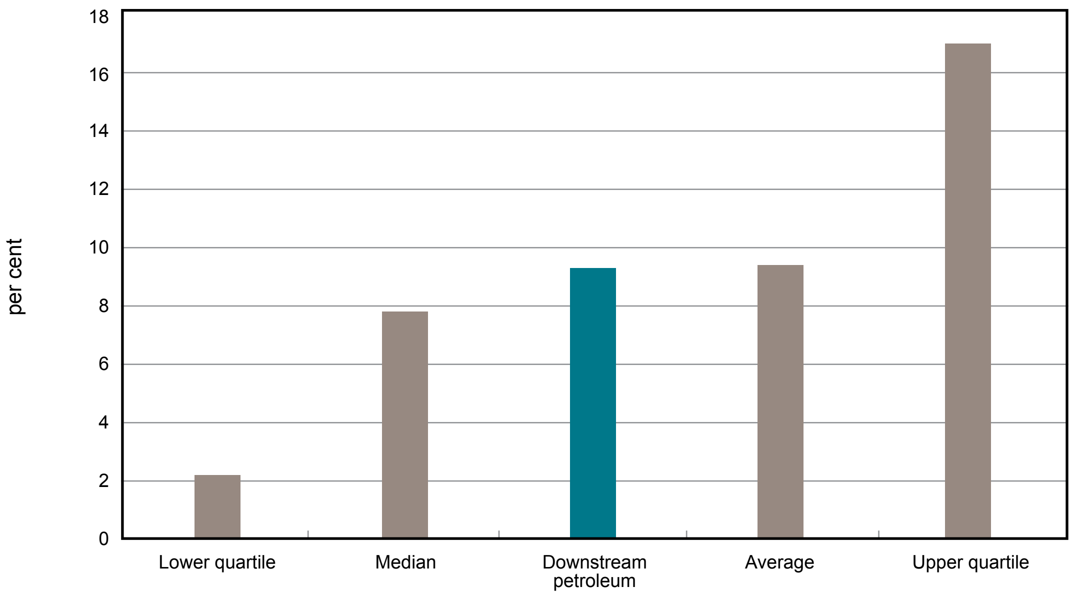
In terms of return on sales, the local petroleum industry has ranked low compared with the estimated average for ASX 200 companies (see chart 11). When measured using return on assets the petroleum industry is approximately the average for the ASX 200 companies (see chart 12).

Chart 11 Comparison of return on sales for downstream petroleum industry and ASX 200 companies: 2002–03 to 2009–10 average



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

Chart 12 Comparison of return on assets for downstream petroleum industry and ASX 200 companies: 2002–03 to 2009–10 average



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

Costs

Out of every dollar collected by the petrol companies at the bowser, less than 3 cpl is retained as net profit. This means that the underlying costs of supply account for the remainder of the bowser price.

Nominal components of cost

Australian petrol prices are not regulated and local petrol companies are free to set prices in the market. However the two largest components of the pump price – the international benchmark price for refined fuel and tax (excise and GST) – are outside the control of the local petrol companies.

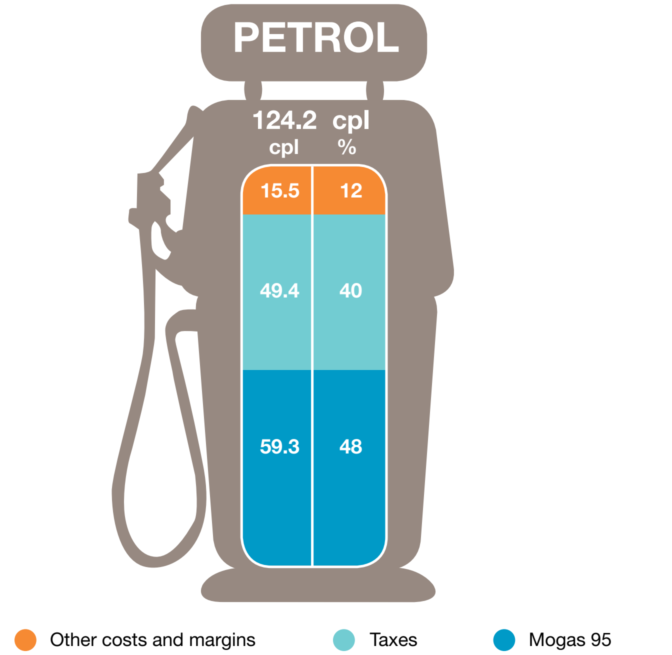
Together, these two components account for approximately 88 per cent of the price of petrol. That is, out of a retail price of 124.2 cpl, approximately 109 cpl is directly attributable to the cost of refined petrol and taxes (see chart 13).

For diesel these two components also account for 88 per cent of the bowser price (see chart 14).

For automotive liquified petroleum gas (LPG), the international benchmark price and GST account for 78 per cent, in part reflecting that excise is currently not imposed on automotive LPG and higher transport and storage costs for automotive LPG relative to petrol and diesel (see chart 15).

Other costs and margins therefore account for approximately 15.5 cpl of the retail price of petrol, 14.9 cpl for diesel and 13.3 cpl for automotive LPG. This amount covers a number of costs such as freight (including freight to Australia from overseas), wages, and terminal and service station operations.

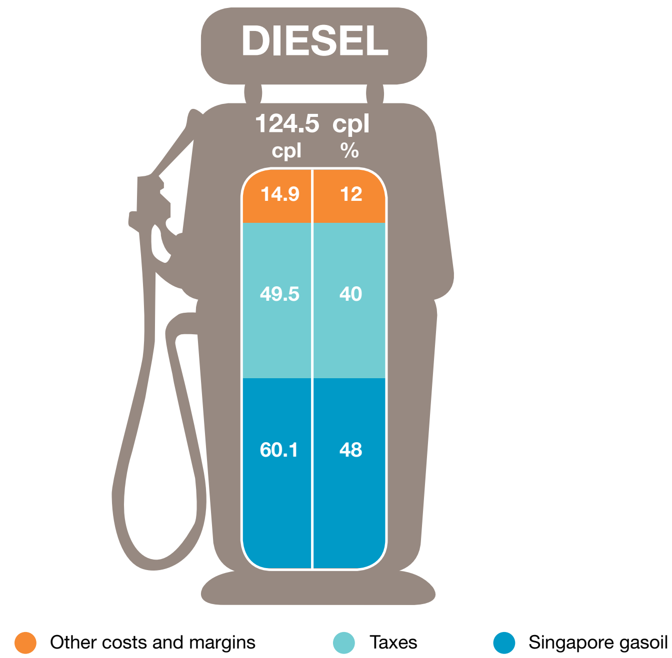
Chart 13 Components of average retail RULP prices in the five largest cities: 2009–10



Source: ACCC calculations based on Platts, RBA, WA FuelWatch, Informed Sources data and information provided by the monitored companies

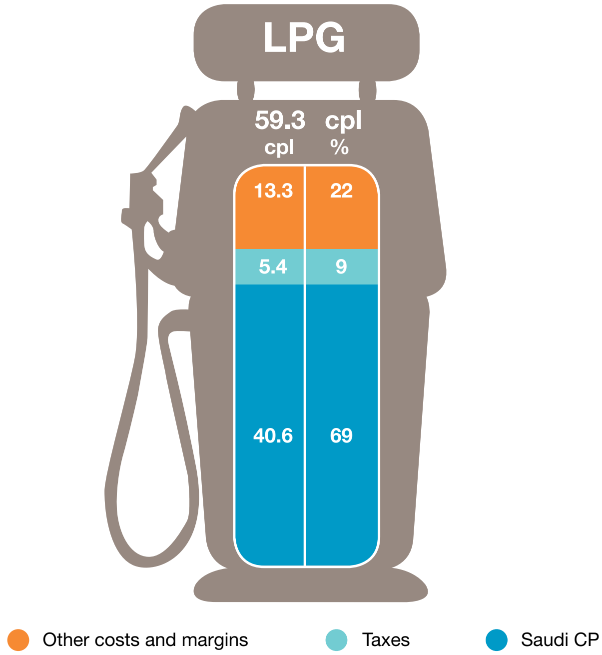
Note: Of the 15.5 cpl other costs and margins, 2.9 cpl is the net aggregated profit per litre across the supply, wholesale and retail sectors.

Chart 14 Components of average retail diesel prices in the five largest cities: 2009–10



Source: ACCC calculations based on Platts, RBA, AIP and Informed Sources data

Chart 15 Components of average retail automotive LPG prices in the five largest cities: 2009–10



Source: ACCC calculations based on LPG Australia, RBA and Informed Sources data

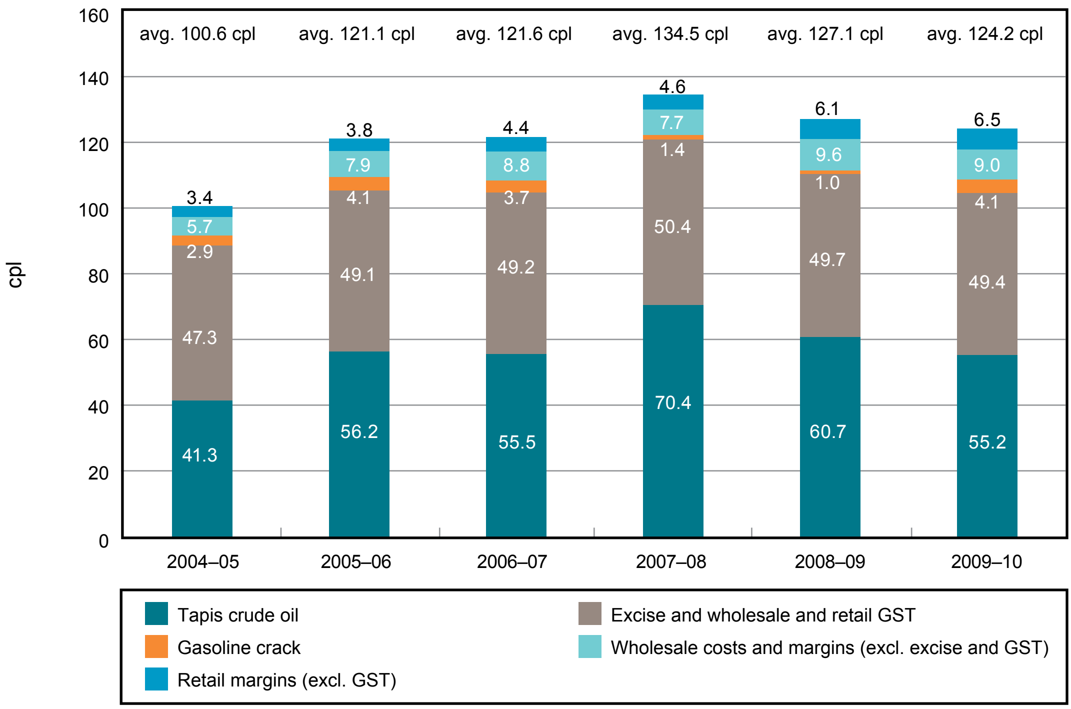
Components of the pump price

Chart 16 shows the major components of the pump price of RULP over the past six years. Movements in the pump price have been overwhelmingly due to changes in the price of crude oil. By contrast, the components relating to excise and GST and costs and margins of the local petrol companies have been relatively stable.

Between 2004–05 and 2009–10, the average pump price of RULP increased by approximately 23.6 cpl. Most of this increase, approximately 13.9 cpl, has flowed back to the suppliers (owners and extractors) of the crude oil. By contrast, the amount flowing back to the local wholesalers and retailers has increased by approximately 6.4 cpl over the same period to cover inflation and increases in freight and other operating costs.

Over 80 per cent of crude oil refined in Australia is imported. These crude oil imports are sourced predominately from countries including Vietnam, Malaysia, Indonesia and the United Arab Emirates. It is the owners of the crude oil in oil exporting countries such as these which have benefited the most from the rise in local petrol prices over the past decade.

Chart 16 Components of retail RULP prices in the five largest cities: 2004–05 to 2009–10



Source: ACCC calculations based on Informed Sources RBA, WA FuelWatch, Platts data and information provided by the monitored companies

Conclusion: prices, costs and profits

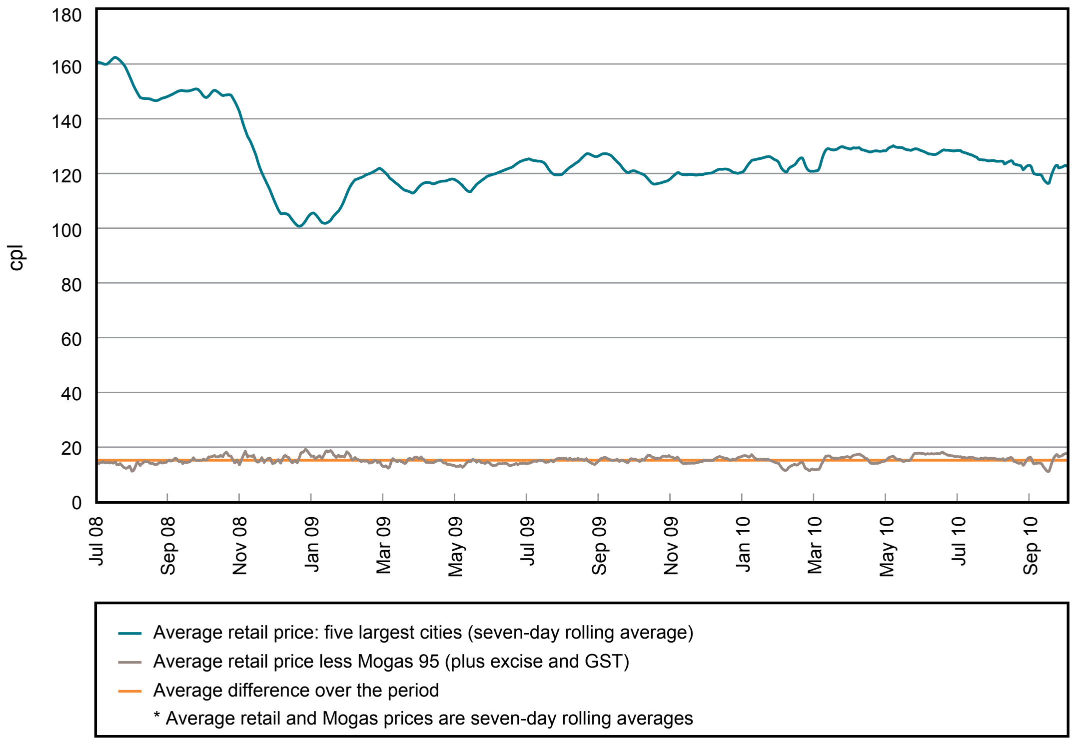
- Overall movements in retail petrol prices have generally reflected movements in Singapore Mogas 95 prices (which in turn have reflected movements in the prices of crude oil).
- On any particular day retail price cycles in the major cities may cause divergences from the international benchmark prices of up to several cents per litre depending on the phase of the weekly retail price cycle.
- Retail petrol prices in Australia remain low compared with other countries in the OECD.
- Average downstream petrol industry profits in Australia do not appear high compared with other industry sectors operating in Australia.
- The underlying driver of retail petrol prices is the cost of crude oil. The owners of the crude oil have received the largest share of revenue from the petrol sold at the bowser. Since 2004-05, the retail price of petrol has increased by approximately 23.6 cpl. Approximately 13.9 cpl of this increase has flowed back to the owners of the crude oil.

Short-term comparisons of prices and margins can be misleading

While retail petrol prices in Australia closely follow international benchmarks, the existence of retail price cycles, local price wars and other factors mean that on a day-to-day basis or even over a few days, retail prices can diverge from their long-term relationship with the benchmark price.

Chart 17 shows average retail petrol prices for the five largest cities (on a seven-day rolling average basis) and the daily difference between those prices and Mogas 95 prices (on a seven-day rolling average basis lagged by 10 days) plus excise and GST.

Chart 17 Average retail prices in the five largest cities and the differential with Mogas 95 (including excise and GST): 1 July 2008 to 30 September 2010



Source: ACCC calculations based on Platts, RBA and Informed Sources data

Chart 17 shows that the differential between Australian retail petrol prices and Mogas 95 prices (including excise and GST) varies from day to day around the longer-term average. The chart also shows that this differential does not explain much of the movement in retail prices.

No significant conclusions can be drawn from the value of the relationship between a price and a benchmark on any particular day or even over a few days. For any meaningful results, comparisons between international benchmarks and local prices should be viewed over longer periods of time.

The need to take a longer-term perspective

The level of retail prices in the larger cities on any particular day will be influenced by the stage in the retail price cycle that the retail market is at on that day. Therefore comparisons of daily prices can be misleading.

For example, the difference in retail prices between a country town and a capital city on a particular day will be smaller or larger depending upon whether the capital city's prices are at a peak or trough in the regular weekly price cycle.

The lags between changes in international benchmark prices and changes in retail prices will also impact on short-term differentials between international and domestic prices. Short term fluctuations in exchange rates can also impact on the Australian dollar value of international benchmarks from day to day.

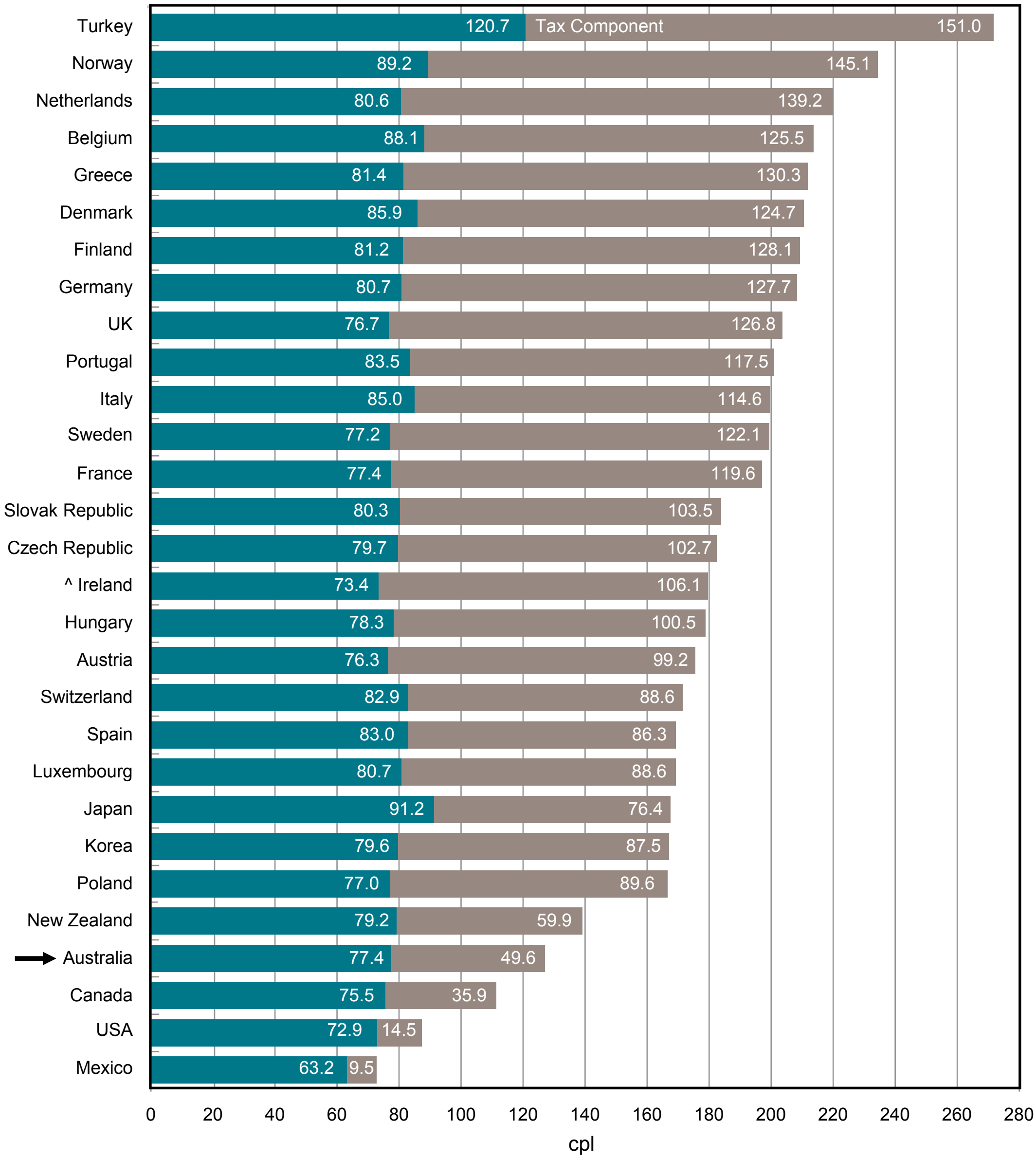
Therefore no significant conclusions regarding relative prices or margins can be drawn from prices observed on any particular day or even taken over a few days. For any meaningful results, comparisons between international benchmarks and local prices–or price differences between cities and towns-should be viewed over longer periods of time.

Petrol prices in Australia compared with prices in other countries

Overall, retail petrol prices in Australia continue to be low compared with other countries in the Organisation for Economic Co-operation and Development (OECD) (see chart 18). In the June 2010 quarter, Australia had the fourth-lowest petrol prices in the OECD.

To a large degree, lower petrol prices in Australia are due to the lower taxation applied to petrol in Australia compared with other OECD countries. If the impact of taxation is removed, the underlying price of petrol in Australia has been around the average of OECD countries.

Chart 18 Petrol prices and taxes in OECD countries: June 2010 quarter



Source: *RET, Australian Petroleum Statistics,* issue 170 (September 2010)

^ previous quarter data

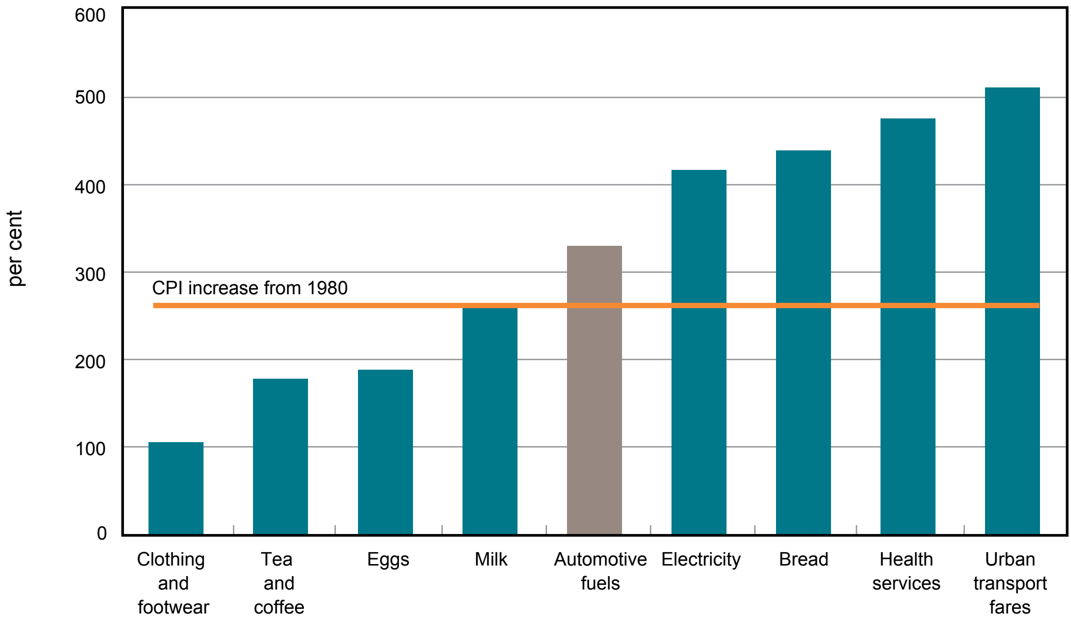
Note: Care must be taken when making international comparisons as fuel quality standards (for example, octane rating and the content of MTBE and sulphur) for the most commonly used form of petrol in each market differ between countries.

Comparison of automotive fuel prices to other goods

Australian petrol, diesel and automotive LPG prices have been volatile in the past few years but over the past 30 years automotive fuel prices have risen less than many other goods, and less than other domestic energy sources such as electricity.

Chart 19 shows the percentage change in the retail price of automotive fuel and other consumer goods since 1980.

Chart 19 Comparative changes in the retail prices of automotive fuels and other consumer items: 1980 to June 2010



Source: Based on ABS data

Note: 'Automotive fuels' includes petrol, diesel fuel, automotive LPG and other gas fuels, oils, lubricants and additives.

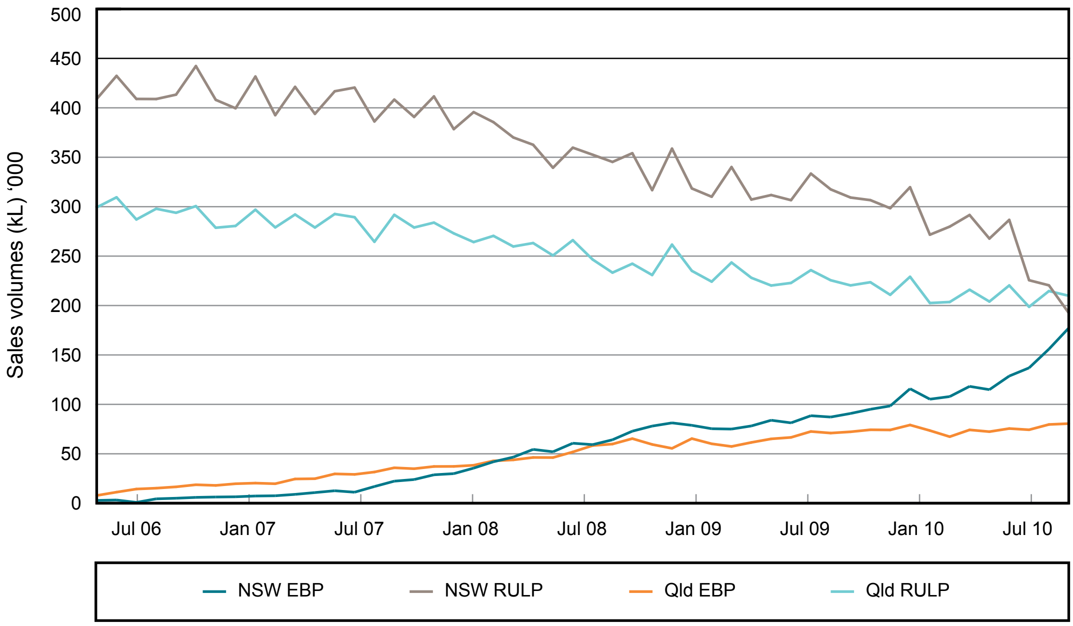
Recent developments in the fuel industry

Substantial increase in sales of E10

During 2009–10 sales of E10 increased substantially, particularly in NSW and Queensland (see chart 20). This increase has primarily been due to the operation of the NSW government ethanol mandate and to an extent anticipation of an ethanol mandate in Queensland.

In past years ethanol blended petrol (EBP) has been more popular in Queensland than the other states.

Chart 20 Monthly sales of EBP and RULP in NSW and Queensland: July 2006 to August 2010



Source: ACCC calculations based on RET *Australian Petroleum Statistics*

NSW government mandate on ethanol

Based on the changes announced on 2 December 2010[7] the NSW government mandate will have the following effects:

- The volume of ethanol sold makes up a minimum of 4 per cent of the total volume of petrol sales from 1 January 2010. As E10 generally consists of 10 per cent ethanol, in effect this means 40 per cent of all petrol sales must be E10.
- From 1 July 2011 the mandate will increase to 6 per cent.
- From 1 July 2012, all RULP sold by 'primary wholesalers' will be replaced with E10. This means that motorists in NSW will effectively be unable to buy RULP. Motorists that can not use E10 will be effectively required to purchase PULP.

7 Hon Tony Kelly MLC, Media Release, Suspension of NSW Ethanol Mandate, 2 December 2010, http://biofuels.nsw.gov.au/ethanol_and_biofuels

The Queensland government had proposed to introduce an ethanol mandate for petrol sold in Queensland by 31 December 2010. The draft bill stated that the volume of ethanol must not be less than 5 per cent of the total volume of RULP and EBP sold in Queensland from 31 December 2010. Plans for the mandate were indefinitely suspended in October 2010.

Some retailers in Queensland have removed RULP from sale at selected sites, possibly in anticipation of the ethanol mandate. As at September 2010, approximately 160 of the 1200 service stations in Queensland (mainly in south-east Queensland) were reported to have already removed RULP from sale.[8]

The operation of the NSW ethanol mandate will have some significant impacts on consumers:

- Mandates will reduce the availability of RULP (which from July 2012 will effectively be removed as a choice for consumers in NSW and most likely the ACT).
- Motorists who cannot use E10 (or choose not to) may be forced to use PULP, which is significantly more expensive than RULP.
- Even though the scaling up of the NSW ethanol mandate has been delayed, current domestic production capacity may not be sufficient to meet demand under the mandate and there is potential for shortages of ethanol and E10.
- The tax treatment of imports of fuel ethanol makes imports unlikely to be able to provide competitive pressure on Australian prices in the short to medium term.
- The move to PULP by some consumers could lead to a shortage of PULP throughout Australia.
- There is potential for the price of E10 and PULP to increase relative to RULP.

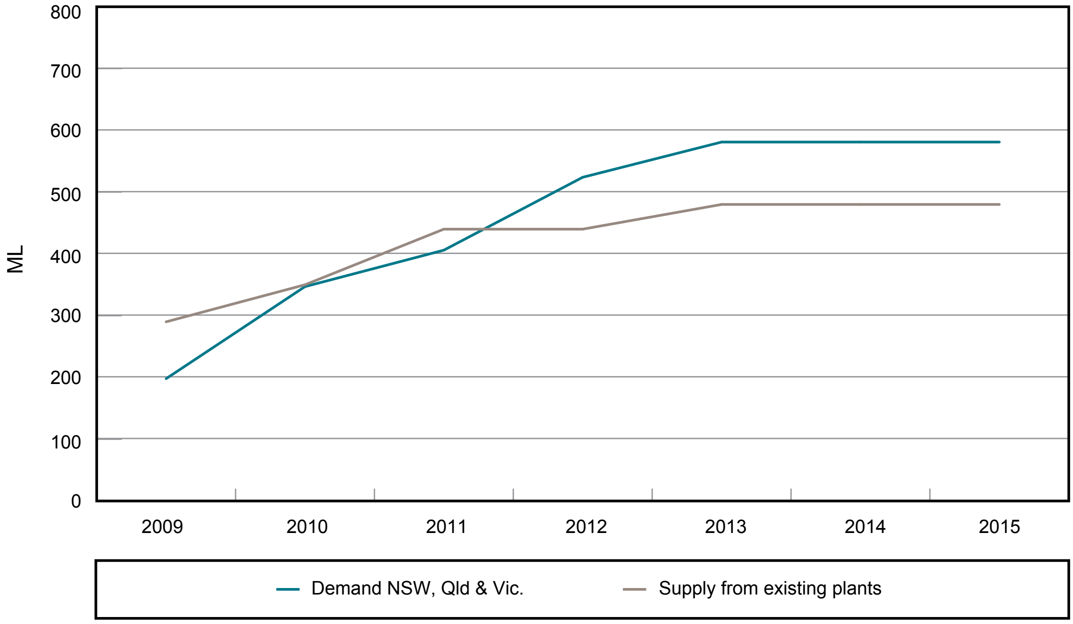
Chart 21 shows an estimate of mandated demand from NSW (presuming NSW consumers switch from RULP to E10 rather than more expensive PULP) and assuming E10 demand from Queensland and Victoria remaining at 2009-10 levels.[9]

Although some new ethanol plants are proposed for 2013 and 2014, given the current suspension of the Queensland mandate and the delay in the full implementation of the NSW mandate and other uncertainties it is unclear if these will go ahead. Therefore Chart 21 does not take supply from proposed new plants into account.

8 Informed Sources

9 Potential growth in ethanol demand from Queensland and Victoria as well as demand for higher blends of EBP such as E85 is not taken into account in this chart. This chart does not include demand from South Australia and Tasmania as RET does not report EBP sales from these states. Because of this and because RET does not report the bulk of sales from independent retailers, shortages could potentially be greater than estimated here. The potential shortage of ethanol will be reduced to the extent that, when RULP is effectively prohibited in NSW, motorists will switch to more expensive PULP rather than E10.

Chart 21 Current and estimated mandated ethanol demand in NSW and sales demand from QLD and Vic. and Australian ethanol production capacity (supply): 2009 to 2015



Sources: ACCC analysis based on *RET Australian Petroleum Statistics* (APS) (various issues), APAC *Australian Biofuels 2010 – 11 data*

Note: Estimates based on 2009–10 petrol sales reported to RET (APS). Data for 2009 is based on actual sales reported to RET in all states. 2010 data is based on actual sales reported to RET in Victoria and Queensland to August 2010; average monthly sales to August 2010 are used as an estimate for the remaining four months. 2010 data for NSW is an estimate based on total petrol sales reported to RET for 2009–10 and a 4 per cent ethanol mandate. The first half of 2011 is an estimate based on 2009–10 total petrol sales and a 4 per cent mandate. The second half of 2011 and the first half of 2012 are estimated based on 2009–10 total petrol sales and a 6 per cent mandate. Estimated mandated volumes in NSW from July 2012 are based on the assumption that demand for RULP is transferred to EBP when RULP is effectively prohibited (and is estimated from 2009–10 sales). In practice it is likely that some RULP users will switch to more expensive PULP rather than use E10. Sales in Victoria and Queensland are assumed to be constant from 2009–10. Supply from existing plants assumes all existing plants produce at their maximum projected production capacity as reported by APAC. It is possible that exemptions will be granted by the NSW government so that retailers will not have to meet their full legislated requirements if there is a shortage of ethanol.

Even if the Queensland mandate is indefinitely suspended and taking account of the recently announced delays in scaling up of the NSW mandate, in the short to medium term there are still concerns over the supply of ethanol.

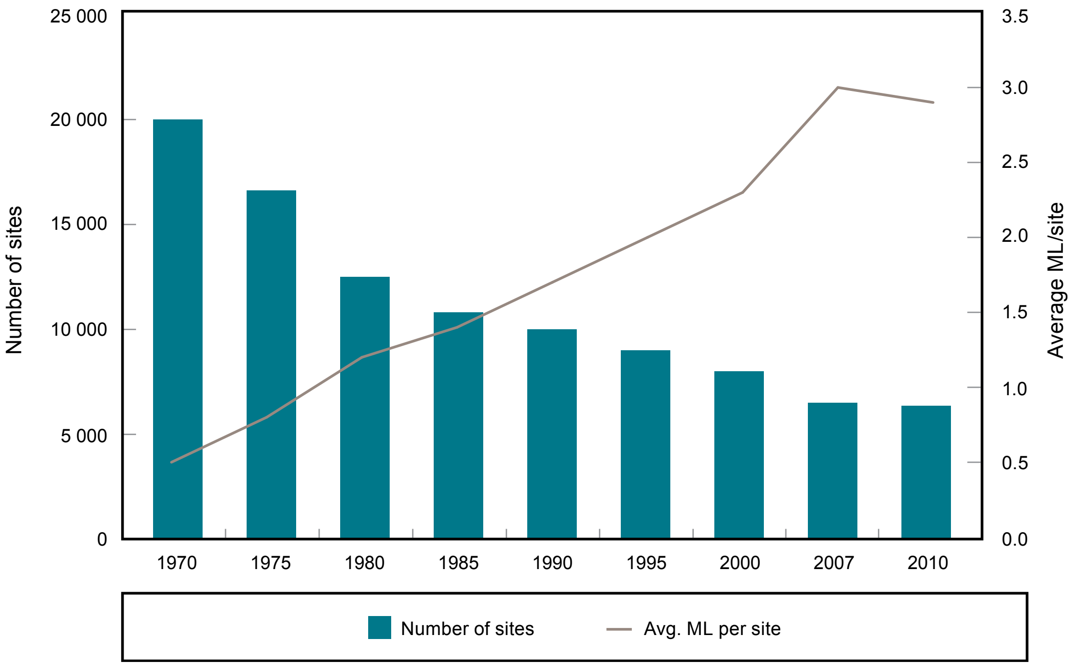
Given the potential supply and price issues relating to ethanol mandates, the ACCC intends to closely monitor the ethanol blended petrol market in the coming year.

Changes in market structure

Consolidation of service station sites

The number of petrol retail sites has been consolidating since at least 1970. This reduction combined with higher total fuel sales has led to an increase in average sales volumes per site (see chart 22).

Chart 22 Number of retail sites and average annual petrol sales volume per site: 1970 to 2010



Source: ACCC estimates based on reports of Royal Commission on Petroleum (1976), PSA (1990) and ACCC (1996 and 2007), combined with data from RET, the Bureau of Infrastructure, Transport and Regional Economics and Informed Sources

In recent years the retail market share of the refiner-marketers has declined, with Shell and Mobil now effectively out of petrol retailing. Specialist retailers such as 7-Eleven, independent chains such as Peregrine Corporation (which owns the On The Run chain), Neumann Petroleum, United and the supermarkets have been increasing their involvement in fuel retailing.

Sale of Mobil's service stations

On 27 May 2010 Mobil announced the sale of its retail assets to 7-Eleven. In addition, it was announced that Peregrine proposed to acquire from 7-Eleven those former Mobil service stations that were located in South Australia.

The ACCC commenced a public review of each acquisition on 27 May 2010.

On 22 July 2010 the ACCC decided not to oppose the sale of Mobil's retail assets to 7-Eleven and the on-sale of the South Australian assets to Peregrine Corporation, conditional on receiving undertakings from each acquirer to divest certain retail sites.

On 1 October 2010 the ACCC accepted a section 87B undertaking from 7-Eleven for the divestiture of three retail petrol sites in (Mount Druitt in NSW and Ashmore and Riverhills in Queensland) to purchasers approved by the ACCC. On the same date, the ACCC also accepted a section 87B undertaking from Peregrine for the divestiture of one retail petrol site at either Noarlunga Downs or Christies Beach to a purchaser approved by the ACCC.

Sale of Gull's Fremantle terminal

On 10 March 2010 the ACCC commenced reviewing Coogee Chemicals' proposal to acquire Gull Petroleum's storage facilities at Kwinana south of Perth.

Coogee operates a chemical terminal on a site adjacent to the Gull terminals. Coogee and Gull advised the ACCC that the acquisition would enable Coogee to better coordinate the operation of the two sites, leading to more efficient operations.

The ACCC conducted public market inquiries and completed its review of the acquisition on 23 March 2010. The ACCC concluded that the proposed acquisition was unlikely to substantially lessen competition in the relevant markets.

Gull continues to have access to the terminal on a user-pays basis and continues to operate its retail service station network. Coogee advised the ACCC that it intended to offer hosting services to other fuel suppliers in Western Australia on a commingled basis.

BP purchase of Reliance Petroleum

On 24 August 2010 BP informed the ACCC of its intention to acquire all of the shares in its branded distributor Reliance Petroleum.

The ACCC commenced a public review of the proposed acquisition on 25 August 2010, and subsequently published a statement of issues outlining certain issues which may have raised competition concerns.

On 17 November 2010 the ACCC announced that it would not oppose the acquisition, concluding that the proposed acquisition was unlikely to substantially lessen competition in the relevant markets.

Increase in independent imports

During the past two years the amount of petrol imported by independent operators more than doubled. In large part, this increase has been due to an expansion of Neumann's importing activities.

The increase in independent imports of petrol has taken place in the context of a longer term increase in the amount of refined petrol imported into Australia. In the past two years, independent imports of unleaded petrol have increased from less than 5 per cent to over 10 per cent of total unleaded petrol imported into Australia. This year, the ACCC has considered in depth issues relating to the importing of refined petroleum products. This is reported in chapter 5.

Role of the ACCC

Well regulated and competitive markets generally provide consumers with the lowest sustainable prices and prevent excessive profits. This is as true for petrol as it is for most other products.

Petrol prices in Australia are set by market forces. The ACCC has no role in setting petrol prices.

The ACCC has two broad roles in relation to the petrol industry:

1. The ACCC monitors the prices, costs and profits relating to the supply of unleaded petroleum products in the petroleum industry

In December 2007, the Minister for Competition Policy and Consumer Affairs directed the ACCC to undertake monitoring for three years to the end of 2010. In May 2010, the Minister subsequently extended the direction for one further year to the end of 2011. In December each year, the ACCC provides the Minister with a report on its monitoring activities. This is the third report.

The ACCC collects fuel prices in each capital city and 150 regional centres and country towns. The ACCC reviews these prices and compares them with the relevant international benchmarks. Each year, the ACCC also obtains cost and profit information from the petrol companies. The ACCC uses this information to compare Australian prices, costs and profits against international benchmarks. The Minister has also asked the ACCC to informally monitor the prices of diesel and automotive LPG.

If ACCC analysis indicates there are factors impairing competition in fuel markets, it can alert the government and community to the problem.

2. The ACCC enforces competition and consumer protection laws across Australia

The ACCC is an independent statutory authority that administers the *Trade Practices Act 1974* (the Act) and other laws. On 1 January 2011 the *Competition and Consumer Act (2010)* will come into operation replacing the Act. The purpose of the Act is to enhance the welfare of Australians through the promotion of competition and fair trading and provision for consumer protection. These laws apply to all industry sectors, including the fuel industry. The most relevant work of the ACCC in the fuel industry relates to its role in enforcement of the Act, assessing mergers and acquisitions and adjudications.

Enforcement

The ACCC has enforcement powers, functions and strategies to achieve compliance with the Act. The ACCC investigates complaints and can take action when sufficient evidence exists that a business has misled consumers or behaved in an anti-competitive way. The Act provides the ACCC with a range of enforcement remedies, including court-based outcomes and court enforceable undertakings. The ACCC resolves many matters administratively, applying the enforcement response which is proportionate to the conduct and resulting harm. The ACCC's approach is set out in its Compliance and Enforcement Policy.

The ACCC also encourages compliance with the Act by educating and informing consumers and businesses about their rights and responsibilities.

Mergers and acquisitions

The ACCC has powers under section 50 of the Act to stop mergers and acquisitions of shares and assets in any industry that have the effect, or would be likely to have the effect, of substantially lessening competition in a market. The ACCC's decision in December 2009 to oppose the proposed acquisition of Mobil Oil Australia's retail assets by Caltex Australia Ltd is an example of the ACCC's work in this area.

Adjudication

In certain circumstances, businesses may obtain immunity from legal action under specific parts of the Act if it is in the public interest. By lodging a valid notification parties may engage in collective bargaining or exclusive dealing which would otherwise be likely to contravene the Act, so long as the ACCC does not object. If the relevant test is met the ACCC may authorise such conduct that may otherwise breach the Act. The ACCC will only permit businesses to engage in such conduct when it is satisfied that the public benefit outweighs any public detriment.

This report outlines the ACCC's activities and findings in relation to its monitoring role, its enforcement of the Act, and mergers and acquisitions and adjudications in the fuel industry.

Compliance with the Trade Practices Act

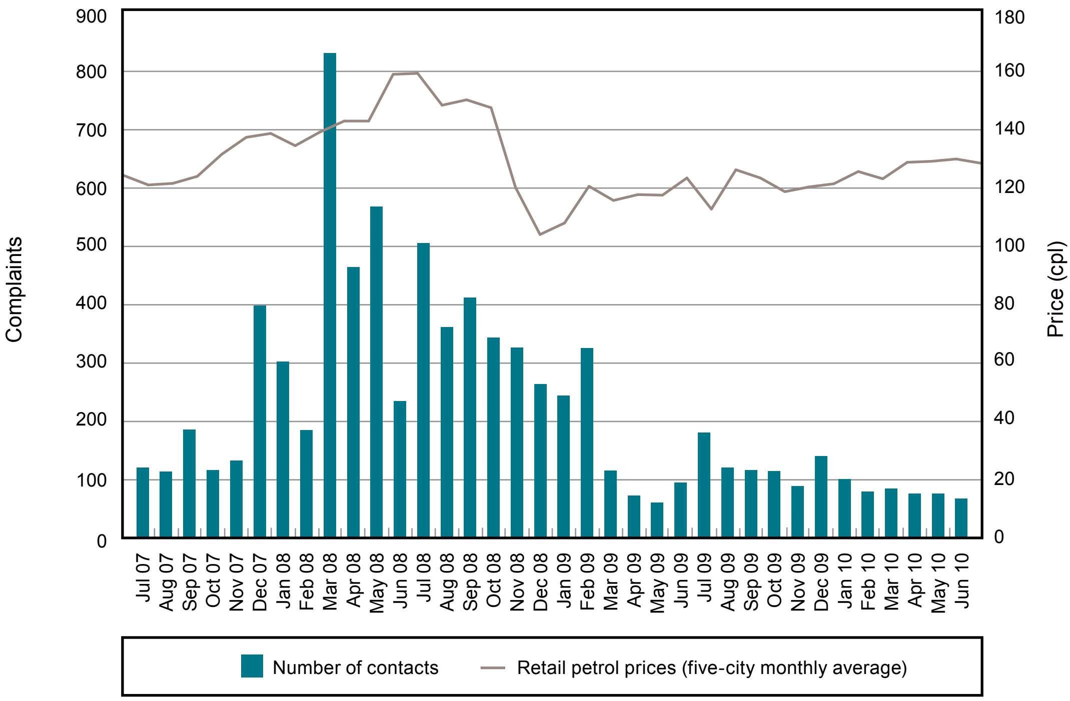
When the ACCC receives information that suggests a breach of the Act may have occurred, it investigates and gathers further information by making targeted inquiries. After making inquiries, if the information available to the ACCC shows that a breach of the Act is likely to have occurred, it investigates the issue in depth and may take legal action to enforce the Act.

The ACCC received fewer complaints and inquiries about the petrol industry in 2009-10 compared with previous years. In 2009–10, the ACCC received about 1250 complaints and inquiries regarding the fuel industry. This compares with around 3000 complaints and inquiries in 2008-09.

These contacts came from every state and territory but were broadly in proportion with the population of each state. The number of complaints increased sharply when petrol prices increased sharply in 2008, and has declined since (see chart 23).

A large proportion (42 per cent) of these complaints and inquiries were in relation to high prices. The ACCC has reviewed the complaints about high prices to identify common issues and has examined these issues in the context of its monitoring work.

Chart 23 Fuel issues contacts received by the ACCC by month and average petrol prices in the five largest cities: July 2007 – June 2010



Source: ACCC and Informed Sources data.

ACCC review of conduct that may breach the Trade Practices Act

The ACCC takes potential breaches of the Act seriously. Over the course of 2009–10 it has undertaken a number of investigations of conduct to determine whether the conduct might breach the Act.

Misleading conduct and false representations

Most of the complaints the ACCC received in 2009–10 about conduct that could potentially breach the Act related to misleading and deceptive conduct and false or misleading representations. Under the Act, conduct may be in breach where it is likely to or has the effect of misleading consumers. Such conduct may include lying to consumers, leading them to a wrong conclusion, creating a false impression or making false or inaccurate claims.

The main concerns raised by consumers included pricing practices (particularly price boards), labelling on fuel pumps, advertising promotions (such as discount schemes), fuel quality claims and inaccurate fuel measurements. The ACCC was able to achieve compliance outcomes in a number of the matters during 2009–10.

Business-to-business dealings

The ACCC also received a number of contacts alleging conduct such as price fixing, predatory pricing, certain types of exclusive dealing and general anti-competitive agreements that may substantially lessen competition. While most of these matters were addressed directly with the complainants, over the 2009–10 financial year the ACCC identified around 25 matters for further inquiry or assessment, which led to a number of matters being investigated. To date, no allegations of this nature have been substantiated although some investigations were continuing in late 2010.

The ACCC also examined three fuel related public merger matters in 2009–10. In December 2009 the ACCC opposed the proposed acquisition of Mobil Oil Australia's retail assets by Caltex Australia Limited. The ACCC's decision to oppose was based on the likely effect of the proposed acquisition on local market competition for the supply of petrol, diesel and automotive LPG, as well as broader concerns about the effect of the acquisition on the stability and effectiveness of coordination between the major fuel retailers in determining petrol prices.

The ACCC examined the sale of Mobil's retail assets to 7-Eleven and the on-sale of the South Australian assets to Peregrine Corporation. The ACCC announced on 22 July 2010 that, conditional on receiving undertakings from each acquirer to divest certain assets that raised local competition concerns, it did not propose to intervene. These conditions were met and the sale went ahead.

Improving business practices

In October 2009 the ACCC wrote to the major petrol companies and industry associations about complaints regarding some practices which were causing concern for consumers. The ACCC asked the petrol companies to review their business practices and take corrective action where necessary. The ACCC has continued to monitor these issues closely during 2010. The issues the ACCC raised in its letter included:

- labelling of fuel containing ethanol
- businesses' obligations not to engage in collusive conduct such as price fixing
- discrepancies between advertised board prices and prices displayed at the fuel pump
- fuel quality
- advertising and labelling.

Conclusion: Level of compliance with the Act

Over 2009–10 the ACCC received around 1250 complaints about the petrol industry. The majority of these complaints related simply to the fact that market prices were high rather than allegations of a breach of the Act. The ACCC undertook a number of investigations into conduct that may breach the Act. To date none of these investigations have produced sufficient evidence to warrant legal action.

The ACCC will continue to monitor the operation of the industry and will take action, including through the courts, where necessary to enforce the Act.

1 Background and objectives

1.1 Role of the ACCC in the petrol industry

The price of petrol and other automotive fuels, like most products in the Australian economy, are determined by market forces. The Australian Competition and Consumer Commission (ACCC) has no role in setting these prices.

The ACCC's current roles in relation to the petrol industry can be broadly classified into two main categories:

- Monitoring: The ACCC monitors the prices, costs and profits of unleaded petroleum products, including regular unleaded petrol (RULP), premium unleaded petrol (PULP) and ethanol blended petrol (EBP), as well as the prices of diesel and automotive Liquefied Petroleum Gas (LPG). The ACCC's petrol monitoring activities include a formal monitoring program and the preparation of an annual report about the Australian petrol industry following a direction given by the Minister for Competition Policy and Consumer Affairs in December 2007.
- Enforcement: The ACCC enforces competition and consumer protection laws across Australia. It enforces the law in the petrol industry as it does in all sectors of the Australian economy.

The remainder of this chapter details the minister's direction, the processes regarding the preparation of the annual monitoring report and the structure of the report. A full account of the ACCC's activities in relation to the petroleum industry over 2009–10 is set out in chapter 2.

1.2 The monitoring report

The ACCC's first formal monitoring report in this series was provided to the minister in December 2008 (the 2008 ACCC petrol monitoring report) and the second in December 2009 (the 2009 ACCC petrol monitoring report). This is the third report.

1.2.1 The minister's direction

On 17 December 2007 the Assistant Treasurer and Minister for Competition Policy and Consumer Affairs, the Hon. Chris Bowen MP, directed the ACCC to monitor the prices, costs and profits of unleaded petrol in Australia. The minister made this direction after receiving *Petrol prices and Australian consumers: Report of the ACCC inquiry into the price of unleaded petrol* (the 2007 ACCC petrol inquiry report) in December 2007. The minister directed the ACCC to undertake monitoring for three years to the end of 2010. The ACCC must report to the minister on its findings by 17 December each year.

A copy of the letter and direction is attached at appendix A.

In February 2008, the minister asked the ACCC to increase its focus on diesel and automotive LPG prices.

In May 2010, the Minister for Competition Policy and Consumer Affairs, the Hon. Craig Emerson MP, extended the direction to monitor the unleaded petroleum industry for one year to the end of 2011.

1.2.2 Objectives of the monitoring report

The ACCC's objectives for the petrol monitoring program are derived from the minister's letter and direction, and include:

- providing information to the community on the operation of the petrol industry
- describing and analysing trends in prices, costs and profits as directed by the minister
- focusing on sectors of the industry where the 2007 ACCC petrol inquiry report had identified competition to be less than fully effective.

For a detailed overview of the industry and key issues see the ACCC 2007 petrol inquiry report and subsequent formal monitoring reports.

1.2.3 Other statutory considerations

The ACCC has been directed by the minister to monitor the prices, costs and profits of unleaded petrol pursuant to the provisions of Part VIIA of the *Trade Practices Act 1974* (the Act). On 1 January 2011 the *Competition and Consumer Act (2010)* will come into operation, replacing the Act. The ACCC's functions under this Part include:

- holding price inquiries
- examining proposed price rises for goods and services that have been declared by the minister
- monitoring the prices, costs and profits of an industry or business that the minister directs it to monitor, and reporting the results to the minister and making them publicly available.

Part VIIA of the Act also enables the ACCC to compel the provision of information and documents (section 95ZK) where appropriate.

Under subsection 95G(7) of the Act, the ACCC is required to have 'particular regard' to the following matters when performing its price monitoring function:

a) The need to maintain investment and employment, including the influence of profitability on investment and employment.

b) The need to discourage a person who is in a position to substantially influence a market for goods or services from taking advantage of that power in setting prices.

c) The need to discourage cost increases arising from increases in wages and changes in conditions of employment inconsistent with principles established by relevant industrial tribunals.

The ACCC has had regard to these matters in carrying out its formal petrol monitoring functions. The ACCC considers that the matters in subsection 95G(7) will generally be met by economically efficient prices that reflect:

- an efficient cost base
- a reasonable rate of return on capital.[1]

1 See ACCC, *Statement of regulatory approach to assessing price notifications*, June 2009, pp. 12–13 for guidance on the ACCC's approach having regard to the matters in s. 95G(7).

The ACCC considers that, in general, the matters in subsection 95G(7)(a) are satisfied where a reasonable rate of return on capital is included in prices for goods and services in a monitored industry. This provides incentives for firms to maintain profitable investment. At the same time, in accordance with paragraph 95G(7)(b), firms in a monitored industry that may have substantial influence in a market for relevant goods and services are discouraged from charging prices based on profits above a reasonable rate of return. The ACCC considers subsection 95G(7)(c) less relevant to its petrol monitoring role following changes to industrial relations legislation in 1996 that led to a movement away from centralised wage fixing to agreements negotiated at the enterprise level. The object of the *Workplace Relations Act 1996* was to give 'primary responsibility for industrial relations and agreement making to employers and employees at the enterprise and workplace levels'.[2]

1.2.4 Scope of the report

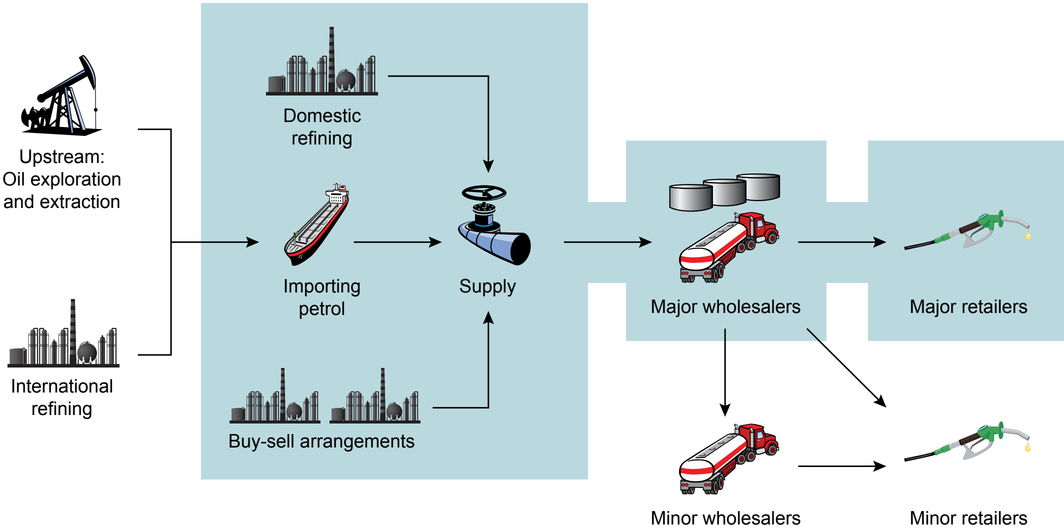
This monitoring report follows a similar framework to that adopted in the 2008 and 2009 ACCC petrol monitoring reports, and in addition:

- describes in detail and assesses the implications of developments in the market for biofuels
- considers the demand and supply characteristics of the market for PULP, including wholesale and retail prices
- analyses trends in the industry
- presents further details of the international context for prices in the petrol industry
- describes issues and challenges faced by independent wholesalers and resellers in importing fuel into Australia.

Accordingly, the scope for the monitoring report in 2010 again covers the three major segments of the Australian petrol industry: refining and importing, wholesaling and retailing. These are illustrated in figure 1.1.

2 Commonwealth Department of Industrial Relations, *Changes in federal workplace relations law: Legislation guide*, December 1996, p. 1.

Figure 1 Scope of the 2010 formal monitoring report



The monitoring program focuses firmly on the Australian downstream industries and so does not extend to the crude oil exploration and extraction segment. The monitoring report, however, again provides an account of the major international influences on the domestic market.

1.3 Data requirements

1.3.1 Data collection process

The ACCC has requested information from the major industry participants: the four refiner-marketers, the leading independent wholesalers and the major retailers. The following companies have provided information for the 2010 ACCC petrol monitoring report:

- refiner-marketers: Mobil, Shell, BP and Caltex
- supermarket chains: Coles Express and Woolworths
- independent wholesalers: Liberty, United, Gull and Neumann
- large retail chains: Gull, United, 7-Eleven, Quix[3] and Neumann.

The ACCC also obtained information on retail petrol prices from Informed Sources.

The ACCC wishes to thank the companies for the information they provided for this report.

This report focuses on unleaded petrol products (that is, regular and premium unleaded, and ethanol blended products). However, in order to provide broader industry context, data has also been collected on other petroleum products, mainly diesel and automotive LPG. In part, this approach has been necessary because of the fact that the industry does not produce unleaded petrol products in isolation from other fuels and petroleum products.

3 Quix is the trading name of sites owned by Strasburger Enterprises (Properties) Pty Ltd (SEP), which operates retail sites under the Mobil brand. Retail data for these sites was collected from SEP. In May 2010, Mobil announced the sale of these sites to 7-Eleven and Peregrine Corporation, owner of the On the Run retail chain.

Often, production processes and staff are employed to produce a suite of products. To estimate the level of profits associated with the supply of petrol, it is necessary to allocate common costs across the various products. This can only be done if information has been collected on the range of products.

The data collection process employed for the 2010 ACCC petrol monitoring report is similar to the process employed for the 2009 ACCC petrol monitoring report. Early in 2010 the ACCC met with representatives from all major industry participants to discuss data requirements and monitoring processes for 2010. Some data templates for 2010 were modified as a result of previous experience.

Templates were provided to the refiner-marketers, independent wholesalers and importers and retailers in March, April and May 2010 to obtain wholesale, import and retail transaction data, pricing benchmark data and financial data. In addition, templates were sent to terminal owners and operators to obtain information on the operation of import terminals.

1.3.2 Challenges with the data

In 2010 the ACCC faced a number of challenges during its process of collecting information from industry stakeholders. These are outlined below.

1.3.2.1 Consistency with industry accounts

As was noted in the 2009 ACCC petrol monitoring report, the analysis of data provided for the downstream petrol industry is complicated by the fact that individual companies use a variety of organisational structures and employ different accounting systems and methodologies to deal with complex cost and revenue measurement issues.

While mindful of the potential cost to companies of complying with data requests that may be inconsistent with their accounting and reporting systems, in 2010 the ACCC has again endeavoured to standardise data collection as much as possible to facilitate data analysis.

That said, caution is required when examining and interpreting the data presented in this report. First, operational and accounting differences across companies complicate comparisons of financial performance. Second, in estimating the profitability of different products produced by refiner-marketers, it has been necessary for the ACCC to make allocations as the refiner-marketers do not usually measure revenues, costs and profits on a product-by-product basis. As was noted in last year's monitoring report, refineries jointly produce a mix of products, and there is no economically meaningful way of allocating joint and common costs to individual product types.

Third, the extent of coverage of the industry is not uniform across all sectors. Data on refining has been obtained from all four refiner-marketers. However, owing to the large number of small operators present in the wholesale and retail sectors, data on these sectors was obtained from the refiner-marketers, Liberty, United, Neumann, Gull, 7Eleven, Quix, Coles Express and Woolworths. Data was not obtained from small independent wholesalers and other independent retailers. However, average retail prices for some of the smaller operators were available from Informed Sources. In addition, the ACCC was able to measure the volumes of fuel sold by smaller operators from wholesale information provided by refiner-marketers.

Finally, it must be noted that much of the financial information has been provided to the ACCC confidentially. As such, the analysis of costs, revenues and profits is presented in this report at an aggregate rather than a company level.

13.2.2 Time series and base data

As far as possible, the ACCC requested data in 2010 on the same basis as 2009 in order to continue the time series established in previous formal monitoring reports and in the 2007 petrol inquiry. The ACCC considers that data on prices, revenues, costs and profits is required over a number of years in order to adequately respond to the direction by the minister.

1.4 Previous ACCC involvement in the petrol industry

The ACCC and its precursor agencies, the Trade Practices Commission and the Prices Surveillance Authority, have had a long involvement in the petroleum industry. This includes prices surveillance, public inquiries, informal price monitoring, education and enforcement of the Act.

Before 1 August 1998, the ACCC established maximum wholesale prices for petrol, including freight differentials, under the *Prices Surveillance Act 1983*. The Australian Government deregulated petrol prices from 1 August 1998. In making this decision, the government considered that the maximum endorsed wholesale price in the capital cities acted as a target for prices at the end of a discount cycle, while in the country the maximum endorsed wholesale price acted as a price floor underwriting the price paid by country consumers.

1.4.1 The 2007 ACCC petrol inquiry

In response to a proposal from the ACCC for a public inquiry into petrol prices, on 15 June 2007, the former Treasurer, the Hon. Peter Costello MP, approved the holding of a price inquiry into the price of RULP pursuant to subsection 95H(2) of the Act. The petrol price inquiry reported in December 2007.

The petrol inquiry report highlighted fundamental structural issues that raised concerns about current operations and future competitiveness of the Australian petrol industry.

The ACCC made a number of key findings and recommendations to the Treasurer. On 15 April 2008, the Australian Government responded to the recommendations and issues raised in the 2007 petrol inquiry report.

A summary of the major findings and recommendations of the 2007 ACCC petrol inquiry report, and the government's response, was presented in last year's petrol monitoring report.[4]

4 ACCC, *Monitoring of the Australian petroleum industry,* December 2009, p. 6.

1.5 Report structure

The structure of this year's monitoring report is largely based on Australia's petrol industry structure and the various elements of the industry highlighted in the minister's direction.

The report is structured as follows:

Chapter 2 outlines the ACCC's petrol-related activities in 2009–10

Chapter 3 outlines the industry structure and latest industry developments

Chapter 4 discusses the international context for Australia's petrol industry

Chapter 5 discusses various issues faced by importers and potential independent importers of fuel into Australia

Chapter 6 details the production, sale and use of biofuels in Australia

Chapter 7 discusses premium grades of petrol and the trends in its use

Chapter 8 outlines pricing in the wholesale sector

Chapter 9 outlines pricing in the retail sector

Chapter 10 focuses on retail pricing in regional areas of Australia

Chapter 11 presents an analysis of pertinent retail pricing issues for 2009–10

Chapter 12 details the revenue, costs and profits in the downstream petroleum industry

Chapter 13 details the revenue, costs and profits in the refining and supply sectors

Chapter 14 details the revenue, costs and profits in the wholesale and retail sectors

Chapter 15 describes broad trends in Australia's petrol industry.

2 ACCC activities related to the petroleum industry

Key points:

- In 2009–10, the ACCC reviewed in detail issues including petrol price cycles, biofuels and complaints about fuel prices in regional areas.
- The ACCC considered around 1250 complaints and inquiries about fuel issues in 2009–10 and compliance outcomes were achieved in a number of instances. The most common issues raised by consumers were high prices, allegations of anti-competitive conduct and allegations of misleading and deceptive conduct.
- The ACCC actively engaged with stakeholders to identify opportunities to improve compliance with the Act and held two Fuel Consultative Committee meetings in 2010.
- The ACCC sought to improve consumer understanding about fuel issues by distributing fact sheets and other publications, reviewing its website and providing informed comment to media.

This chapter outlines the ACCC's activities in relation to the petroleum industry over 2009–10. The first part of the chapter covers the ACCC's petrol monitoring activities. The second part covers the ACCC's work relating to the industry under the Act.

2.1 Monitoring

2.1.1 Monitoring report

This report builds on the work of the 2007 petrol inquiry report and the 2008 and 2009 ACCC petrol monitoring reports. It provides a comprehensive overview of the prices, costs and profits of the industry. Given consumer and legislative trends there is a particular focus on biofuels including ethanol blended petrol (EBP), and premium grades of petrol.

2.1.2 Price monitoring

The ACCC's monitoring of the prices, costs and profits of the supply of petrol is informed by the collection of extensive fuel price data. The information collected by the ACCC includes:

- retail prices of petrol, diesel and automotive liquefied petroleum gas (LPG) in the capital cities and around 150 regional centres and country towns
- international crude oil and refined fuel prices
- data on over three and a half million wholesale transactions related to petrol
- published terminal gate prices (TGPs) of the oil companies and some independent wholesalers.

ACCC monitoring of retail petrol prices includes the collection of:

- premium unleaded petrol (PULP) 95/96 and PULP 98 prices in all capital cities and available regional centres and country towns
- E10 petrol prices in about 50 locations across Australia, that is, regular unleaded petrol with up to 10 per cent ethanol.

Over the course of 2010 the ACCC reviewed specific fuel issues including those discussed below.

2.1.3 Price cycles

In the past the ACCC has expressed concern that retail prices in the larger cities have tended to move in regular weekly cycles.[5] In 2009–10, there was evidence of changes in the pattern of price cycles, particularly in the days of the week in which price peaks and troughs occur, and also in the greater incidence of failed and truncated cycles. Nevertheless, the majority of price cycles in 2009–10 continued to exhibit a high degree of regularity. The ACCC remains concerned about the level of coordinated conduct that may be affecting these price cycles. The operation of price cycles is examined in more detail in chapter 11.

2.1.4 Biofuels

Biofuels (particularly EBP and biodiesel) are becoming increasingly important in Australia. The New South Wales (NSW) Government introduced an ethanol mandate in 2007. The mandate currently requires 4 per cent of total petrol sold in NSW to contain ethanol. From 1 July 2012, all RULP sold by 'primary wholesalers' will have to be E10. Effectively this means that RULP will be unavailable in NSW (and in the ACT) from that time and that it will be replaced with E10. The Queensland Government was also considering introducing an ethanol mandate in 2011 but has suspended its planned mandate. The NSW mandate also incorporates biodiesel, and currently requires that biodiesel make up 2 per cent of all diesel sold in NSW. In view of these developments, the ACCC has given additional attention to the supply and price of biofuels. The emergence of biofuels is examined in chapter 6 and the retail price of E10 is examined in more detail in chapter 9 and appendix D.

2.1.5 Regional strategy

The ACCC regularly considers allegations of anti-competitive conduct in regional areas raised by members of the public, motoring bodies and industry groups. If warranted by the information provided in support of the allegation, the ACCC undertakes further analysis of fuel prices in the region.

When there is information that suggests a breach of the Act may have occurred in a regional area, the ACCC investigates and gathers further information by making targeted inquiries. After making inquiries, if the information available to the ACCC shows that a breach of the Act is likely to have occurred, it investigates the issue in depth and may take legal action to enforce the Act.

5 See ACCC, *Monitoring of the Australian petroleum industry*, December 2009, p. xxiii.

2.2 Fuel industry and the Trade Practices Act

One of the major areas of concern to consumers is the level of competition in local or national fuel markets. Where there is evidence of anti-competitive conduct, these issues are dealt with through enforcement of the Act.

The ACCC is responsible for enforcing the Act across the Australian economy, which includes the fuel industry. The ACCC's roles in relation to the fuel industry include enforcement and compliance, mergers and acquisitions, authorisations and notifications, and administration of the Oilcode.

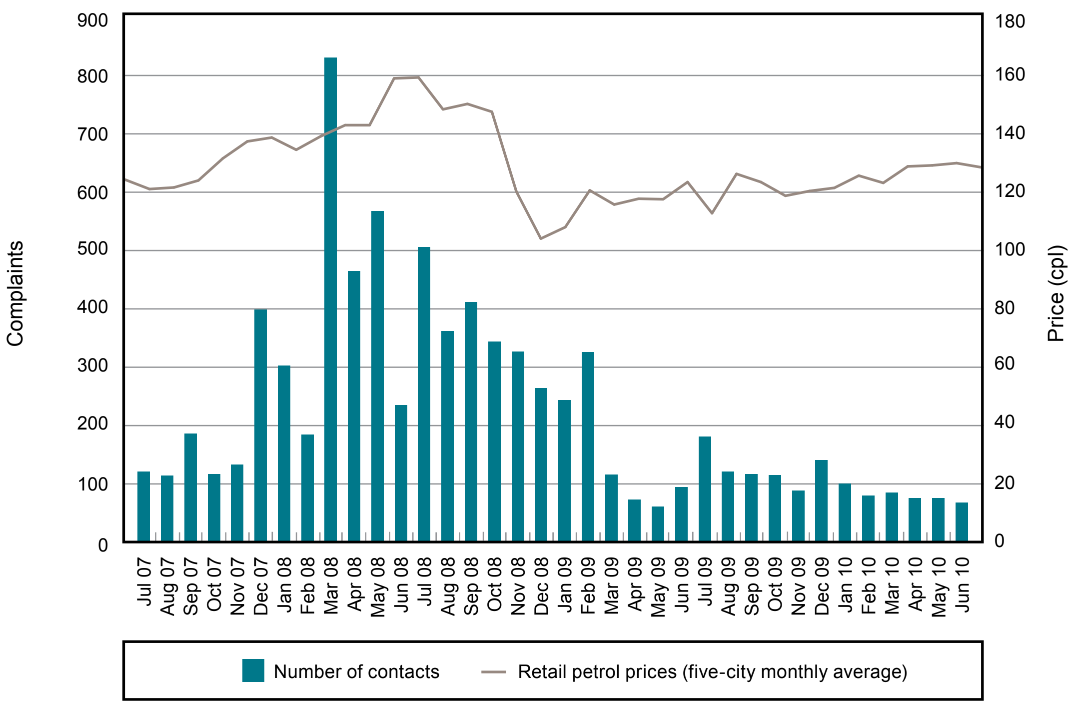
2.2.1 Enforcement and compliance

Complaints and inquiries regarding fuel

The ACCC receives information about potential breaches of the Act from a wide variety of sources, but the most common source is complaints and inquiries (contacts) from consumers. During 2009–10 the ACCC received approximately 1250 complaints and inquiries about fuel issues from every state and territory. The number of contacts from each state and territory were broadly in proportion to each state and territory's population.

The number of contacts about fuel issues has declined by more than 50 per cent since 2008–09 (see chart 2.1). Unsurprisingly, there appears to be a relationship between increases in the number of fuel-related complaints and inquiries received by the ACCC and increases in retail petrol prices. The number of fuel-related complaints and inquiries is likely to have been affected by the steady decline in average retail prices from July 2008 to January 2009, which was then followed by more stable average prices in 2009–10.

Chart 2.1 Fuel issues contacts received by the ACCC by month and average petrol prices in the five largest cities: July 2007 – June 2010



Source: ACCC records and Informed Sources data

Potential compliance issues

Approximately 62 per cent of complaints and inquiries received about the fuel industry related to potential compliance issues under the Act. The ACCC examined these contacts carefully and made further inquiries or assessments in over 50 matters.

The topics that raised most concern included high prices, alleged collusion, price discrepancies between boards and pumps, accuracy of petrol pumps, EBP issues, price cycles and fuel quality.

High prices

In 37 per cent of the complaints and inquiries received about the fuel industry the price of fuel being 'too high' was the primary issue raised. The ACCC has reviewed the contacts about high prices to identify common issues and has examined these issues in the context of its monitoring work. Common issues included:

- differences in prices between towns, suburbs or service stations
- differences in prices for one type of fuel compared to another
- the relationship between retail prices in Australia and international benchmark prices.

The ACCC does not regulate wholesale or retail petrol prices in Australia and retailers are free to determine their prices according to market conditions. The ACCC seeks to educate consumers on what influences domestic retail prices by providing fact sheets and information on its website. As detailed in chapter 9 retail fuel prices are largely driven by movements in international market prices for oil and refined petroleum products. The ACCC monitors pricing movements in the fuel industry and will enforce the provisions of the Act if there is evidence that the Act has been breached.

2.2.2 Misleading conduct and false representations

Many of the complaints and inquiries the ACCC received in 2009–10 about compliance with the Act related to alleged misleading and deceptive conduct and false or misleading representations. Conduct will be in breach of the Act where it is likely to mislead or deceive consumers. Such conduct may include lying to consumers, leading them to a wrong conclusion, creating a false impression or making false or inaccurate claims.

The main concerns raised by consumers included concerns about pricing practices (particularly relating to prices displayed on price boards), labelling on fuel pumps, advertising promotions (such as discount schemes), fuel quality claims and inaccurate fuel measurements. Of the total fuel-related matters that were further assessed in 2009–10, compliance outcomes were achieved in a number of matters alleging misleading conduct and false representations. These outcomes included changes to advertising undertaken by retailers in response to concerns put to them by the ACCC.

2.2.3 Business-to-business dealings

The ACCC also received a number of complaints alleging conduct such as price fixing, predatory pricing, certain types of exclusive dealing and general anti-competitive agreements that may substantially lessen competition. While most of these matters were addressed directly with the complainants, the ACCC identified approximately 25 matters for further inquiry or assessment over 2009–10, which led to a number of matters being investigated. To date, no allegations of this nature have been substantiated, although some investigations were continuing in late 2010.

The ACCC has scrutinised allegations of predatory pricing, carrying out further assessments in over 50 per cent of these matters. Despite this concerted effort, upon further inquiries no allegations of predatory pricing conduct were able to be substantiated by information held and obtained by the ACCC.

2.2.4 Improving business practices

From the complaints and inquiries it received, the ACCC became aware of some practices that were causing concern for consumers. In October 2010, the ACCC wrote to the major petrol companies and industry associations to request that they review their business practices and take corrective action where necessary. The practices the ACCC raised in its letter included the following:

- Labelling of fuel containing ethanol—consumers raised concerns that in some instances fuel containing ethanol has not been adequately differentiated from regular unleaded fuels. This appears to be a particular problem on signboards where only fuel containing ethanol is sold at the service station.
- Restrictive trade practices—the ACCC reminded businesses about their obligations not to engage in anti-competitive conduct such as price fixing. The ACCC takes allegations of anti-competitive conduct very seriously and encourages anyone with information about such conduct to contact the ACCC.
- Displaying prices—discrepancies between prices advertised on signboards and prices displayed at the fuel pump. This appears to have been a particular issue when prices were being changed.
- Fuel quality—consumers raised concerns about fuel being sold that is contaminated or does not meet advertised specifications such as its research octane number (RON).[6]
- Advertising and labelling—consumers complained about the failure of retailers to clearly display terms and conditions of offers, unclear labelling of different fuel products, and inaccurate representations about the performance, grade or composition of fuels.

The ACCC will monitor the issues raised in this letter and take action, including through the courts if necessary.

6 The Department of Sustainability, Environment, Water, Population and Communities is responsible for fuel standards.

2.2.5 Emerging market for biofuels

The ACCC is monitoring developments in the emerging market for EBP and biodiesel in Australia in readiness to consider issues of compliance with the Act if they arise. The ACCC is mindful that when markets are developing and competitors are attempting to establish a market presence or gain a competitive advantage, competition, consumer protection and supply issues may be more likely to occur.

There have been steady increases in the numbers of complaints and inquiries received by the ACCC about EBP. Issues that have been brought to the ACCC's attention in respect of EBP include:

- the NSW Government's mandate for the use of EBP and the associated withdrawal of RULP from many service stations in NSW
- improper advertising of EBP, such as prices for RULP and EBP not being sufficiently differentiated on some roadside price boards
- insufficient labelling of EBP, namely the absence or position of stickers on fuel pumps indicating ethanol content of fuel at some service stations
- advertising a price for EBP when no EBP was available or relevant pumps were closed
- changes by some retailers to the colours of pump handles used to dispense fuel products, including EBP
- inquiries about the price differential between EBP and other fuels.

See chapter 6 for further details on biofuels-related issues.

2.2.6 Mergers and acquisitions

The Act's merger and acquisition provisions fall within the competition provisions of Part IV of the Act. Section 50 prohibits acquisitions that would have the effect, or likely effect, of substantially lessening competition in a substantial market. The ACCC administers and enforces the merger provisions under the Act.

Over 2009–10 the ACCC completed a public review of four fuel-related merger proposals. The outcomes of the ACCC's review of these mergers are summarised below.

Caltex Australia Limited—proposed acquisition of the retail assets of Mobil Oil Australia Pty Ltd (Ref: 37501)

On 26 May 2009, Caltex and Mobil executed a share sale agreement and a business sale deed. Under the share sale agreement, Caltex would have acquired the fuel retail business operated by Mobil and SEP, and the assets used in connection with the business, including the 302 Mobil service station sites.

On 2 September 2009, the ACCC published a statement of issues about the proposed acquisition raising a number of competition concerns.

On 2 December 2009, the ACCC announced its decision to oppose the proposed acquisition of Mobil's retail assets by Caltex on the basis that the ACCC considered that the proposed acquisition was likely to result in a substantial lessening of competition in various fuel markets.

7-Eleven Stores Pty Ltd—proposed acquisition of retail assets of Mobil Oil Australia Pty Ltd (Ref: 40971)

Peregrine Corporation—proposed acquisition of retail assets of Mobil Oil Australia Pty Ltd (Ref: 40972)

On 27 May 2010, it was announced that 7-Eleven proposed to acquire the retail assets of Mobil. In addition, it was announced that Peregrine proposed to acquire from 7-Eleven those former Mobil service stations that are located in South Australia.

The ACCC commenced a public review of each acquisition on 27 May 2010.

On 22 July 2010, the ACCC decided not to intervene in the sale of Mobil's retail assets to 7-Eleven and the on-sale of the South Australian assets to Peregrine, conditional on receiving undertakings from each acquirer to divest certain assets.

On 1 October 2010, the ACCC accepted a section 87B undertaking from 7-Eleven for the divestiture of three retail petrol sites in Mount Druitt in New South Wales and Ashmore and Riverhills in Queensland to purchasers approved by the ACCC. On the same date, the ACCC also accepted a section 87B undertaking from Peregrine for the divestiture of one retail petrol site at either Noarlunga Downs or Christies Beach to a purchaser approved by the ACCC.

Coogee Chemicals proposed acquisition of terminal assets of Gull Petroleum (Ref: 40974)

On 10 March 2010, the ACCC commenced reviewing Coogee Chemicals' proposal to acquire Gull Petroleum's storage facilities at Kwinana, south of Perth.

The ACCC conducted public market inquiries and completed its review of the acquisition on 23 March 2010. The ACCC concluded that the proposed acquisition was unlikely to substantially lessen competition in the relevant markets.

BP Australia Pty Ltd proposed acquisition of Centrel Pty Ltd (Reliance) (Ref: 43280)

On 24 August 2010 BP informed the ACCC of its intention to acquire all of the shares in its branded distributor Reliance.

The ACCC commenced a public review of the proposed acquisition on 25 August 2010, and subsequently published a statement of issues outlining certain issues which may have raised competition concerns.

On 17 November 2010 the ACCC announced that it would not oppose the acquisition, concluding that the proposed acquisition was unlikely to substantially lessen competition in the relevant markets.

2.2.7 Authorisations and notifications

In certain circumstances the ACCC can grant immunity from legal action for potentially anti-competitive conduct. Businesses may obtain immunity by applying for an authorisation or submitting a notification with the ACCC.

Authorisations

Authorisation is a process under which the ACCC can grant immunity for potential breaches of the competition provisions of the Act if it is satisfied the conduct delivers a net public benefit. Notification of exclusive dealing conduct (such as the 'tying' of the purchase or sale of goods and/or services) provides immunity for potential breaches of the applicable sections of the Act. Immunity under an exclusive dealing notification operates from the date it is validly lodged with the ACCC, or 14 days after it is lodged in the case of third line forcing conduct, and remains unless revoked by the ACCC.

In 2009–10 the ACCC determined two fuel-related authorisation applications.

Woodside Energy Ltd and Benaris International Pty Ltd, two of four joint-venture partners in the Otway gas project off the Victorian coast, sought authorisation to continue to jointly market their shares of LPG produced by the project until 2012. On 2 September 2009 the ACCC issued a final determination, granting authorisation until 31 December 2012. On 4 February 2010 the ACCC issued a determination granting authorisation to a minor variation to the authorisation to allow Origin Energy, who had purchased Woodside's interest in the joint venture, to jointly market its share with Benaris.

Santos QNT Pty Ltd and 10 other Queensland oil producers sought authorisation to jointly negotiate common terms and conditions, including price, under which oil produced predominantly from the Surat Basin and Denison Trough in Queensland would be sold. On 2 June 2010 the ACCC issued its final decision, granting authorisation to the joint marketing arrangements until 30 June 2020.

Exclusive dealing notifications

In 2009–10 the ACCC considered 12 fuel-related exclusive dealing notifications and allowed immunity to continue in each case. Of these notifications:

- four related to proposed shopper docket third line forcing arrangements
- one related to tying fuel discounts of 50 cpl to qualifying home loans
- one related to tying car loans to vouchers for car servicing and fuel cards
- one related to an offer to sell base oil for lubricant production on the condition that the purchaser use certain suppliers for other components
- one related to tying a lease transfer to maintaining arrangements with a refiner-marketer
- one related to tying a sale of business arrangement to maintenance of arrangements with a refiner-marketer
- two related to third line forcing arrangements in relation to fuel discount schemes attached to membership cards
- one related to tying loans of motor oil storage equipment or finance to maintaining arrangements for the supply of motor oil with a particular supplier.

2.2.8 Administration of the Oilcode

The Oilcode came into effect on 1 March 2007 as a prescribed industry code of conduct under the Act. The Oilcode forms part of the Australian Government's Downstream Petroleum Reform Package. The purpose of the Oilcode, in general terms, is to regulate the conduct of suppliers, distributors and retailers in the downstream petroleum retail industry.

The ACCC's role is to ensure compliance with the Oilcode and the Act by informing downstream petroleum industry participants of their rights and obligations under the law and by enforcing it if necessary.

In 2009–10 the ACCC received three Oilcode-related complaints and 10 inquiries. The complaints related to supply of declared petroleum products and re-selling agreements. One complaint was referred to dispute resolution, while the other two complaints were not pursued because the evidence was insufficient to establish a breach of the Oilcode.

In September 2009 the Department of Resources, Energy and Tourism released its review of the Oilcode. The review made 11 recommendations, including measures for further disclosure regarding fuel reselling agreements and more clarity and certainty regarding the dispute resolution scheme, and suggested a further examination of the role of collective bargaining in the industry. The Australian Government has not yet released its final response, stating that it will carefully consider the review's recommendations in consultation with interested parties.

2.3 Informing consumers

Throughout 2009–10, the ACCC expanded its public information activities to make a broad range of information readily available to consumers.

2.3.1 Website

The ACCC has improved its website and increased the amount and accessibility of the information it provides. Petrol issues are consolidated on a single page providing links to price data, fact sheets and publications and can be found at: www.accc.gov.au/fuel. The ACCC has also reviewed and updated the way it presents information on the cheapest day of the week to buy petrol in the five largest cities.

2.3.2 Fact sheets

The ACCC had five fuel fact sheets available in 2009–10:

- *What influences the price of unleaded petrol?*
- *Petrol price cycles in Australia*
- *Fuel prices in regional Australia*
- *What influences the price of diesel?*
- *What influences the price of automotive LPG?*

These fact sheets are available on the ACCC website.

2.3.3 Ministerial correspondence

Over 2009–10 the ACCC addressed 32 pieces of correspondence from federal and state parliamentarians on fuel issues. The most common topics raised in this correspondence were:

- price differentials between various locations
- the relationship between local prices and international benchmarks
- price differentials between fuel types.

2.3.4 ACCC Infocentre

During 2009–10 the ACCC responded to approximately 1250 fuel-related complaints and inquiries received by the Infocentre. Issues arising from these calls are discussed further in sections 2.2.1 to 2.2.3.

2.3.5 Enhancing consumer understanding

The ACCC engages with newspapers, television, radio and internet media outlets with the objective of making information about its analysis and developments in the petroleum industry more accessible to consumers. In 2009–10 the ACCC distributed news releases and/or provided informed comment on a variety of issues including:

- failure of the price cycle in Adelaide during September 2009
- expected higher petrol prices over the 2009 Christmas period due to movements in the benchmark prices and the AUD–USD exchange rate
- changes to the cheapest day of the week to buy petrol in Sydney in July 2010
- factors that can contribute to prices in regional areas being higher than in larger cities, in response to concerns about prices in Alice Springs and other remote locations in September 2010.

The ACCC also distributed a summary of the 2009 monitoring report to all local councils in Australia to assist local communities to understand the factors that influence petrol prices and provide information on other issues relating to the fuel industry.

2.4 Engagement with stakeholders

In 2009–10 the ACCC formalised its dialogue with industry stakeholders through the formation of a Fuel Consultative Committee (FuelCC) as outlined below. The ACCC works with other government bodies in relation to fuel quality standards, trade measurement and consumer protection issues and other issues relevant to the fuel industry. The ACCC also engages with consumer groups, particularly motoring organisations, by providing information and addressing inquiries about a range of fuel-related issues.

2.4.1 Fuel Consultative Committee

In 2010 the ACCC formed the FuelCC in order to provide:

- an opportunity for meaningful dialogue between the ACCC, the fuel industry and motoring organisations
- information to increase the ACCC's understanding of fuel industry issues and to assist the ACCC in undertaking its role under the Act on issues related to competition and consumer protection in the fuel industry.

There are currently 16 members of the FuelCC including retailers, refiner-marketers, industry associations and motoring organisations. The FuelCC has met on two occasions and has discussed issues including industry consolidation, availability of pricing information to consumers, state government mandates on biofuels, motorist confusion about price cycles, wholesale supply availability, industry regulation, and profitability of the industry.

2.4.2 Other government bodies

The ACCC liaises and shares information in accordance with its Information Sharing Policy with the following government bodies to fulfil its functions under the Act:

- the Australian Government Treasury concerning fuel pricing issues and the fuel industry broadly
- the Australian Government Department of Resources, Energy and Tourism concerning the fuel industry broadly and fuel supply, including security of supply
- the Australian Government Department of Sustainability, Environment, Water, Population and Communities in relation to the quality of fuel supplies, including allegations of contamination
- the National Measurement Institute in relation to concerns regarding trade measurement practices
- state government bodies concerning consumer protection and other issues such as state offices of fair trading and the FuelWatch monitoring service administered by the Western Australian Government
- local councils in respect of queries about the conduct of fuel retailers in their municipality and other issues.

2.4.3 Consumer groups

In addition to meetings of the FuelCC, the ACCC corresponds and meets with consumer groups and motoring organisations to address concerns raised about the conduct of petrol retailers that affect consumers. Organisations that the ACCC has engaged with in 2009–10 include the motoring organisations in each state and territory. Issues raised by these groups and addressed by the ACCC include:

- proposals for increasing fuel pricing information available to consumers
- retail profit margins for RULP and PULP
- cost differentials between RULP and PULP
- retail price differentials between metropolitan and regional areas
- allegations of anti-competitive conduct.

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- the National Measurement Institute in relation to concerns regarding trade measurement practices
- state government bodies concerning consumer protection and other issues such as state offices of fair trading and the FuelWatch monitoring service administered by the Western Australian Government
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- cost differentials between RULP and PULP
- retail price differentials between metropolitan and regional areas
- allegations of anti-competitive conduct.

3 Developments in industry structure

Key points:

- The Australian petrol industry is evolving.
- The retail sector continues to undergo fundamental change.
- The involvement of the refiner-marketers in retail is diminishing while specialist retailers are increasing their presence.
- Australia is increasingly reliant on imports of crude oil as well as refined petroleum products, especially premium unleaded petrol and diesel.
- There has been a significant increase in the overall capacity of independently owned terminals. Some of these terminals may have spare capacity, providing potential import opportunities for independent wholesalers and retailers.

3.1 Overview

This chapter looks at the structure of the Australian petroleum industry, focusing on developments since completion of the 2009 ACCC petrol monitoring report.

The Australian petroleum industry can be considered in terms of its upstream and downstream operations. The upstream industry, which covers the exploration, production and export of crude oil, is largely outside the scope of this report. The downstream industry, which is the focus of this report, incorporates three sectors: refining and supply, wholesale and retail.

Refining and supply refers to the sector of the industry that sources domestically refined and imported petroleum products for on-selling to wholesalers.[7] Refining refers to the production of petroleum products using crude oil that is either sourced in Australia or imported. Importing refined products involves sourcing petroleum products from foreign refineries that are either ready for sale or require only slight processing in Australia.

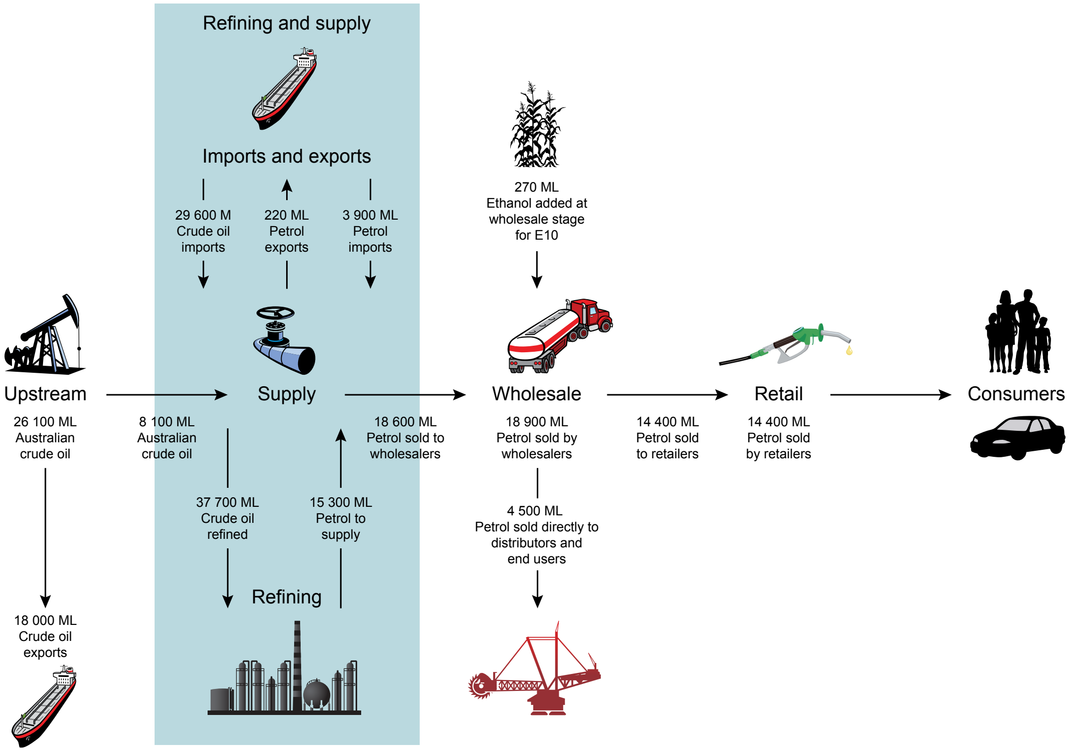
Wholesale is the sector that sells and transports petroleum products from its source. Refiners, importers or wholesalers may sell to other wholesalers, retailers, or end users such as transport, agricultural and mining companies.

Retail is the sector that sells refined petroleum products to the public through retail sites.

Figure 3.1 presents a schematic representation of the flows and volumes of crude oil and petrol flowing within and between the sectors of the Australian petroleum industry. Additional information on major product flows and infrastructure in the petroleum products industry is presented in the schematics in appendix B.

7 'Petroleum products' refers to petrol, diesel, LPG, jet fuel and other related products. Petrol includes regular and premium unleaded petrol, and ethanol-blended petrol.

Figure 3.1 Volumes of crude oil and petrol flows: 2009–10



Sources: *Australian Petroleum Statistics*, RET, issue 167 (June 2010); ACCC estimates based on data obtained from firms monitored through the ACCC's monitoring process; and *Australian Biofuels 2010–11*, APAC Biofuel Consultants

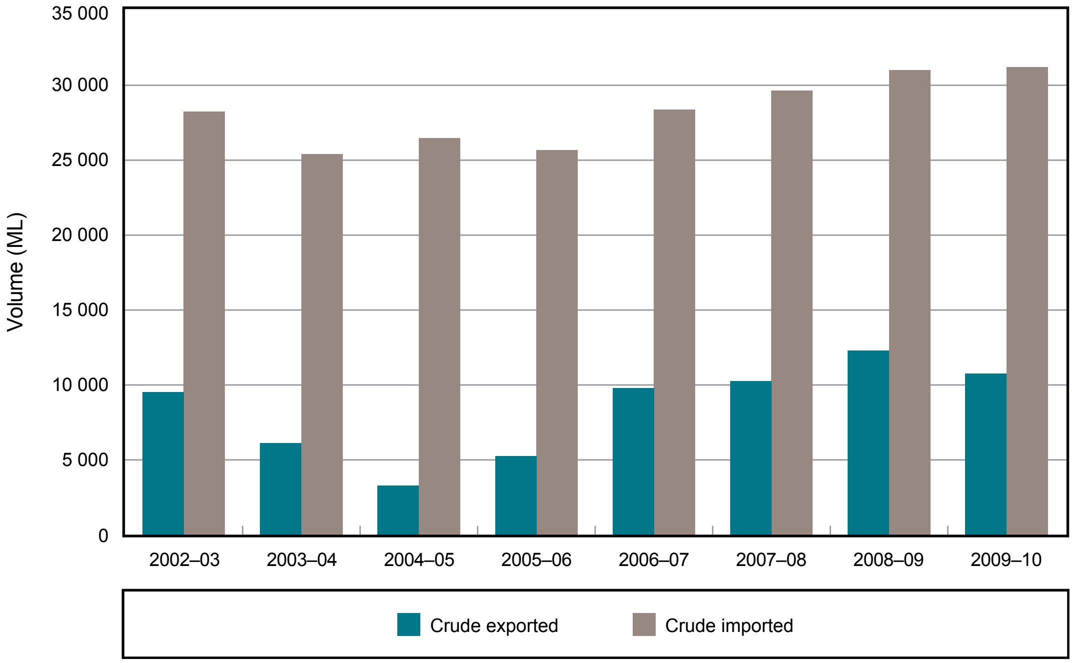
Notes: Data represent rounded estimates. Crude oil data include condensate, and represents total crude refined, not just the share used to produce petrol. Petrol includes regular unleaded petrol, premium unleaded petrol and ethanol-blended petrol.

3.2 Crude oil production

3.2.1 Crude oil inputs

Due to the different chemical composition of different crude oils, as well as geographic and economic considerations, during 2009–10 Australia continued to export most of its crude oil production and to rely on imports for domestic refining (chart 3.1). At 31 206 megalitres (ML), imports of crude during 2009–10 were approximately the same as for 2008–09.

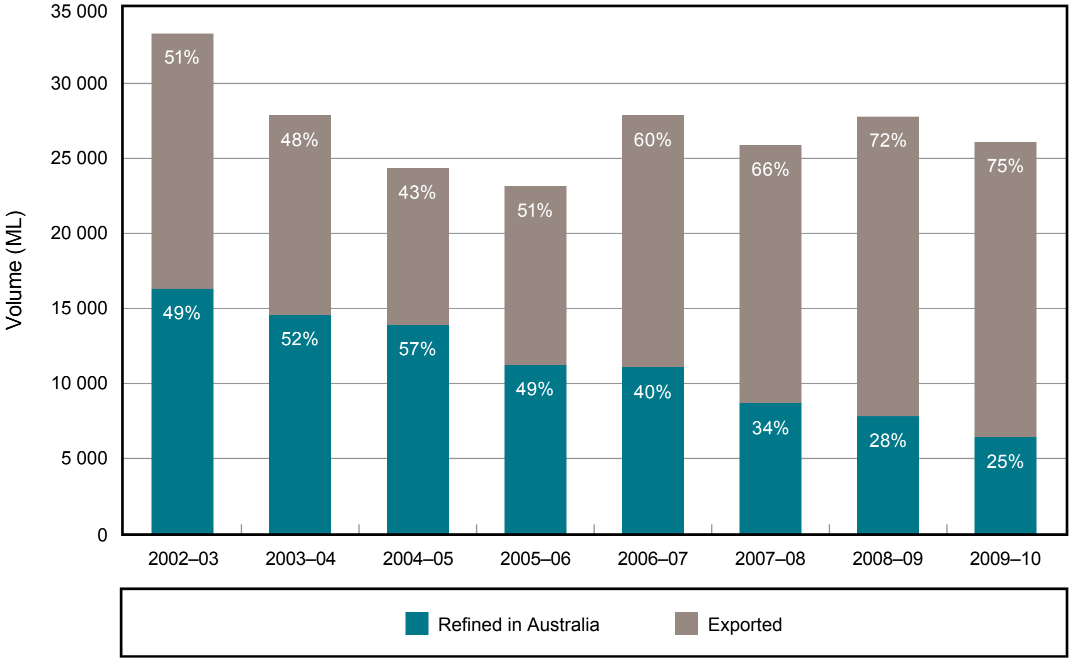
Chart 3.1 Australian crude oil and condensate exports and imports: 2002–03 to 2009–10



Source: *Australian Petroleum Statistics,* RET, issues 83 (June 2003), 119 (June 2006) and 167 (June 2010)

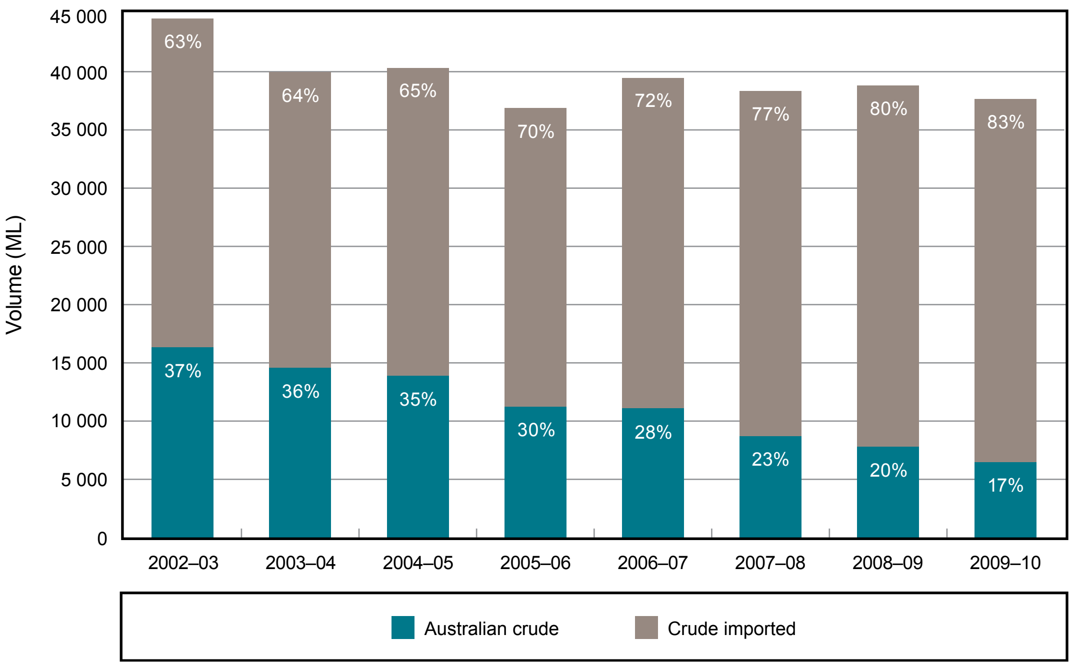
The proportion of domestic crude exported rose slightly from 72 per cent to 75 per cent (chart 3.2). The proportion of crude used in Australia that was sourced domestically fell from 20 per cent to 17 per cent (chart 3.3).

Chart 3.2 Australian crude oil and condensate production: 2002–03 to 2009–10



Source: *Australian Petroleum Statistics*, RET, issues 83 (June 2003), 119 (June 2006) and 167 June 2010)

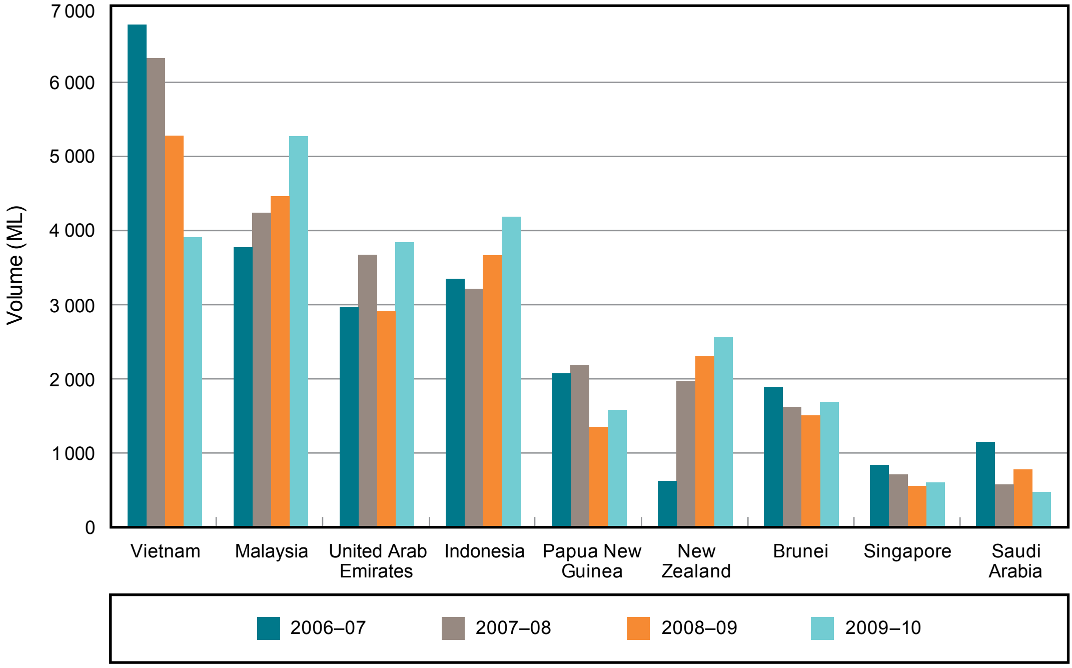
Chart 3.3 Volume of crude oil and condensate refined in Australia by source: 2002–03 to 2009–10



Source: *Australian Petroleum Statistics*, RET, issues 83 (June 2003), 119 (June 2006) and 167 (June 2010)

In 2009–10, Malaysia and Indonesia replaced Vietnam as the largest sources of crude imports (chart 3.4). Imports from Malaysia increased 18 per cent to 5 272 ML while imports from Indonesia increased 14 per cent to 4 187 ML. Australia imported 3 913 ML of crude from Vietnam in 2009–10, a fall of 26 per cent from 2008–09. Australia's imports from the United Arab Emirates also increased.

Chart 3.4 Major sources of crude oil imports to Australia: 2006–07 to 2009–10



Source: *Australian Petroleum Statistics*, RET, issue 167 (June 2010)

3.3 Refining in Australia

3.3.1 Refinery capacity

According to the Australian Institute of Petroleum, total capacity at Australian refineries has increased slightly in recent years.[8] Total capacity is now estimated to be 44 210 ML pa, an increase of 3.5 per cent since 2006–07. The most notable increase in capacity occurred at the BP refinery in Bulwer Island, Brisbane, where capacity increased by 15.5 per cent to 5 910 ML pa. Capacities at the Shell refineries at Geelong and Clyde have been reduced marginally in order to improve reliability.

3.3.2 Refinery production

A large proportion of the petroleum products consumed in Australia are refined locally. In 2009–10, there was a slight increase in both production and sales of total petroleum products. The share of sales of petroleum products refined domestically in 2009–10 remained unchanged at 72 per cent. However, since 2002–03 the percentage of sales of petroleum products refined in Australia has fallen significantly, from 100 per cent to 72 per cent in 2009–10 (table 3.1). This has been a result of increased demand combined with lower domestic production.

Table 3.1 Petroleum products production as a percentage of sales in Australia: 2002–03 to 2009–10

	Petroleum products sales (ML)	Petroleum products production (ML)	Production as a proportion of sales
2002–03	41 980	41 951	100%
2003–04	43 899	39 654	90%
2004–05	45 496	38 786	85%
2005–06	45 610	37 160	81%
2006–07	46 541	39 108	84%
2007–08	48 434	37 744	78%
2008–09	48 052	34 590	72%
2009–10	48 665	34 839	72%

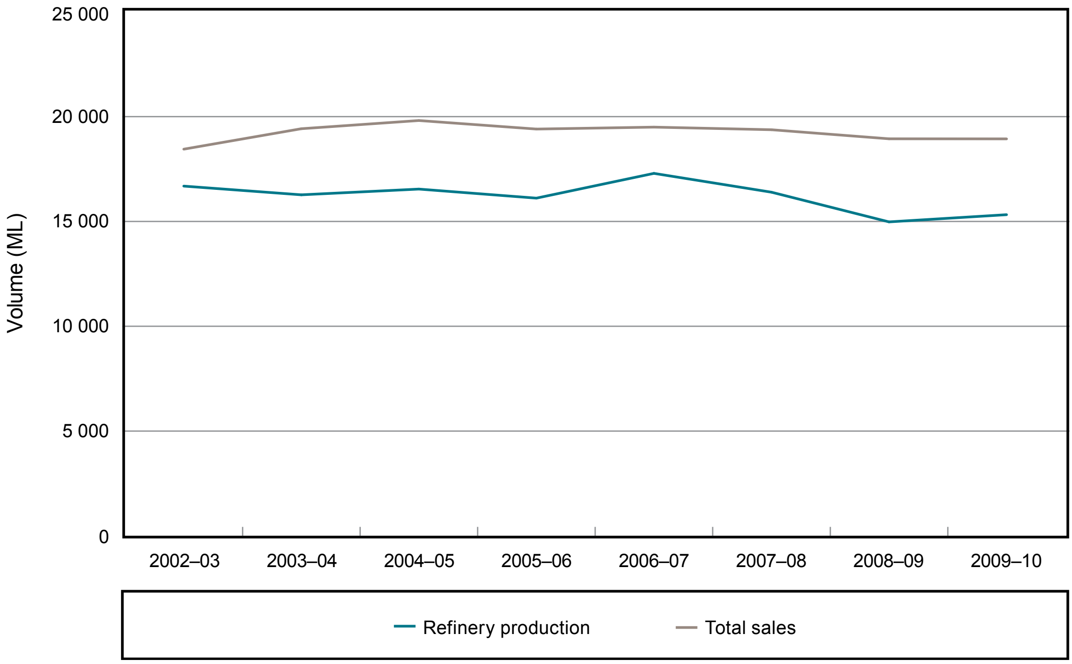
Source: ACCC analysis based on data obtained from firms monitored through ACCC's monitoring process

3.3.3 Unleaded petrol production

Production of unleaded petrol increased marginally in 2009–10 following two years of falling production levels. Total production in 2009–10 increased to 15 322 ML from 14 978 ML while sales remained steady at 18 940 ML. Chart 3.5 depicts trends since 2002–03 in refinery production of unleaded petrol and total sales of unleaded petrol.

8 Australian Institute of Petroleum, *Downstream Petroleum 2009,* June 2010, p. 5.

Chart 3.5 Production and sales of unleaded petrol in Australia: 2002–03 to 2009–10

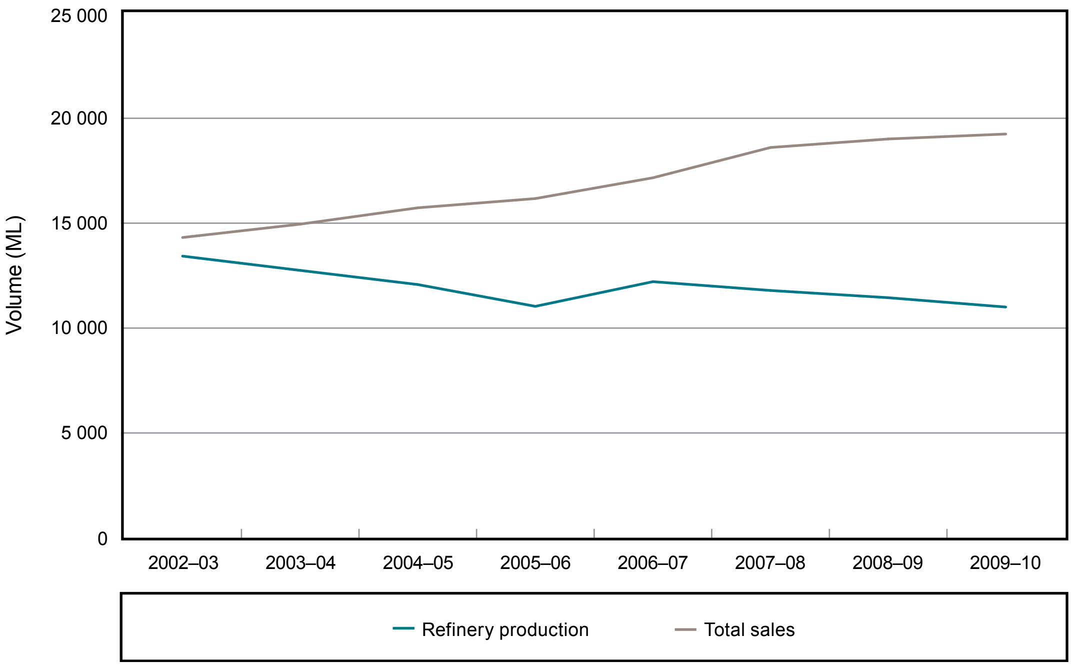


Source: ACCC analysis based on data obtained from firms monitored through ACCC's monitoring process

3.3.4 Diesel production

Sales of diesel continued to rise in 2009–10 while domestic refinery production fell for the third consecutive year. Production of diesel in Australia has fallen in six of the past seven years. The difference between domestic production and sales increased in 2009–10 (see chart 3.6). Higher levels of imports of diesel have bridged the growing gap between domestic production and sales.

Chart 3.6 Production and sales of diesel in Australia: 2002–03 to 2009–10



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

3.3.5 Petrol refining market share

Apart from Caltex, market shares among the four refiner-marketers of refinery production of unleaded petrol products did not change significantly in 2009–10 (table 3.2). Caltex's share of domestic petrol refining fell from 34.6 per cent to 31.8 per cent while those of Shell and Mobil increased. BP's share remained steady at 29.1 per cent.

Table 3.2 Share of petrol production in Australia: 2002–03 to 2009–10

	2002–03 %	2003–04 %	2004–05 %	2005–06 %	2006–07 %	2007–08 %	2008–09 %	2009–10 %
BP	24.7	25.6	27.2	23.5	25.6	27.2	29.1	29.1
Caltex	28.6	31.1	32.5	34.3	35.4	33.7	34.6	31.8
Mobil	18.3	16.8	15.9	14.8	13.3	13.9	14.2	15.1
Shell	28.3	26.5	24.5	27.4	25.7	25.2	22.1	23.9

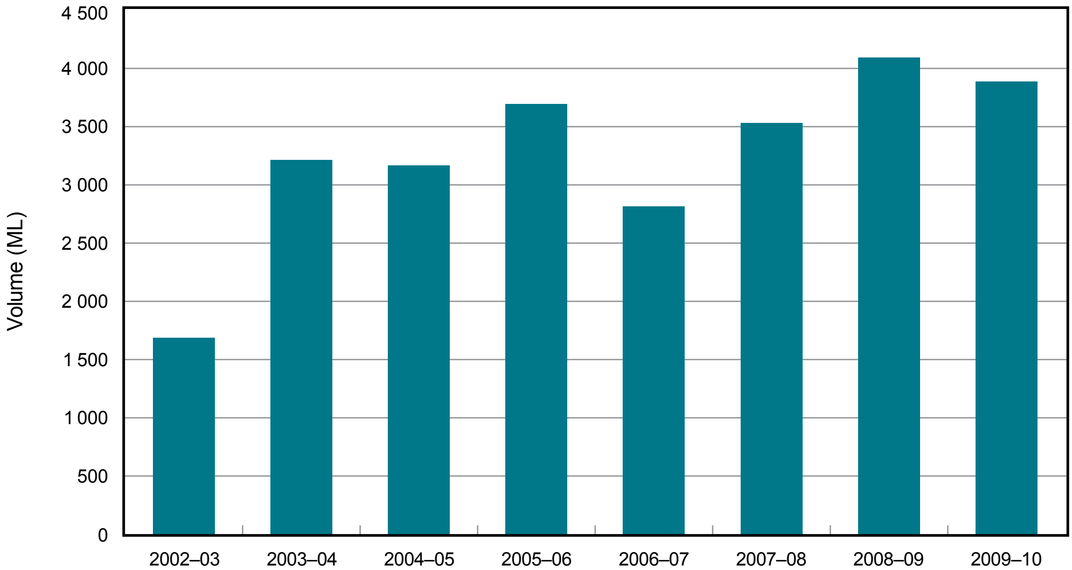
Source: ACCC analysis based on data obtained from firms monitored through ACCC's monitoring process

3.4 Importing of refined petroleum products

3.4.1 Petrol importing

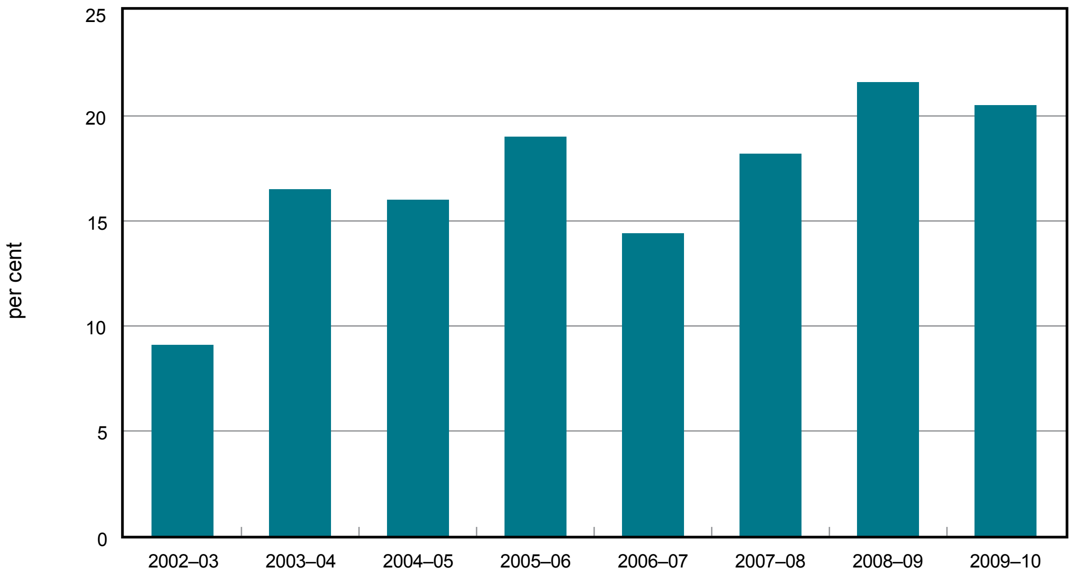
The volume of unleaded petrol imports fell 5 per cent in 2009–10 to 3 889 ML. Imports represented 20.9 per cent of total sales of unleaded petrol products, compared with 21.8 per cent in 2008–09 (charts 3.7 and 3.8).

Chart 3.7 Volume of unleaded petrol imported into Australia: 2002–03 to 2009–10



Source: *Australian Petroleum Statistics*, RET, issues 83 (June 2003), 119 (June 2006), 155 (June 2009) and 167 (June 2010)

Chart 3.8 Unleaded petrol imported as a percentage of total sales in Australia: 2002–03 to 2009–10



Sources: *Australian Petroleum Statistics*, RET, issues 83 (June 2003), 119 (June 2006) and 167 (June 2010). ACCC analysis based on data obtained from firms monitored through ACCC's monitoring process

While the overall volume of imports of unleaded petrol fell in 2009–10, information provided to the ACCC for the 2010 monitoring report indicates that the volume of independent imports was considerably higher in 2009–10 than in 2008–09.

Australia continued to import most of its refined petrol from Singapore in 2009–10. While the absolute volume of imports from Singapore fell slightly, imports from other countries fell more markedly, and thus the proportion of imports sourced from Singapore increased slightly (table 3.3). There was a significant increase (from 2 to 7 per cent) in the proportion of imports from South Korea, the only other sizeable source. Taiwan was a less important source of imports accounting for 2 per cent of imports in 2009–10 compared with 7 per cent in 2008–09.

Table 3.3 Sources of petrol imports into Australia: 2006–07 to 2009–10

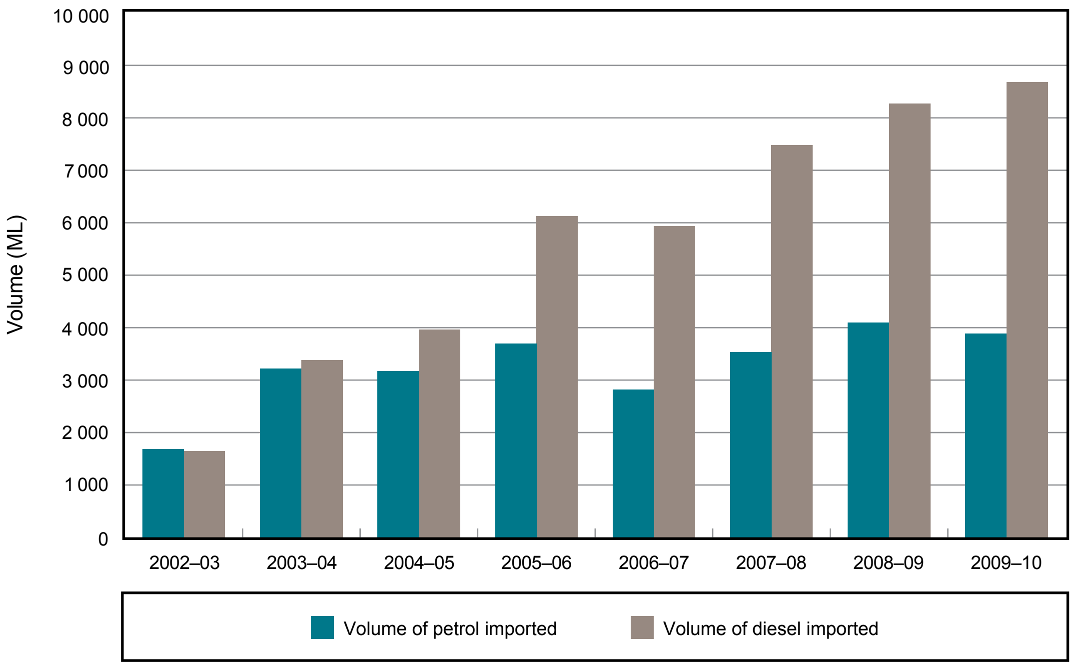
	2006–07		2007–08		2008–09		2009–10	
	ML	%	ML	%	ML	%	ML	%
Singapore	2 668	90	3 301	93	3 426	84	3 330	86
Taiwan	182	6	110	3	297	7	91	2
Oman	0	0	0	0	108	3	46	1
South Korea	1	0	18	0	81	2	278	7
Other	99	3	125	4	182	4	144	4
Total	2 950	100	3 536	100	4 093	100	3 889	100

Source: *Australian Petroleum Statistics,* RET, issue 167 (June 2010)

3.4.2 Diesel importing

There has been a substantial increase in the volume of diesel imports since 2002–03, from 1 646 ML in 2002–03 to 8 681 ML in 2009–10 (chart 3.9). Driven mainly by increasing demand from industries servicing the resources boom, annual imports of diesel have risen from parity with imports of petrol in 2002–03 to more than double the volume of petrol imports in 2009-10.

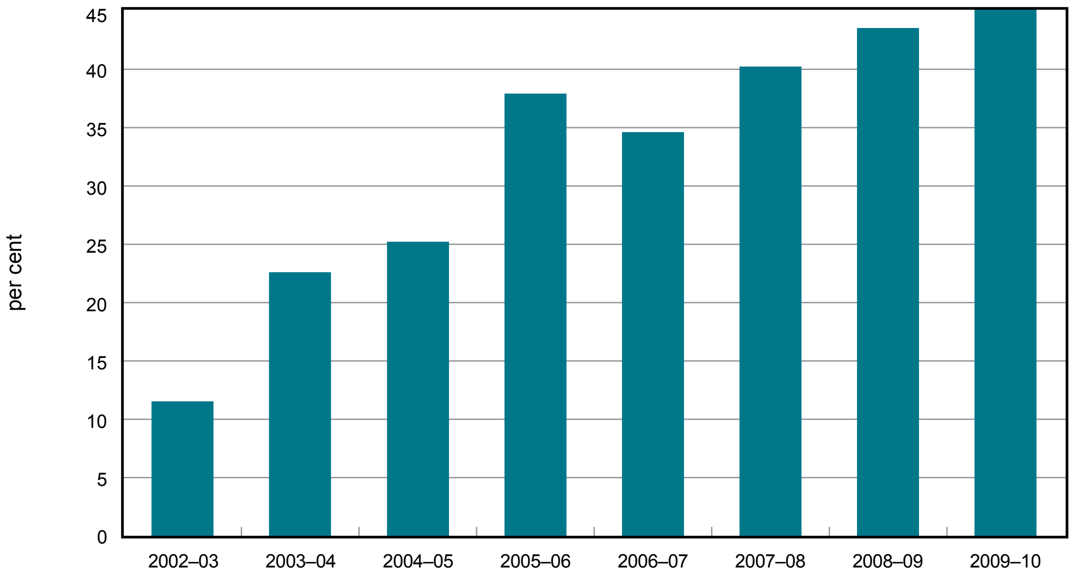
Chart 3.9 Volumes of petrol and diesel imported into Australia: 2002–03 to 2009–10



Source: *Australian Petroleum Statistics*, RET, issues 83 (June 2003), 119 (June 2006), 155 (June 2009), 167 (June 2010)

Reflecting the limited capacity of Australian refineries to satisfy the growing demand for diesel, imports have increased significantly as a percentage of total sales (chart 3.10). In 2009–10 approximately 45 per cent of the diesel sold in Australia was imported. This was marginally higher than 2008–09 and markedly up from 12.6 per cent in 2002–03.

Chart 3.10 Diesel imports as percentage of total sales in Australia: 2002–03 to 2009–10



Source: *Australian Petroleum Statistics,* RET, issues 83 (June 2003), 119 (June 2006) and 167 (June 2010). ACCC analysis based on data obtained from firms monitored through ACCC's monitoring process

3.5 Import infrastructure

In the 2009 monitoring report, the ACCC presented a detailed description of terminal and pipeline infrastructure used for importing refined fuel into Australia.

The focus in the 2010 monitoring report is to provide an update on throughput data for major terminals.[9] This chapter will also outline details of any significant investment plans for infrastructure used to import fuel.

3.5.1 Terminal throughput[10]

Petroleum products

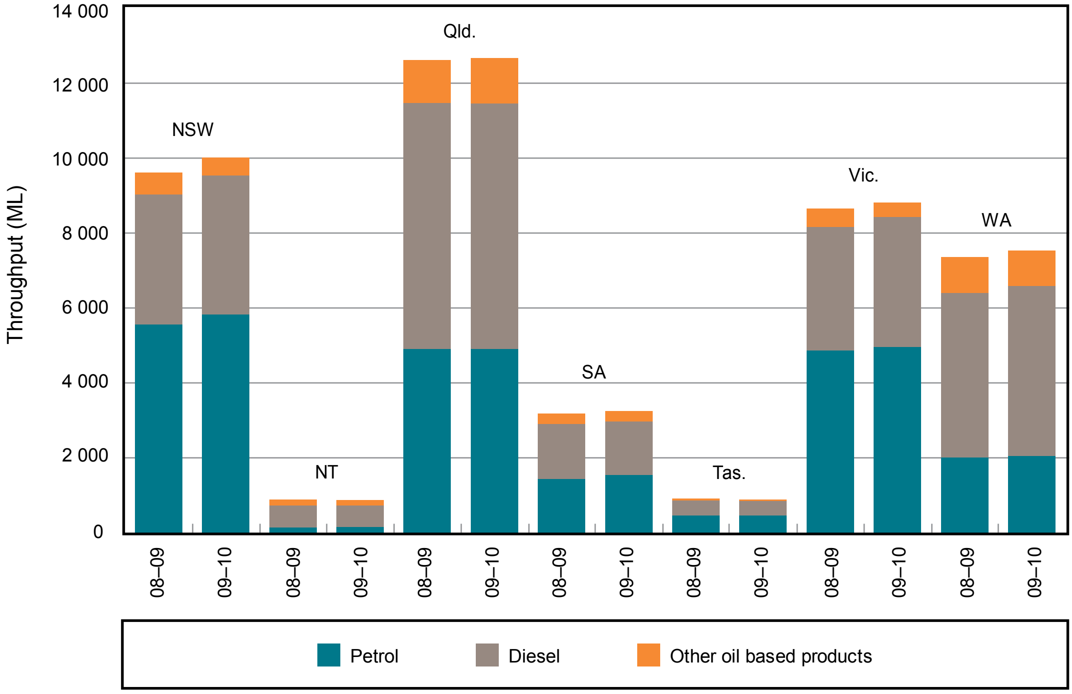
Between 2008–09 and 2009–10 New South Wales had significant percentage rises in throughput of both petrol (4.8 per cent) and diesel (6.7 per cent). Annual throughputs for petrol, diesel and other oil-based products are shown in chart 3.11. Victoria had the next highest rise in diesel throughput, while the largest rises in petrol throughput were in South Australia (7.8 per cent) and the Northern Territory (6.9 per cent).

Nationally, there was an increase of 2.6 per cent in petrol throughput, 2.4 per cent in diesel, and 1.9 per cent in petroleum products compared with 2008–09.

9 A major terminal is defined as having a pipeline connection to a port or refinery.

10 Terminal throughput is defined as the annual volume of product that goes out through the terminal's truck or rail gantry.

Chart 3.11 Petroleum products throughput by state: 2008–09 to 2009–10

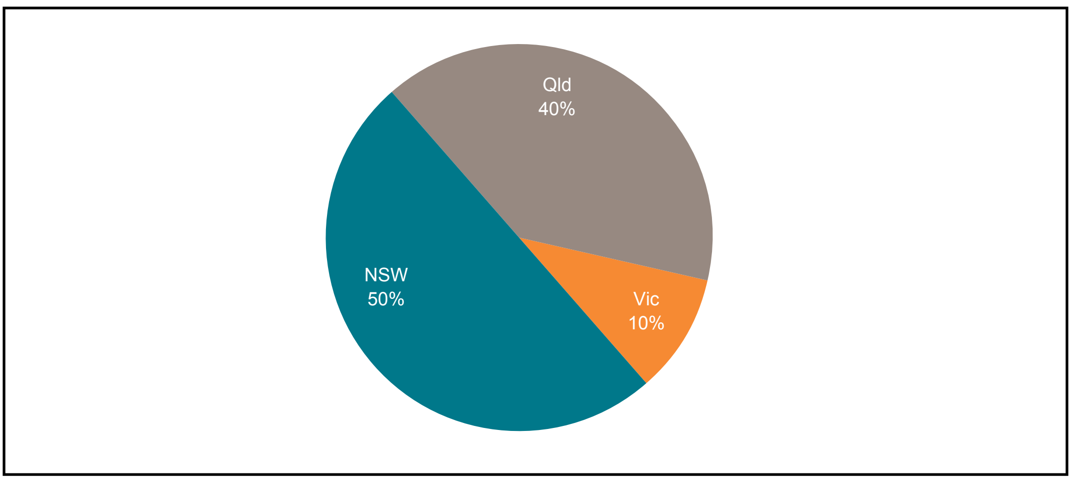


Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process

Ethanol

While terminals in New South Wales (50 per cent) and Queensland (40 per cent) accounted for most of the ethanol throughput, the largest increase was in Victoria. This state went from 4 per cent of total national throughput in 2008–09 to 10 per cent in 2009–10 (see chart 3.12). Victoria has no ethanol production facilities, so its throughput is sourced from interstate.

Chart 3.12 Ethanol terminal throughput by state: 2009–10 (ML)



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

Note: New South Wales, Queensland and Victoria were the only states with ethanol throughput in 2009–10.

3.5.2 Major terminals by state 2009–10

Fuel terminals play an important role in the petrol supply chain by providing storage facilities and a hub for the distribution of fuel to downstream wholesale or retail customers. Their strategic importance means access to terminals is an essential aspect of a company's ability to supply its customer base.

Most terminals are owned and operated by the refiner-marketers. Some key terminals are independently owned. As it is more difficult to establish an independent presence in the industry without access to a terminal, the availability of spare capacity at terminals can influence the extent to which independent wholesale and retail operators can effectively compete against the refiner-marketers.

There is evidence of independent wholesalers increasingly using independently-owned terminals, including those also being used by refiner-marketers.

The 2009 ACCC monitoring report provided detailed descriptions of major terminals in each state. These are updated in appendix C.

Below are outlines of current capacity utilisation and expansion plans at Australia's major terminals based on information provided to the ACCC for the 2010 monitoring report.

New South Wales

As noted in the 2009 ACCC monitoring report, Vopak has invested in new capacity in recent years at its terminal in Botany. As a result of these investments there is potentially significant spare capacity depending on shipping logistics.

Mobil has reported spare capacity for certain grades of fuel at the terminal it jointly owns with Caltex at Silverwater.

Caltex's terminals at Banksmeadow and Newcastle are fully utilised and have limited potential for increasing capacity. Caltex has plans for minor additions to ethanol storage capacity at Newcastle by reconfiguring its tanks.

Terminals Pty Ltd owns a small terminal in Botany that is mainly used by an independent wholesaler for diesel storage.

Planning is well advanced for Marstel's terminal development with direct port access in Newcastle. Construction is expected to commence in mid 2011.

Northern Territory

Vopak owns and operates the only major petrol import terminal in Darwin. Vopak has no plans to increase capacity but claims that spare capacity is available depending on shipping logistics.

Queensland

Shell has completed the expansion of its Pinkenba terminal, which now has a physical storage capacity of 55 ML.

Neumann is planning to increase the capacity of its Eagle Farm terminal to store an additional 15 ML of diesel or 11 ML of petrol. It is expected to be commissioned in the third quarter of 2011. Construction of the new pipeline connecting to a deep-water port commenced in August 2010 and is expected to be completed in February 2011 with new tank facilities to be completed by March 2011.

Marstel's refurbishment of the former Mobil terminal in Bundaberg is expected to be completed in 2011.

Caltex is still planning to increase diesel capacity at Mackay and Gladstone terminals by 26 ML and 15 ML respectively.

South Australia

In June 2009 Mobil announced that it abandoned plans to restart the refinery at Port Stanvac and that it would instead demolish the refinery and remediate the site.[11] Mobil reported spare capacity for certain grades of fuel at its Birkenhead terminal.

Caltex's Birkenhead terminal is fully utlised and Caltex is pursuing options to expand capacity within the next two years.

The plan by Stuart Petroleum to construct a 100 ML diesel import, storage terminal and distribution facility in Port Bonython has been approved by the South Australian government. The purpose of the new facility is to serve the diesel fuel needs of the mining industry in South Australia.[12]

Tasmania

There have been no reports of significant developments at any of the major terminals in Tasmania.

Victoria

Mobil has reported spare capacity for certain grades of fuel at its terminal at Yarraville. Caltex on the other hand considers that at best there may be an additional 10 per cent of capacity available at its terminal in Newport given existing configuration. Shell has no developments planned for either the Corio or Newport terminals.

Western Australia

The only significant development in Perth was the acquisition by Coogee Chemicals of the adjacent terminal at Kwinana owned and operated by Gull Petroleum (see also sections 2.2.6 and 3.7.3).

In Port Hedland, BP is constructing two new diesel storage tanks with combined capacity of 26 ML. These will enhance BP's ability to service the diesel energy needs of the mining industry in the Pilbara and are expected to be commissioned by the end of 2010. This is part of a larger capacity expansion program to be completed in 2011.[13]

Caltex has finalised its plans for a 40 ML expansion of diesel capacity at Port Hedland which will be completed in 2011.

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11 Mobil Refining Australia Pty Ltd, *Future of Mobil Port Stanvac Refinery,* 25 June 2009.

12 'SA Government Approves Construction of Stuart Facility', *Oil & Gas Australia*, December 2009, p. 14.

13 ACCC, *Monitoring of the Australian petroleum industry,* December 2009, p. 56. See also *Petroleum Infrastructure in Australia,* prepared by ACIL Tasman for RET, 2009, p. 82.

3.5.3 Import terminals with spare capacity

Recognising the importance of access to terminals for competition in the downstream petrol market, the ACCC has analysed terminal turnover rates for import and refinery-pipeline terminals.[14] A terminal's turnover rate is the number of times that the equivalent of its physical tank capacity has been put through in a given year. The national average turnover rate for each type of terminal may be used as a proxy for maximum throughput capacity.

Due to the unpredictable nature of shipping logistics compared with refinery production schedules, import terminals generally have significantly lower annual turnover rates than terminals connected to a refinery.

In 2009–10, Australian import terminals averaged a turnover of 6.8 times, compared with 29.7 times for refinery-pipeline terminals (table 3.4).

Table 3.4 Terminal petrol turnover by type of terminal: 2009–10

	IMPORT TERMINALS			REFINERY-PIPELINE TERMINALS		
	Capacity (ML)	Throughput (ML)	Turnover (times)	Capacity (ML)	Throughput (ML)	Turnover (times)
2009–10	687.8	4 703.0	6.8	442.9	13 134.3	29.7

Note: Excludes Corio and Parramatta refinery-pipeline terminals (which are directly attached to refinery storage tanks and have no stand-alone storage capacity), and import terminals that exist primarily to service local mines.

Note: Data are not comparable with 2008–09 data in the 2009 ACCC petrol monitoring report, due to terminal reclassifications.

In 2009–10, the average turnover of independently owned import terminals was 3.7 times (table 3.5). This was well below the average of 11.2 times at terminals owned by refiner-marketeters; a difference that is partly explained by the significant increase in overall capacity of independently owned terminals in recent years. This suggests that some independently owned terminals may have spare capacity, thus providing potential opportunities for independent wholesalers or retailers to import petrol to these terminals.

Table 3.5 Import terminal petrol turnover by type of ownership: 2009–10

Type of ownership	Turnover (times)
Independently owned	3.7
Refiner-marketeter owned	11.2
Australia	**6.8**

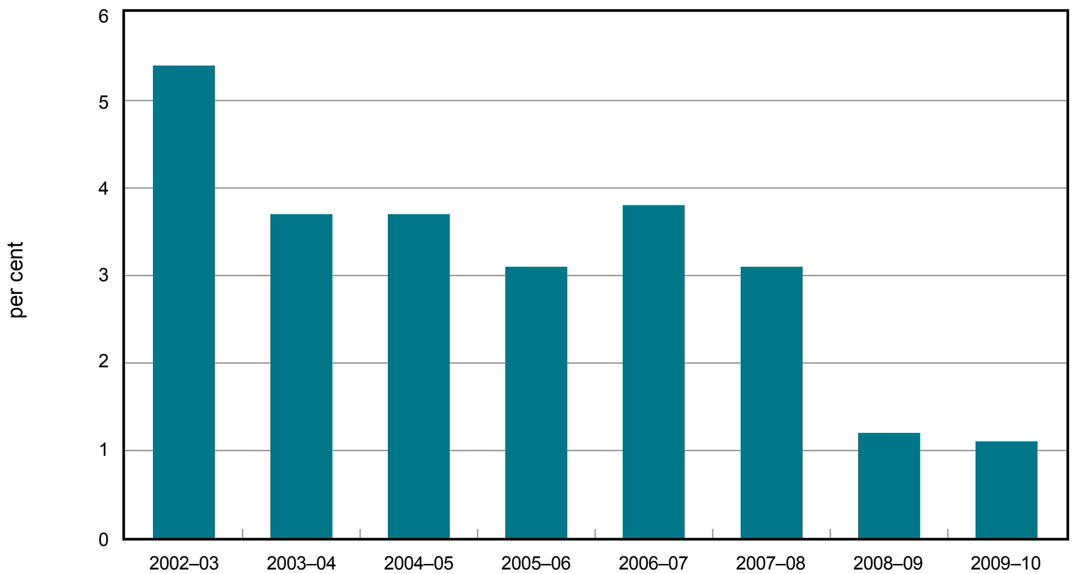
Note: Excludes throughput for terminals that exist primarily to service local mines. Data is not comparable with 2008–09 data in the 2009 petrol monitoring report due to terminal reclassifications.

14 Import terminals have a direct pipeline connection to a port, and generally receive all their fuel from ships. Refinery-pipeline terminals have a direct or indirect pipeline connection to a refinery which, when operating normally, is the source of all or most of their fuel.

3.6 Exporting refined product

The ability of refiner-marketers to export refined fuel is limited to situations when there is excess supply. In 2009–10 exports of petrol continued to represent a small proportion of domestic supply (defined as refinery production plus net imports). Export volumes were slightly lower in 2009–10, representing approximately 1.1 per cent of total production compared with 1.2 per cent in 2008–09 (chart 3.13).

Chart 3.13 Petrol exports as a percentage of domestic supply: 2002–03 to 2009–10



Source: *Australian Petroleum Statistics*, RET, issues 83 (June 2003), 119 (June 2006) and 167 (June 2010)

3.7 Wholesaling

3.7.1 Wholesale market share

The four refiner-marketers account for the overwhelming majority of petrol wholesaling in Australia (table 3.6). Among the other wholesalers, the most prominent are United, Neumann, Gull and Liberty. While the relative shares of volumes in the wholesale sector held by the independent wholesalers did not change significantly in 2009–10, they have shown an upward trend since 2005–06.

Table 3.6 Share of volume of wholesale petrol sales: 2005–06 to 2009–10

	2005–06 %	2006–07 %	2007–08 %	2008–09 %	2009–10 %
BP	17	17	17	17	17
Caltex	36	36	36	36	36
Mobil	14	15	15	13	13
Shell	29	27	27	28	29
Independent wholesalers	4	4	5	6	6

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

3.7.2 Types of wholesale sales

Independent retailers and supermarkets continued to be the most important wholesale customers of the four refiner-marketers in 2009–10 with 53 per cent of total wholesale sales (table 3.7). Refiner-marketer branded retailers represented the next largest customer group for the refiner-marketers with 35.8 per cent of total wholesale sales. This was followed by other wholesalers (resellers and distributors) with 7.2 per cent and other retailers with 3.9 per cent.

Table 3.7 Refiner-marketers' wholesale petrol sales by type of customer: 2007–08 to 2009–10

Type of customer	2007–2008 %	2008–09 %	2009–10 %
Resellers and distributors	9.8	9.3	7.2
Independent retailers (inc supermarkets)	50.6	51.3	53.0
R-M branded retailer	35.7	34.8	35.8
Other retailers	3.9	4.5	3.9

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

3.7.3 Structural changes in the wholesale market

Developments in 2009–10 that can affect the make-up of Australia's wholesale petrol market include:

- In March 2010, Coogee Chemicals purchased a neighbouring fuel terminal in Kwinana, Perth, owned by Gull Petroleum. Gull is a leading independent wholesaler, retailer and importer of petrol in the Western Australia market. These terminals are located in the Kwinana industrial estate south of Perth. Both are connected by pipeline to an import jetty and to the BP refinery. The purchase increased Coogee Chemical's storage capacity by 53 ML. It is understood that under the arrangement, Gull will continue to have access to the terminal, which will be operated by Coogee as an open industry terminal.

- Since the sale of the Gull terminal to Coogee Chemicals, Caltex and Shell have announced their intention to relocate from their jointly owned terminal in North Fremantle to the co-mingled Coogee terminal at Kwinana.
- On 25 August 2010, the ACCC initiated inquiries into the proposed acquisition by BP of Centrel Pty Ltd (trading under the name Reliance Petroleum). Reliance is one of BP's largest branded distributors supplying BP's fuel and lubricants in non-metropolitan areas. Reliance also operates a large network of BP branded retail sites. On 17 November 2010 the ACCC announced that it would not oppose the acquisition, concluding that the proposed acquisition was unlikely to substantially lessen competition in the relevant markets.
- In September 2010, United Petroleum acquired the assets and business of Gippsland Petroleum Group (GPG). United is one of Australia's leading independent wholesale and retail petrol companies with a presence in every state. GPG operated a wholesale business and ran 15 fuel and one non-fuel sites in Gippsland, Victoria. The ACCC did not consider that the transaction raised competition concerns.

3.8 Retailing

The Australian petrol retail sector is undergoing fundamental changes. The retail sector is the least concentrated sector in the Australian petroleum industry, where the position of the refiner-marketers is continuing to be eroded by the growing presence of specialist retailers. At the same time there appears to be a focus on higher-volume main road outlets offering an expanded range of non-fuel products. The long-term trend of rationalisation of service stations appears to have slowed.

3.8.1 Retail market share

The major trends in the retail sector evident in recent years continued in 2009–10 (table 3.8). Supermarkets increased their shares of the retail market while the refiner-marketers continued to reduce their involvement in retail operations.

Table 3.8 Share of volume of retail sales by brand: 2002–03 to 2009–10

	2002–03 %	2003–04 %	2004–05 %	2005–06 %	2006–07 %	2007–08 %	2008–09 %	2009–10* %
BP	20	20	18	19	19	19	19	17
Caltex	24	22	18	16	16	17	16	17
Coles Express/Shell	0	16	25	25	22	20	22	23
Mobil	19	17	12	11	11	13	11	7
Shell	20	3	3	3	3	2	2	2
Woolworths/Caltex	10	14	18	20	22	22	23	23
Other retailer chains	6	7	6	6	7	8	9	10

Source: 2007 ACCC petrol inquiry report and ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process

Note: *2009–10 data estimated by the ACCC on the basis of information provided by the monitored companies.

3.8.2 Retail business types

Petrol retailers in Australia can be separated into five broad types, categorised by the owner and operator of the business on the site:

- business owned and/or operated by a supermarket
- business owned and/or operated by a refiner-marketer
- business owned and/or operated by an independent retail chain
- business owned and/or operated by a franchisee, lessee or commission agent[15]
- business owned and/or operated by an independent retailer (including businesses operated by independent distributors, and other independents).[16]

The appearance of refiner-marketers' brand names on many petrol retail sites does not always provide an accurate indication of the owner or type of ownership structure. In most cases, petrol retail businesses are actually owned and/or operated by supermarkets, independent retailers, franchisees, or commission agents (table 3.9). The owner of a petrol retail business does not necessarily own the site.

Table 3.9 Percentage of monitored retail sites by brand and business operator[a]: 2009–10

	Business operated by[b]:					
Brand	Refiner-marketer %	Supermarket %	Independent retailer[c] %	Franchisee[d] %	Commission agent[d] %	Total %
BP	3.6	0.0	19.3	0.3	0.1	23.3
Caltex	1.0	0.0	17.5	3.5	2.7	24.7
Woolworths/Caltex (co-branded)	0.0	9.7	0.0	0.0	0.0	9.7
Mobil	0.0	0.0	5.8	5.0[e]	0.0	10.8
Shell	0.4	0.0	4.2	0.0	0.0	4.5
Coles Express/Shell (co-branded)	0.0	10.8	0.0	0.0	0.0	10.8
Independent retailers[c]	0.0	0.0	6.7	4.0	5.5	16.2
Totals	5.0	20.5	53.5	12.8	8.3	100.0

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

Notes: 2009–10 data estimated by the ACCC on the basis of information provided by the monitored companies. Totals may not add due to rounding.

a Data is only for monitored companies, does not include all retail sites in Australia.
b Sites are categorised by the operator of the business on the site.
c Includes businesses operated by distributors, independent retail chains and other independents.
d Excludes supermarkets.
e These sites were operated by Mobil's single multi-site franchisee, Strasburger Enterprises (Properties) Pty Ltd. Businesses on about half the sites were operated by SEP's commission agents. Mobil had a 50 per cent share in SEP. See sections 2.2.6 and 3.7.3 for details of Mobil's sale of SEP to 7-Eleven. Includes sites co-branded Quix.

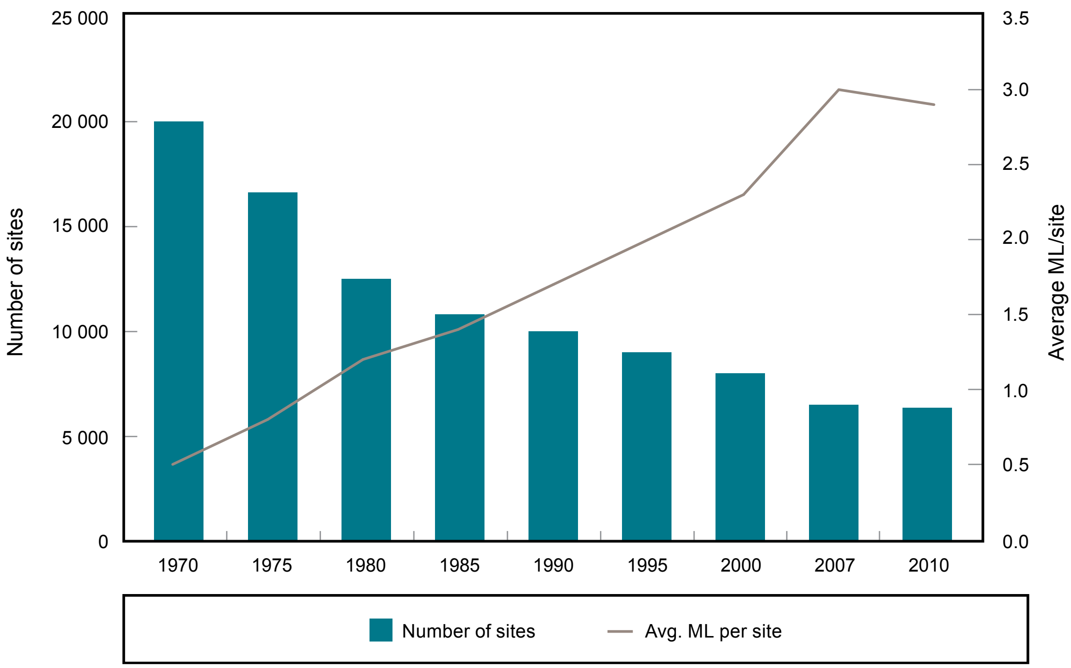
15 Commission agents generally manage a business owned by a refiner-marketer or independent chain, and are generally compensated in the form of a commission based on the quantity of product sold. Franchisees rent a site or a number of sites and source fuel from the franchisor and brand it accordingly. They may receive price support from the franchisor (wholesaler), providing some influence over the retail prices set by the franchisee.

16 Owners choose wholesale suppliers and set retail prices. They may agree to align their site with a particular wholesaler and receive fuel supplies and branding. For a description of retail industry structure refer to the ACCC 2007 petrol inquiry report, pp. 71–80 and 134–37.

3.8.3 Retail site numbers

The rationalisation of retail site numbers since 1970 has resulted in a significant decrease in the number of service stations and, when combined with higher fuel sales, a concomitant increase in average sales volumes per site. However, since 2007 there appears to be evidence of a slowing down in the rate of site rationalisation (chart 3.14). This, along with a fall in sales of unleaded petrol products in the past three years, has resulted in a slight fall in average petrol sales per site.

Chart 3.14 Number of retail sites and average annual petrol sales volume per site: 1970 to 2010



Sources: ACCC estimates based on data from reports of Royal Commission on Petroleum (1976), PSA (1990), ACCC (1996 and 2007), RET, the Bureau of Infrastructure, Transport and Regional Economics and Informed Sources

3.8.4 Structural changes in the retail market

In December 2009 the ACCC announced its decision to oppose the proposed acquisition of Mobil's retail assets and business by Caltex because it considered that it would likely lead to a substantial lessening of competition in contravention of section 50 of the Act. The ACCC concluded that the acquisition would increase the presence in the retail market of Caltex, which was considered one of the price leaders in the upward leg of the price cycle. The ACCC also considered that the most likely counterfactuals involved the purchase of Mobil's retail assets by 'retailers who do not lead and instead tend to lag the price restorations'.[17] This would be likely to lead to increase uncertainty in the retail market and lessen the potential for coordinated behaviour.

17 ACCC, Public Competition Assessment, Caltex Australia Limited – proposed acquisition of the retail assets of Mobil Oil Australia Pty Ltd, 9 February 2010, p. 15.

The ACCC's decision to oppose the acquisition by Caltex of Mobil's retail assets provided an opportunity for alternative acquirers of Mobil's retail business. In May 2010 Mobil announced the sale of its retail business operated by Strasburger Enterprises Pty Ltd (SEP). The transaction involved the sale of 295 retail sites, mostly operating under the 'Quix' trade name, to 7-Eleven Stores Pty Ltd (7-Eleven).

The Mobil/SEP service stations sold to 7-Eleven are geographically distributed as follows:

- Victoria: 103 sites
- Queensland: 46 sites
- New South Wales: 108 sites
- Australian Capital Territory: 8 sites
- South Australia: 30 sites.

In turn, 7-Eleven on-sold all retail sites in South Australia to Peregrine Corporation, which operates the On the Run network of service stations in that state. It is understood that Mobil and 7-Eleven reached agreement for Mobil to continue supplying fuel to the sites sold.

In its consideration of the sale of the Mobil retail business to 7-Eleven, the ACCC raised concerns about the acquisition by 7-Eleven of four of the sites: two in Queensland, one in New South Wales, and one in South Australia. The ACCC decided not to oppose the Mobil–7-Eleven transaction subject to the divestiture of those sites.

3.9 Concluding observations

The Australian petrol industry is undergoing profound changes.

This chapter has considered evidence indicating the following:

- demand for petrol products is increasing more quickly than domestic production
- Australia is increasingly reliant on imports to meet its fuel requirements
- independent imports of fuel are increasing
- the refiner-marketers are less dominant in the retail sector
- specialist retailers are improving their market penetration.

Some of the changes that are taking place, particularly in the retail petrol market, appear to be part of broader shifts in market positioning and strategies among the major players in the petroleum industry. Chapter 15 discusses some of these shifts in the context of developments in Australia and overseas.

4 International context

Key points:

- Crude oil is an internationally traded commodity with prices determined by the interplay of supply and demand in global markets.
- Crude oil prices are a major influence on international refined petrol benchmark prices and thus on Australian domestic retail petrol prices.
- Australia is a relatively small player in global oil and refined petrol markets, and as such petrol prices in Australia are heavily influenced by events in international markets for crude oil.

4.1 Introduction

Crude oil is the major input into the production of refined petrol.

While demand and supply conditions for crude oil and refined petrol may differ over time, in the long run the international benchmark prices for refined petrol are heavily influenced by prices of crude oil. As such, crude oil prices also exert a strong influence on Australian domestic wholesale and retail prices of refined petrol.

4.2 Crude oil supply

The list of major oil-producing countries can be separated into countries that are significant crude oil consumers and countries that are major oil-exporting countries and so contribute to world supplies of crude oil. Global sources of crude oil supply can be further distinguished in terms of countries that are part of the Organisation of Petroleum Exporting Countries (OPEC) and countries that are not members of OPEC.

OPEC is an intergovernmental cartel of some of the largest producers of crude oil in the world. OPEC has 12 active member countries: Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela. OPEC's stated object is to:

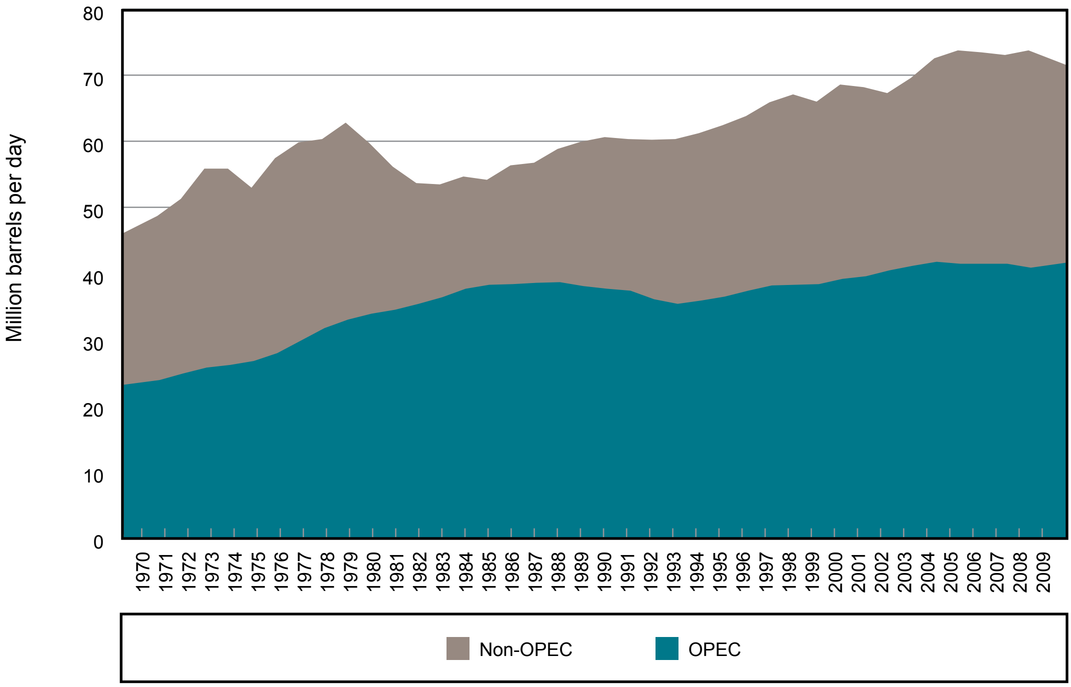
> *coordinate and unify the petroleum policies of member countries and ensure the stabilization of oil markets in order to secure an efficient, economic and regular supply of petroleum to consumers, a steady income to producers and a fair return on capital to those investing in the petroleum industry.*[18]

Some of the significant non-OPEC crude oil producing regions are North America (the US, Canada and Mexico), the former Soviet Union (FSU), the North Sea (Norway and UK), China and Brazil.

18 OPEC Mission Statement, www.opec.org.

As chart 4.1 illustrates, OPEC accounts for a significant share of global crude oil production.

Chart 4.1 OPEC and Non-OPEC oil production: 1970 to 2009



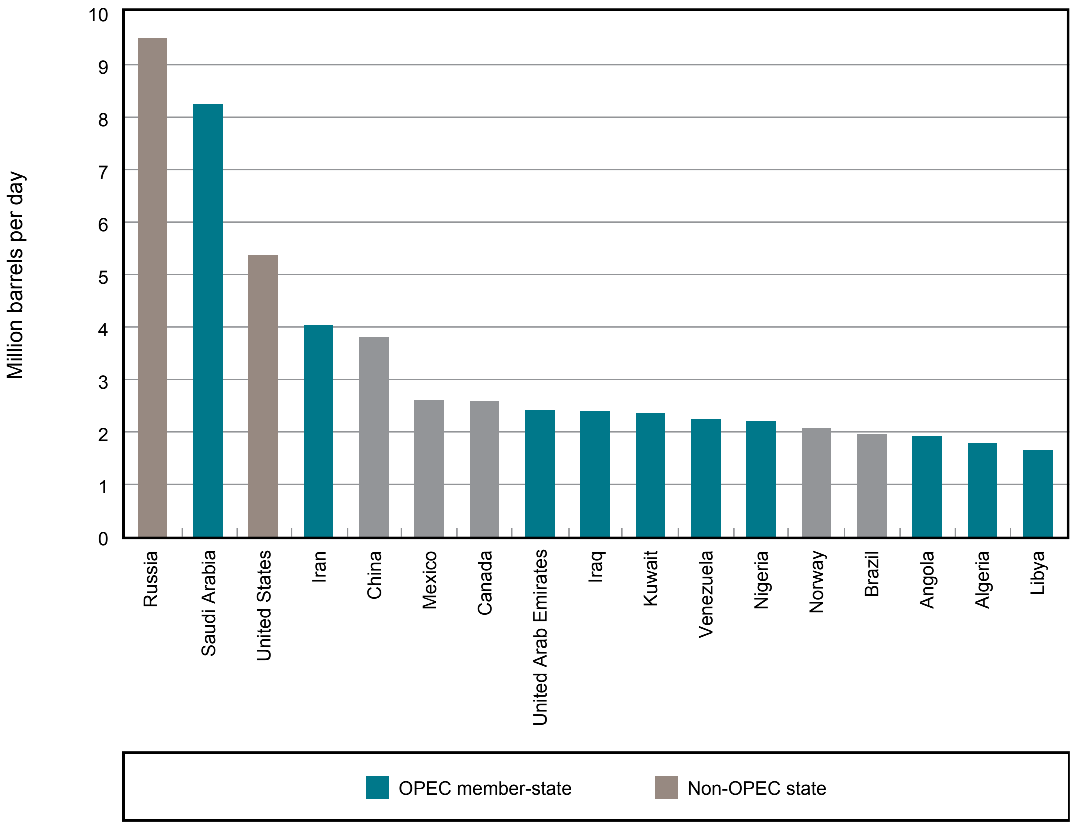
Source: ACCC calculations based on data sourced from US Energy Information Administration[19]

Chart 4.1 also demonstrates that the combined output of OPEC countries is more variable than the output of non-OPEC countries. This reflects the fact that oil producers in non-OPEC countries generally maximise production at given world oil prices while OPEC countries seek to vary output levels to maximise combined export revenues subject to global demand and supply conditions.

19 US Energy Information Administration, Table 11.5 World Crude Oil Production 1960-2009, http://www.eia.doe.gov/aer/txt/ptb1105.html

Globally, the largest producers in 2009 were Russia with an output of 9500 thousand barrels per day (kbpd), followed by Saudi Arabia with 8250 kbpd and the US with 5310 kbpd. Australia produced 476 kbpd of crude oil in 2009, ranking the 31st-largest crude oil producer in the world. Chart 4.2 shows that 10 of the 17 largest crude oil producers are OPEC member-states.

Chart 4.2 Global crude oil production by country: 2009

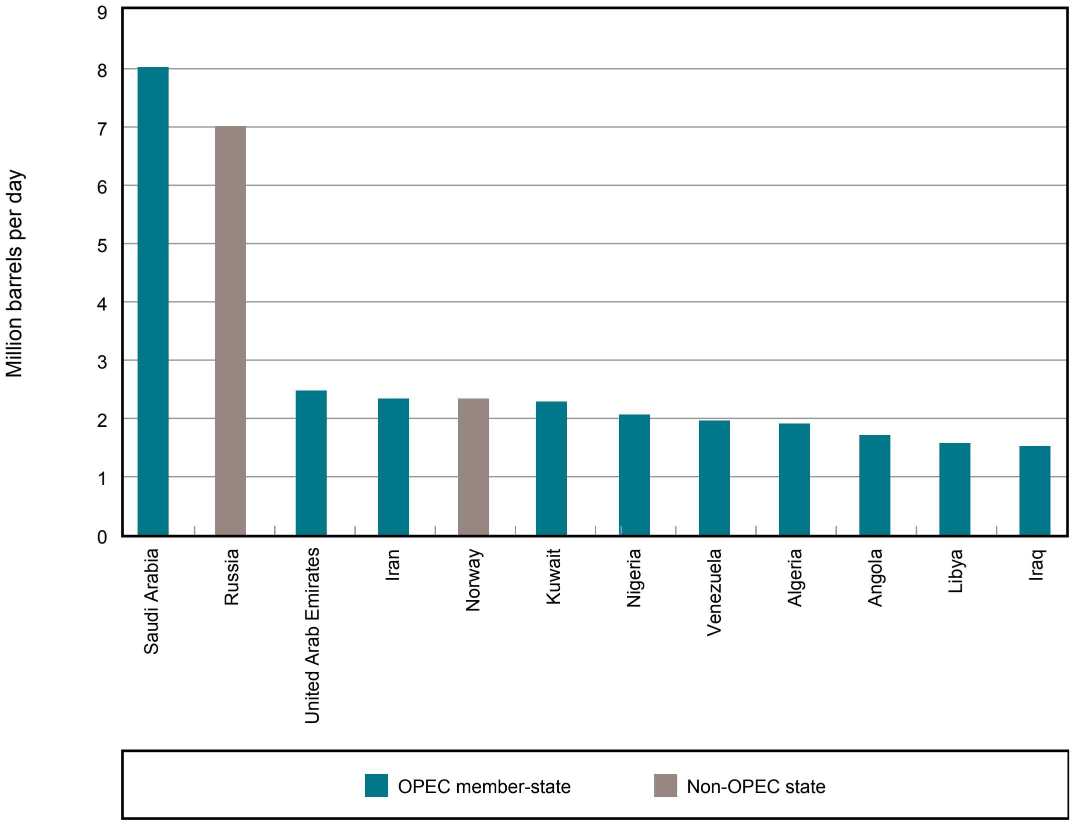


Source: ACCC calculations based on data sourced from US Energy Information Administration[20]

20 US Energy Information Administration, Country Energy Profiles, http://tonto.eia.doe.gov/country/index.cfm

Some non-OPEC countries also export significant quantities of crude oil. Russia and Norway are the largest exporters among non-OPEC countries. Chart 4.3 shows output data for the top 12 net crude oil exporters.

Chart 4.3 Top 12 world oil net exporters: 2008



Source: ACCC calculations based on data from US Energy Information Administration[21]

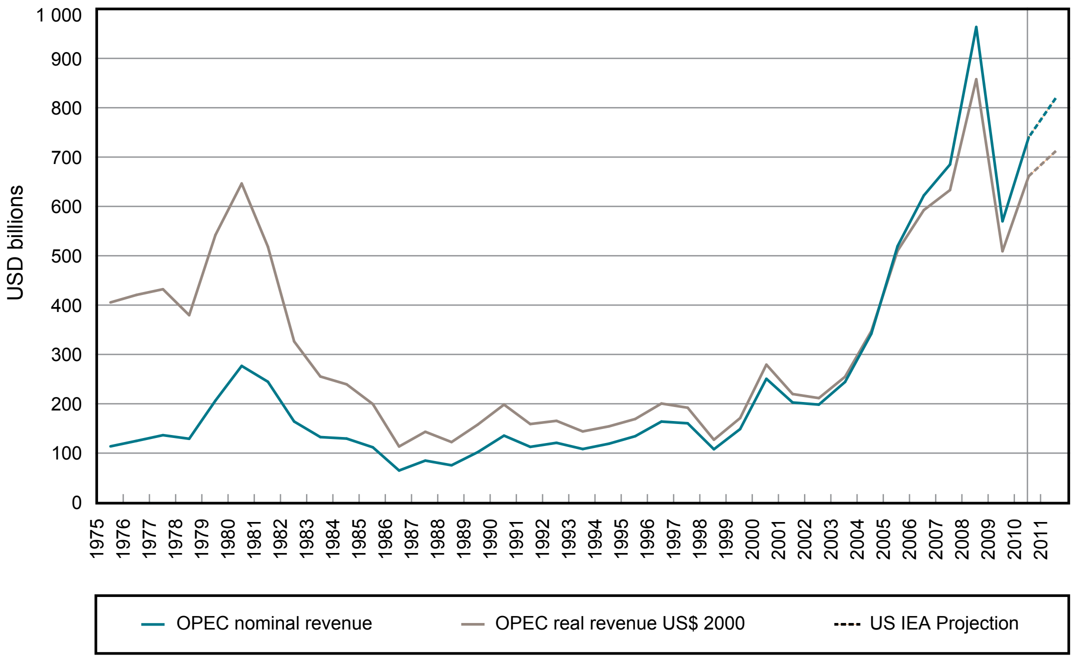
Chart 4.3 also highlights the importance of OPEC countries among exporting nations. Ten of the top 12 net crude oil exporters in 2008 were OPEC member-states. This highlights the influence that OPEC, as the swing producer, can have on the global crude oil market. A significant proportion of OPEC production is directed at countries in the Asia-Pacific region. According to OPEC data, in 2009, 49 per cent of OPEC crude exports flowed to Asia and the Pacific, 23 per cent to North America and 17 per cent to Europe, with the remainder to the rest of the world.[22]

21 US Energy Information Administration, Country Energy Profiles, http://tonto.eia.doe.gov/country/index.cfm

22 OPEC flows of crude oil and refined oil 2009, http://www.opec.org/library/Annual%20Statistical%20Bulletin/interactive/2009/FileZ/XL/Flow.xls

Based on projections from the US Energy Information Administration, OPEC members could earn $741 billion of net oil export revenues in 2010 and $818 billion in 2011. In 2009, OPEC earned $571 billion in net oil export revenues, a 41 per cent decrease from 2008. Saudi Arabia earned the largest share of these earnings ($153 billion), representing 27 per cent of total OPEC revenues. On a per-capita basis, OPEC net oil export earnings reached $1 547 in 2009.[23]

Chart 4.4 OPEC net oil export revenues: 1975 to 2011



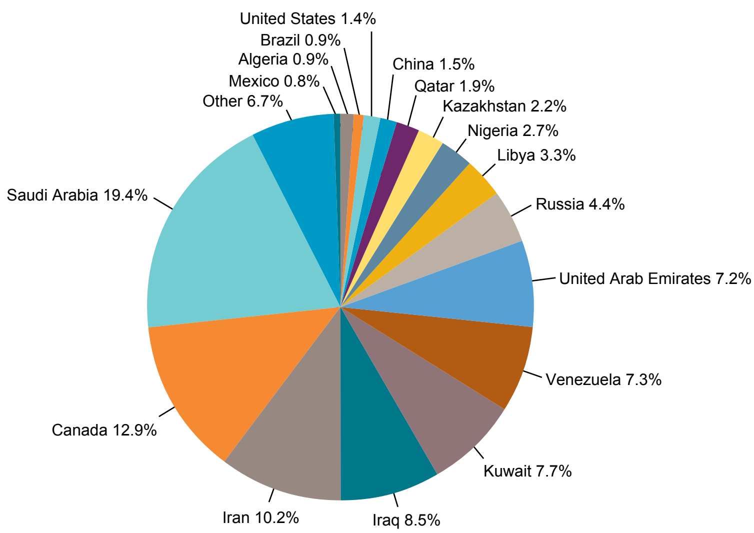
Source: ACCC calculations based on data sourced from US Energy Information Administration[24]

23 US Energy Information Administration, October 2010 Short-Term Energy and Winter Fuels Outlook, OPEC Oil Export Revenues, http://www.eia.doe.gov/emeu/cabs/OPEC_Revenues/Factsheet.html

24 US Energy Information Administration, OPEC Revenues Factsheet, http://www.eia.doe.gov/emeu/cabs/OPEC_Revenues/Factsheet.html

OPEC member states own a substantial proportion of global crude oil proved reserves.[25] In 2009 OPEC accounted for approximately 70 per cent of global crude oil proved reserves.[26] This suggests that, unless there is continued efficiency in the use of hydrocarbon fuels and greater use of alternative fuels, global oil production and exports may be increasingly dominated by OPEC as non-OPEC sources decline.[27] Countries with the most significant crude oil proved reserves are shown in Chart 4.5.

Chart 4.5 Country share of global crude oil proved reserves: 2010



Source: ACCC calculations based on data from US Energy Information Administration[28]

25 Proved reserves are estimated quantities that analysis of geologic and engineering data demonstrates with reasonable certainty are recoverable under existing economic and operating conditions. Note that the Canadian figure includes oil deposits in tar sands.

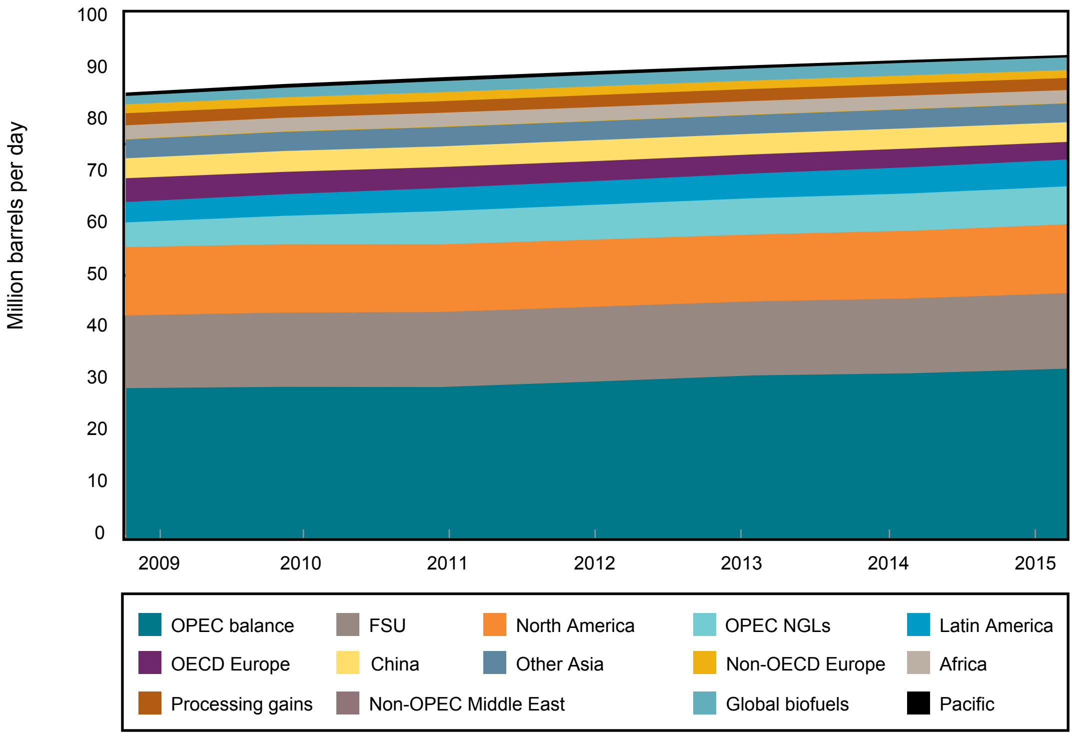
26 US EIA (2009) Table 11.4 World Crude Oil and Natural Gas Reserves, January 1, 2009, http://www.eia.doe.gov/emeu/aer/txt/ptb1104.html

27 US EIA (2009) Table 11.4 World Crude Oil and Natural Gas Reserves, January 1, 2009, http://www.eia.doe.gov/emeu/aer/txt/ptb1104.html

28 US Energy Information Administration, International Energy Statistics, Proved Oil Reserves, http://www.eia.doe.gov/cfapps/ipdbproject/iedindex3.cfm?tid=5&pid=57&aid=6&cid=&syid=2000&eyid=2010&unit=BB

According to the International Energy Agency (IEA), 'future world oil supply growth is likely to come from Latin America, Canadian oil sands, and the Caspian region and biofuels'.[29] This growth in biofuels, unconventional oil and natural gas liquids (NGLs) may offset any decline in non-OPEC conventional crude oil supply. Chart 4.6 shows data on future oil supply growth.

Chart 4.6 Projected oil supply: 2009 to 2015



Source: ACCC calculations using data sourced from the Internation Energy Agency[30]

Notes: FSU: Former Soviet Union.
OPEC NGL: OPEC production of natural gas liquid.
Processing gains: Net volumetric gains and losses in the refining process (excludes net gain/loss in China and non-OECD Europe) and marine transportation losses.
OPEC balance: a derived figure based on the residual between total projected demand and projected supply from all other non-OPEC sources of supply.

29 2010 Medium Term Oil & Gas Markets: Oil-Overview, supply, OECD/IEA ©2010; p. 23.

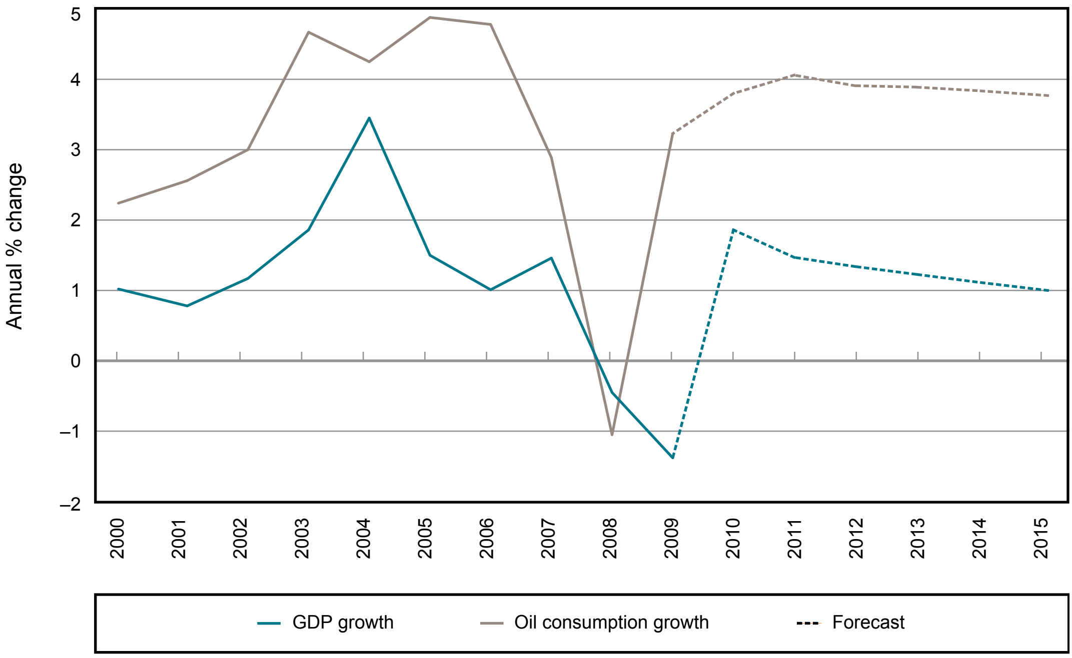
30 2010 Medium Term Oil & Gas Markets: Table 1 – World Oil Supply and Demand, © OECD/IEA; p. 127.

4.3 Crude oil demand

Global oil consumption is closely linked with global economic activity.

Since 2000, growth in global consumption of oil has averaged about 1.0 per cent per annum. However, the global economic downturn resulted in a contraction of oil consumption in 2008 and 2009. Chart 4.7 illustrates that changes in global oil consumption between 1999 and 2009 broadly followed movements in global economic growth. World economic growth slowed due to the Global Financial Crisis (GFC) reducing oil consumption. As global economic growth is expected to recover, world oil consumption is also expected to increase.

Chart 4.7 Global annual GDP and oil consumption growth: 2000 to 2015



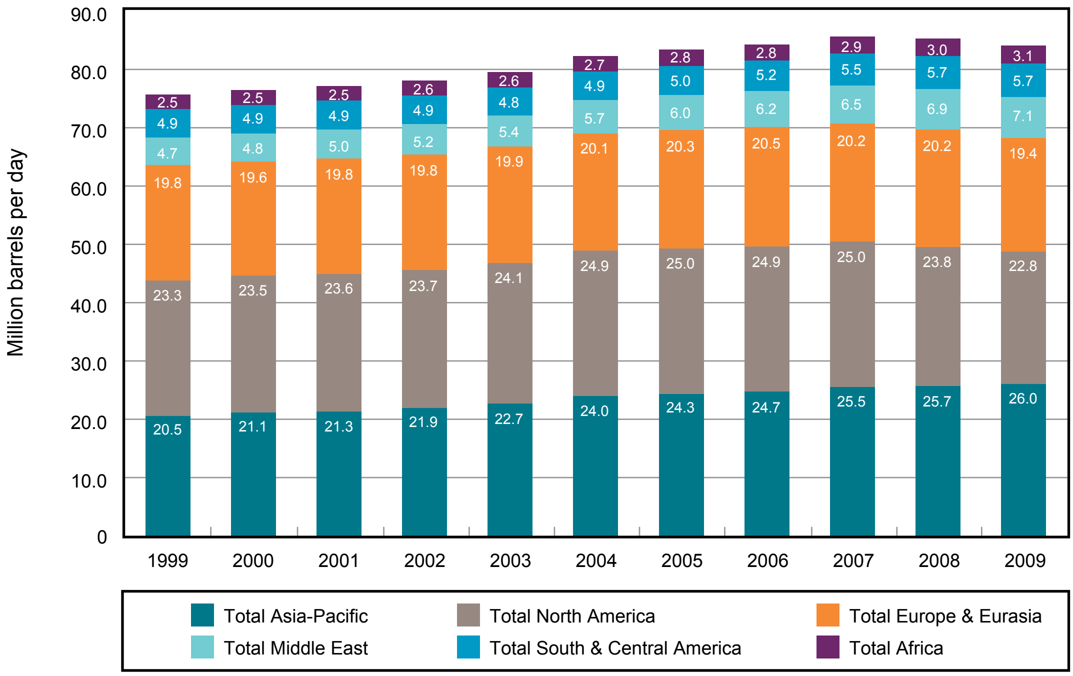
Source: ACCC calculations using data sourced from: the US Energy Information Administration[31]

Note: Dashed lines represent forecasts.

31 US Energy Information Administration 'Figure 21. OECD and Non-OECD total gross domestic product, 1990–2035 (USD trillion 2005)' http://www.eia.doe.gov/oiaf/ieo/excel/figure_21data.xls and 'International Energy Statistics', http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=54&aid=2.xls

Between 1999 and 2009, global oil consumption increased by approximately 10 per cent. This growth in consumption has been driven mainly by the Asia-Pacific region, particularly China and India. Between 1999 and 2009, consumption by China and India increased by 48.1 per cent and 33.0 per cent respectively. This is in contrast to consumption changes over the same period in the US and the Europe–Eurasia region (including the Russian Federation), which decreased by 4.5 per cent and 2.0 per cent respectively. The significant contraction in consumption in US and Europe has occurred since the GFC started in 2007–08. Chart 4.8 illustrates the changes in global oil consumption between 1999 and 2009.

Chart 4.8 World oil consumption: 1999 to 2009

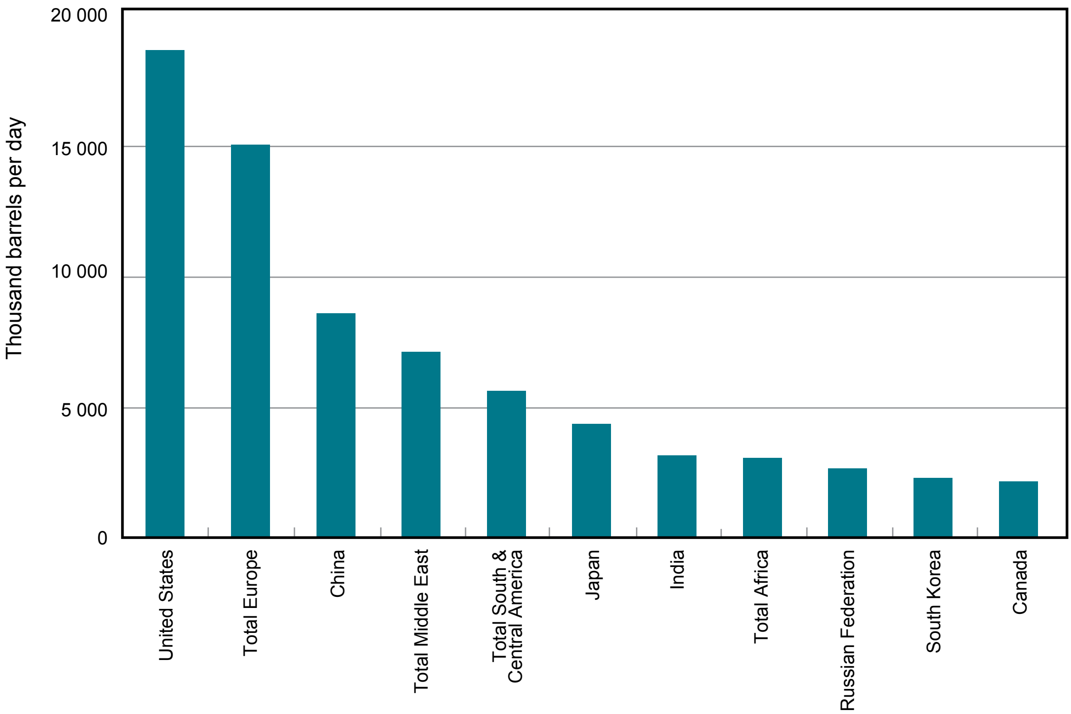


Source: ACCC calculations based on *BP statistical review of world energy,* June 2010[32]

32 *BP statistical review of world energy,* June 2010, Oil Consumption, http://www.bp.com/liveassets/bp internet/globalbp/globalbp uk english/reports and publications/statistical energy review 2008/STAGING/local assets/2010 downloads/statistical review of world energy full reoprt 2010.pdf

There has been significant divergence in the oil consumption growth rates between the contracting economies in the US and Europe and the emerging Asian markets in China and India. However Europe and the US remained by far the largest oil consumers in 2009 (see chart 4.9).

Chart 4.9 Ten largest crude oil consumers: 2009



Source: ACCC calculations based on BP statistical review of world energy June 2010[33]

4.4 Oil prices

Crude oil prices fluctuated within a comparatively narrow (and historically low) band through the second half of the 1980s and most of the 1990s. It was not until 2003 that prices escalated to new heights and continued to rise until mid 2008. With the onset of the GFC crude oil prices fell in response to weaker demand, particularly by developed countries. Crude oil prices then recovered somewhat, but since mid-2009 prices have again fluctuated in a comparatively stable pattern.

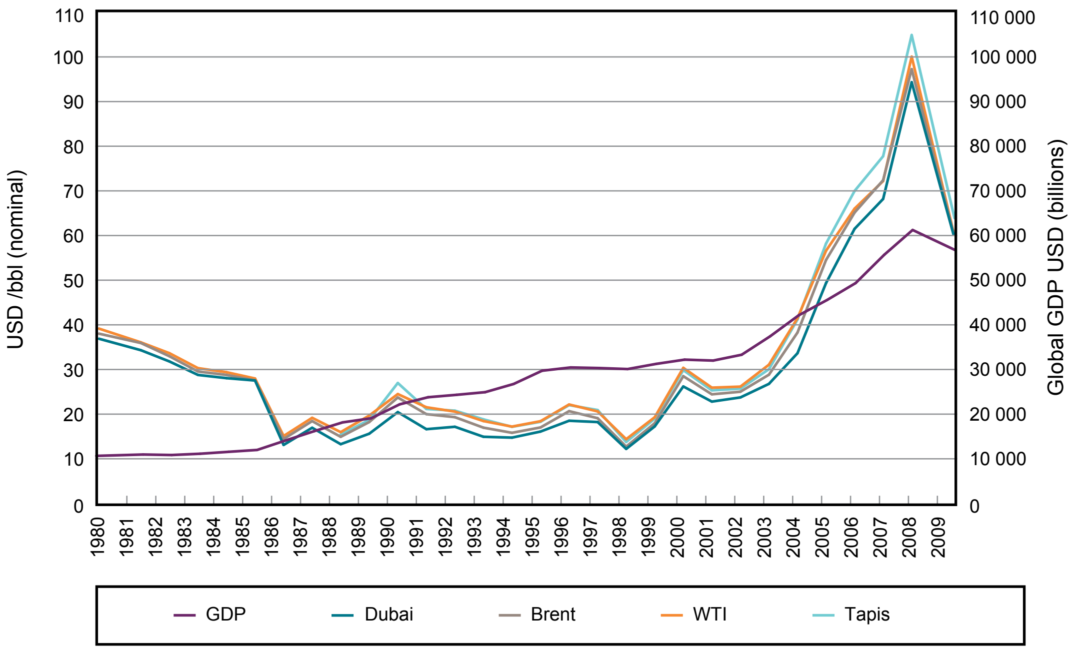
While there are periods when crude oil prices deviate from the global Gross Domestic Product (GDP) growth path (the most obvious divergences occurred in the early 1980s and then again in the mid- to late 2000s), in the long run, there is a close relationship between changes in economic growth and changes in crude oil prices.

33 *BP statistical review of world energy,* June 2010, Oil Consumption, http://www.bp.com/liveassets/bp internet/globalbp/globalbp uk english/reports and publications/statistical energy review 2008/STAGING/local assets/2010 downloads/statistical review of world energy full report 2010.pdf

Chart 4.10 shows a comparison of global GDP growth with average annual prices of four major international benchmarks for crude prices since 1980: West Texas Intermediate (WTI), Brent Crude, Dubai crude and Malaysian Tapis crude.

WTI is a benchmark for crude oil prices in the North American trading region, while Brent Crude and Dubai Crude are used as the basis for price benchmarks in the European and Middle East regions respectively. Tapis is a benchmark for crude oil prices used in the Asia-Pacific region. Tapis[34], WTI[35], Brent[36] and Dubai[37] crudes are light crudes with an American Petroleum Industry (API) gravity index of 45, 40, 38 and 31 respectively. The API gravity index is a measure of the weight of oil relative to water. In the case of Tapis, WTI, Brent and Dubai crude, they are considered light enough to float on water. Tapis, WTI and Brent are considered sweet crudes because their sulphur content is less than 0.5 per cent (0.03 per cent, 0.24 per cent and 0.37 per cent respectively). Dubai has sulphur content of 2 per cent and is classified as sour crude.

Chart 4.10 Average annual prices of WTI, Brent and Dubai crude price benchmarks and global GDP: July 1980 to September 2010.



Source: ACCC calculations based on *BP statistical review of world energy* June 2010[38]; and IMF, *World Economic and Financial Surveys, World Economic Outlook,* October 2010[39]

34 See Energy Intelligence at: http://www.energyintel.com/DocumentDetail.asp?Try=Yes&document_id=225607&publication_id=103.

35 See US Energy Information Administration at http://tonto.eia.doe.gov/ask/crude_types1.html

36 ibid.

37 See http://www.mees.com/postedarticles/oped/v51n04-5OD01.htm

38 *BP statistical review of world energy* June 2010, Spot Crude Prices, http://www.bp.com/liveassets/bp internet/globalbp/globalbp uk english/reports and publications/statistical energy review 2008/STAGING/local assets/2010 downloads/statistical review of world energy full report 2010.pdf

39 International Monetary Fund, *World Economic and Financial Surveys, World Economic Outlook,* Database—WEO Groups and Aggregates Information, October 2010, http://www.imf.org/external/pubs/ft/weo/2010/02/weodata/download.aspx

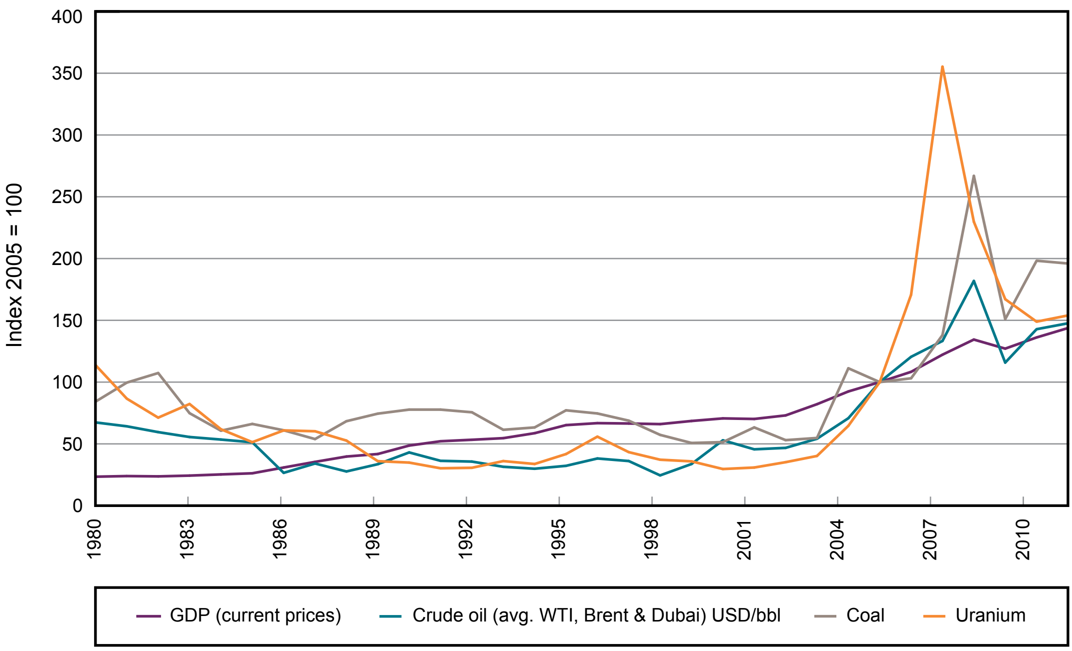
It is evident from chart 4.10 that the four international crude oil benchmark prices track each other very closely. Malaysian Tapis crude is generally priced at a premium compared to the other crude oil benchmarks[40] because of its lower sulphur content.[41]

While changes in oil demand closely mirror changes in economic activity, in the very short run prices of crude oil are affected by myriad factors. As a globally traded commodity, prices of crude oil are determined by the interplay of a complex set of factors, including market perceptions about the outlook for future supply and demand and geopolitical instability. As a result, prices sometimes fluctuate markedly around global activity levels.

4.4.1 Movements in crude oil prices compared with other commodities

Overall, crude prices have not risen as much as prices of many other globally traded commodities, particularly energy sources. Chart 4.11 shows movements in average prices of crude oil, coal and uranium compared with movements in global GDP since 1980. Data is presented in index form to facilitate comparisons.

Chart 4.11 Index of global GDP, real oil and energy commodity prices: 1980 to 2010; 2005 = 100



Source: ACCC calculations based on IMF, *World Economic and Financial Surveys, World Economic Outlook,* October 2010[42]

It is evident from price trends since 1980 that crude prices have generally been less volatile than prices of other energy commodities such as coal and uranium.

40 This does not necessarily translate into higher prices for refined fuel. The sweeter the crude oil, the less de-sulphurisation is required during the refining process.

41 See *Energy Bulletin* at: http://www.energybulletin.net/node/31348

42 International Monetary Fund *World Economic and Financial Surveys, World Economic Outlook,* Database—WEO Groups and Aggregates Information, October 2010, http://imf.org/external/pubs/ft/weo/2010/02/weodata/Download.aspx

4.5 Future influences on crude oil prices

Predicting future crude oil prices is difficult. Future prices will be determined by a complex interplay of factors, including ongoing demand for refined fuels, the costs of finding and extracting new, as well as existing, oil deposits and demand for and supplies of alternative fuels and energy systems. In addition, there is the ever-present threat (to which the crude oil market is particularly sensitive) of geopolitical uncertainty. This section highlights some of the factors that may affect prices in the longer term.

Supply factors

Crude oil development and extraction activity will clearly be influenced by, and in turn be a major determinant of, future prices. In the final analysis, the economics of finding and extracting new supplies of crude oil depends on estimates of associated costs and revenues.

Crude oil exploration

Evidence on the costs of finding and extracting crude oil is not widely available. Evidence from a US study suggests that on average, 'finding and development' costs have risen from approximately US$3 million per well in 2000 to almost US$7.5 million per well in 2008.[43] Other evidence suggests that the cost of finding new oil increased from US$1.20 per barrel in 2002 to almost US$3.00 per barrel in 2009.[44]

OPEC has also reported that exploration and extraction costs have risen in recent years:[45]

> *The average worldwide unit capital cost of adding one new barrel of oil or gas had more than doubled since 2000, due on the whole to higher finding and development costs.*
>
> *Moreover, the cost to find and develop the marginal barrel had almost tripled.*

It is difficult to forecast future supply costs because, as noted by OPEC[46] at any one time cost trends may contain cyclical and structural components. The costs of some inputs rise and fall over time subject to cyclical demand and supply patterns, for example, steel and cement. Other cost changes may be structural in that they reflect permanent changes in underlying or fundamental factors. For example, changes in technology can lead to a permanent reduction in exploration/extraction costs. On the other hand, the exhaustion of known and easily recoverable oil reserves means higher costs in the future as companies are forced to move to less accessible areas; exploring deeper wells, in further offshore and inhospitable places, increases physical, geological, technical and even regulatory and political risks.

The viability of future exploration is likely to depend crucially on the interplay between cyclical and structural cost factors and future price levels. As none of these variables are easy to predict, it is likely that risks associated with finding and extracting crude oil will remain uncertain.

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43 IHS Herold, Inc. and Harrison Lovegrove & Co Ltd, *2009 Global Upstream Performance Review*, 23 September 2009, see http://press.ihs.com/article_display.cfm?article_id=4135. Also article in *Financial Times,* Finding new oil gets ever more expensive, 23 September 2009, see http://blogs.ft.com/energy-source/2009/09/23/finding-new-oil-gets-ever-more-expensive/.

44 Reuters, *ANALYSIS – Oil exploration costs rocket as risks rise*, 11 February 2010. See http://uk.reuters.com/article/idUKLDE6191WK.

45 OPEC, *World Oil Outlook,* 2009, p. 118, at http://www.opec.org/opec_web/static_files_project/media/downloads/publications/WOO%202009.pdf.

46 Ibid.

Recent data from the annual reports of the four major global petrol companies shows that their upstream activities, including oil exploration and extraction, have been considerably more profitable than the downstream activities of refining and marketing. Chapter 15 presents data on revenues earned by the four major global vertically integrated companies on downstream and upstream activities since 2003.

Non-conventional oil supplies

There are significant deposits of hydrocarbons in the form of heavy oils, as well as in tar sands and shale oil deposits. However these deposits require far more processing, and thus are generally more expensive, than traditional oil deposits. Non-conventional oil supplies are also generally more carbon dioxide intensive and thus would be disproportionally affected by any carbon-pricing regime.

Alternative energy sources

Alternative sources of energy are, and will likely remain in the foreseeable future, a marginal source of transport fuel. However, in the medium to longer term, the continued growth of supplies of alternative fuels could have an impact on the viability of marginal crude oil deposits and future crude oil prices. For a discussion of some of the alternatives to crude oil derived transport fuels see chapter 15.

Biofuels

Analysis of biofuel markets by the International Energy Agency (IEA) reveals that globally:[47]

> *Biofuels production is expected to rise sharply in 2010 and to see continued growth thereafter, with output increasing from 1.6 million barrels per day in 2009 to 2.4 million barrels per day in 2015.*
>
> *...By 2015, around 5.7 per cent of gasoline demand on an energy content basis will be met by ethanol, and 1.5 per cent of gasoil by biodiesel.*

Chart 4.12 shows projected biofuels supply growth for various countries and regions.

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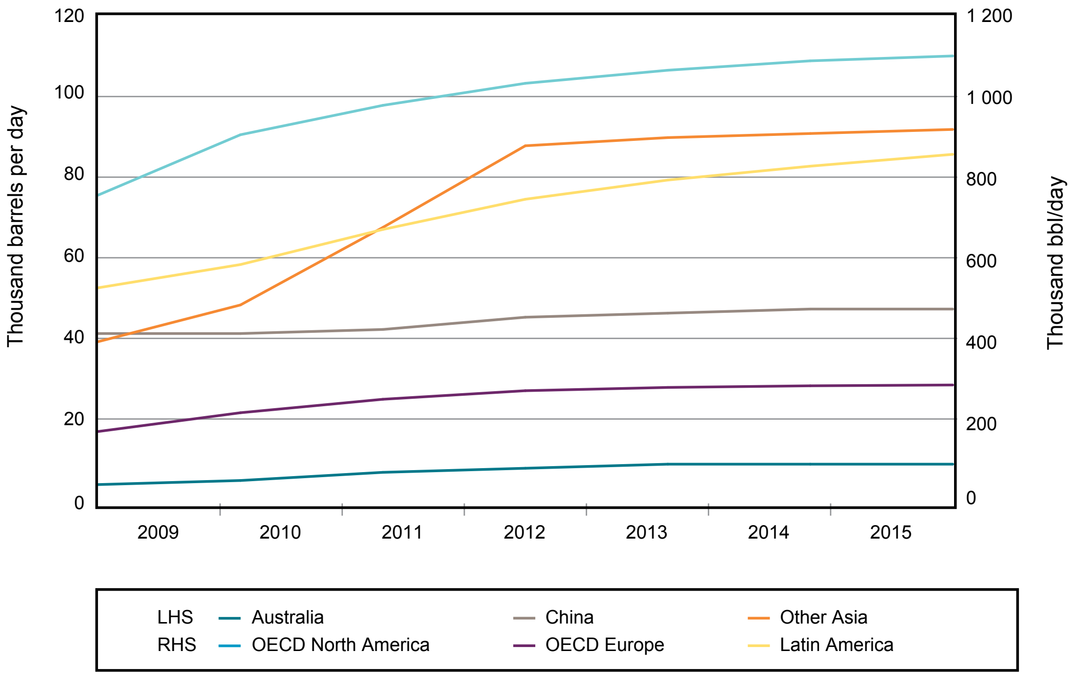
47 International Energy Agency, *Medium-Term Oil and Gas Markets 2010 © Report*, p. 24.

Chart 4.12 Projected global biofuels supply: 2009 to 2015



Source: ACCC calculations based on data sourced from: 2010 *Mid-term oil & gas markets report,* Table 4: World Ethanol Production and Table 4A: World Biodiesel Production, © OECD/IEA, 2010 International Energy Agency[48]

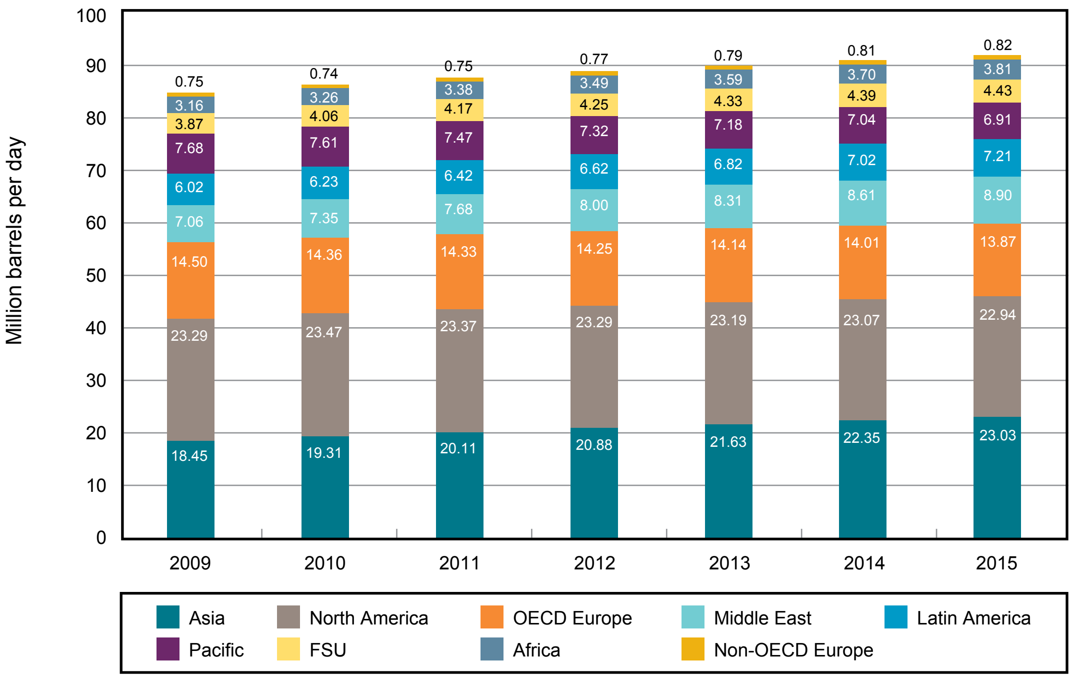
The emergence of biofuels in the Australian market is explored in chapter 6.

48 International Energy Agency, *Medium-Term Oil and Gas Markets 2010 Report,* Table 4: World Ethanol Production, p. 133 and Table 4A: World Biodiesel Production, p. 134, © OECD/IEA, 2010 International Energy Agency.

Demand factors

It is anticipated that the trend in the past decade of increasing oil consumption in the Asia-Pacific region compared with stable or even declining oil consumption in the US and Europe, is likely to continue. Forecasts from the IEA suggest that 'non-OECD demand may reach 52 per cent of the world total by 2015'.[49] Chart 4.13 illustrates the changing regional contribution to world oil demand and the projections suggest that the regional demand shifts identified up to 2009 will continue.

Chart 4.13 Projected change in crude oil demand: 2009 to 2015



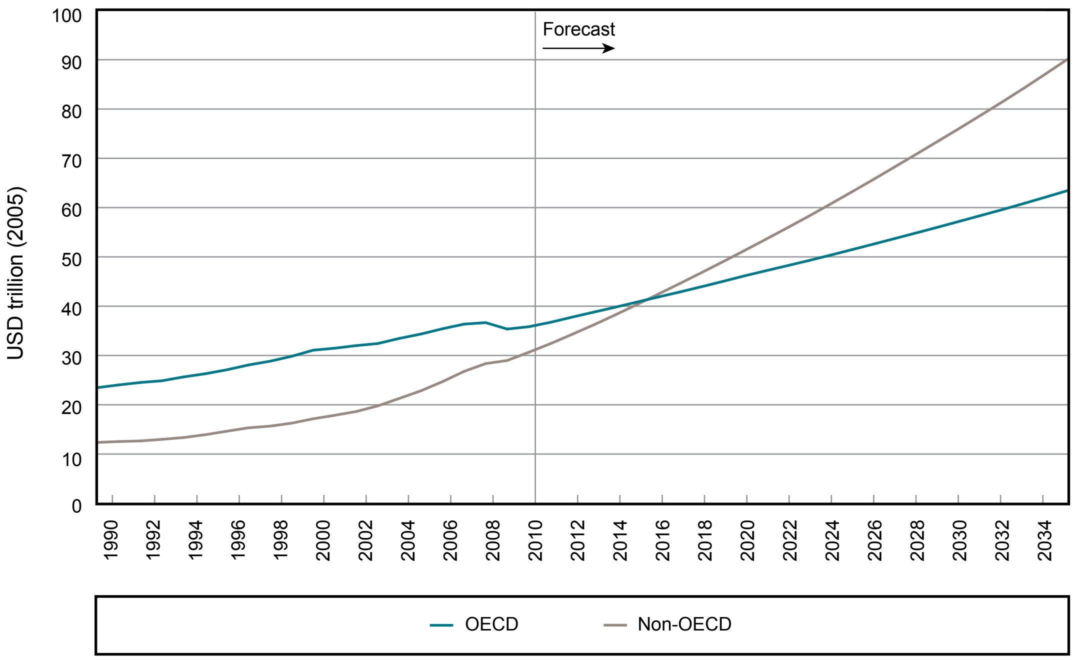
Source: ACCC calculations based on data sourced from the International Energy Agency[50]

The distinction in the demand characteristics of mature developed economies and emerging economies is best illustrated by separating economically developed countries that are member-states of the Organisation for Economic Cooperation and Development (OECD) and countries with emerging economies, which are not members of the OECD. The US Energy Information Administration forecasts the combined size of non-OECD economies to exceed the size of OECD economies in 2016 (see chart 4.14). This highlights the continuing shift in the share of the global economy away from developed economies. This shift is expected to continue to drive global oil demand.

49 2010 *Medium-Term Oil & Gas Markets:* Oil – Overview, Demand, OECD/IEA © 2010, p. 23.

50 International Energy Agency, 2010, *Medium-Term Oil & Gas Markets*, Table 1: World Oil Supply and Demand, © OECD/IEA, p. 127.

Chart 4.14 Projected OECD/non-OECD GDP: 1990 to 2035



Source: ACCC calculations based on data from the US Energy Information Administration[51]

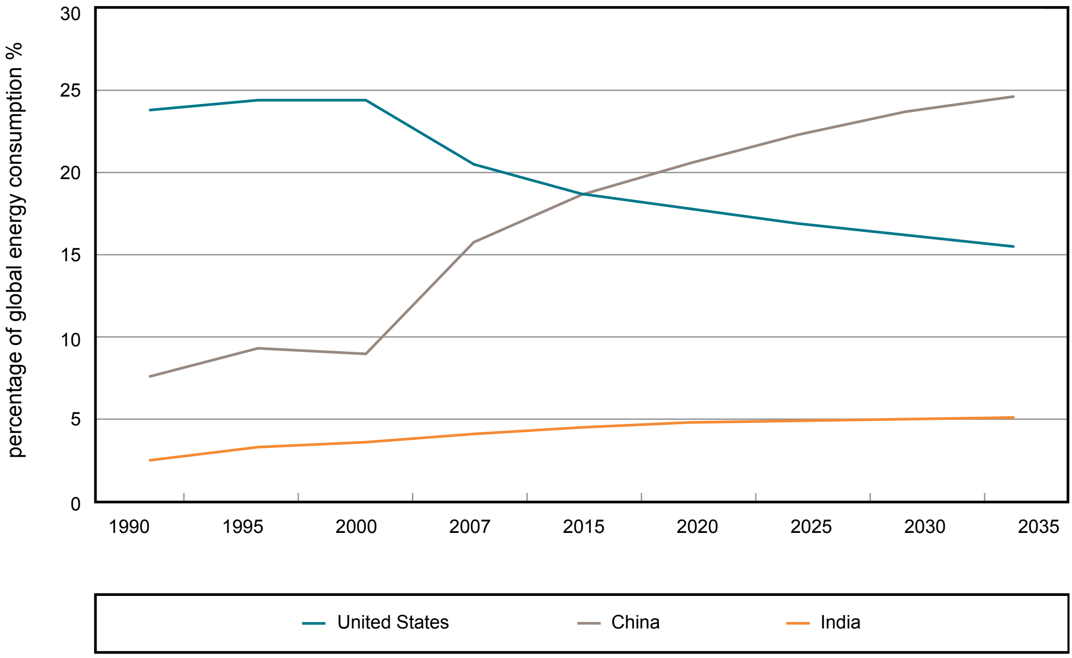
The economies of the developing world tend to have greater oil intensity than the developed world. Oil intensity can be defined as oil consumption per unit of GDP. A change in oil intensity over time is akin to how much less (or more) oil is required to produce a unit of output at a given point in time compared with the previous timeframe.

Oil intensity is influenced by many variables including industry structure, the price of oil, the price of substitutes, and the evolution of technologies and government policies. The manufacturing and construction sectors tend to be far more oil intensive than the services sector. Therefore developing countries that have rapidly growing construction and manufacturing sectors generally have greater oil intensity than the developed world, which tends to have a large services sector. Thus rapid economic growth in developing countries such as China and India will increase global demand for oil more than the same growth in the developed world.

51 US Energy Information Administration, Figure 21: OECD and Non-OECD total gross domestic product, 1990–2035 (USD trillion 2005), http://www.eia.doe.gov/oiaf/ieo/excel/figure_21data.xls.

Chart 4.15 illustrates the changing national shares of global energy consumption from 1990 to 2035, based on predictions made by the US Energy Information Administration[52].

Chart 4.15 Shares of world energy consumption, US, China and India: 1990 to 2035



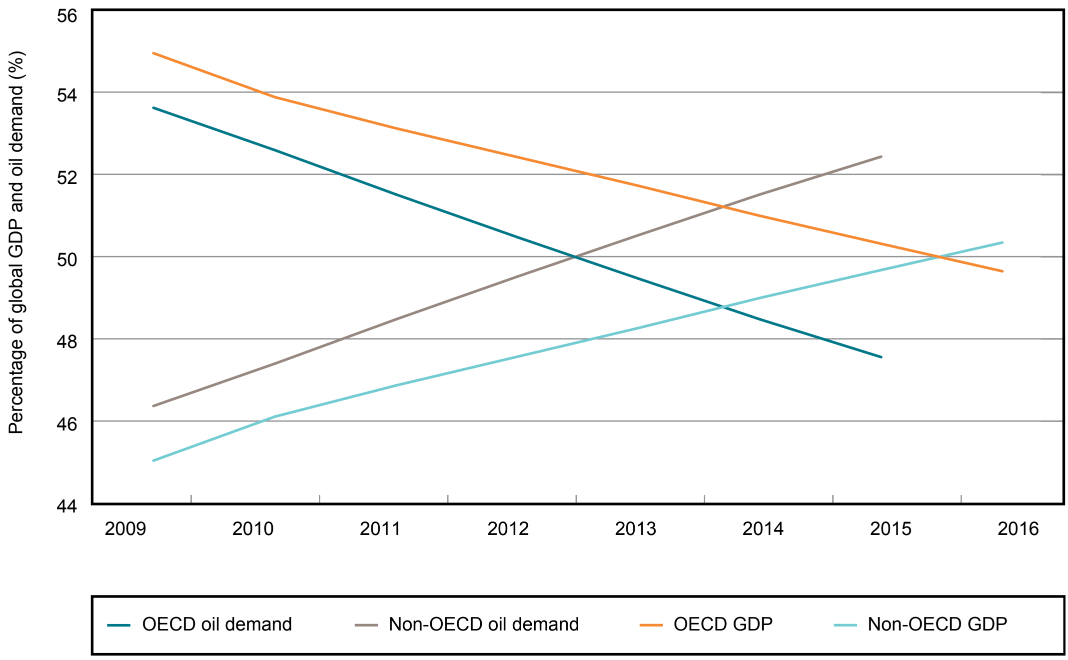
Source: ACCC calculations based on data from the US Energy Information Administration

While oil demand up until 2009 has continued to be characterised by a structural shift from developed economies to emerging economies, in absolute terms developed economies remain the largest global consumers of oil.

52 US Energy Information Administration, Shares of world energy consumption in the United States, China, and India, 1990–2035 (percent of world total), http://www.eia.doe.gov/oiaf/ieo/excel/figure_14data.xls.

Beyond 2009, the combined trends of stable or declining oil consumption in OECD countries and ever-growing oil consumption in emerging economies will result in non-OECD consumption of oil outstripping that of developed economies. Chart 4.16 illustrates that non-OECD oil demand is likely to exceed OECD oil demand around 2012, while the combined size of non-OECD economies will outstrip OECD economies in 2016.

Chart 4.16 OECD and non-OECD projected percentages of global GDP and oil demand growth: 2009 to 2016



Source: ACCC calculations using data from: *Mid-term oil & gas markets report*, Table 1: World oil supply & demand, © OECD/IEA, 2010[53] and the US Energy Information Administration[54]

If these trends continue to develop as projected, it is possible that considerable ongoing global demand for oil may persist despite efficiency gains and moves towards alternative sources of energy.

4.6 Other international influences on Australian prices

Another factor that could impact supplies and prices of fuel in Australia is the availability of refining capacity. As Australia becomes more reliant on imports of refined fuel, security and prices of supplies will increasingly depend on the availability of fuel in the region.

Data from the latest BP Statistical Review of World Energy[55], suggests that in 2009 the average rate of capacity utilisation in refineries around the world declined in response to weaker demand for refined fuel following the GFC. In most regions of the world, refineries were operating between 70 and 85 per cent of capacity in 2009.

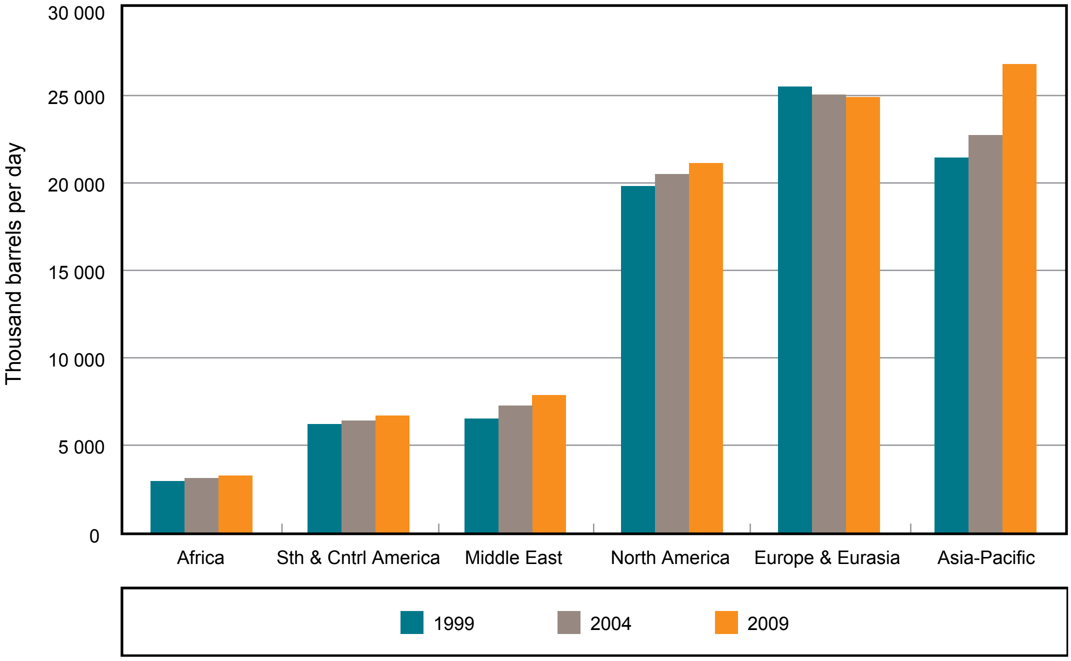
53 *Medium-Term Oil & Gas Markets Report*, Table 1: World Oil Supply & Demand, © OECD/IEA, 2010, p. 127.

54 US Energy Information Administration, Figure 21: OECD and Non-OECD total gross domestic product, 1990–2035 (USD trillion 2005) http://www.eia.doe.gov/oiaf/ieo/excel/figure_21data.xls.

55 *BP Statistical Review of World Energy,* June 2010, at p. 19, http://www.bp.com/bodycopyarticle.do?categoryId=1&contentId=7052055.

Refineries in the Asia-Pacific region now account for the largest share of refining capacity in the world. Chart 4.17 shows the growth in world refining capacity by regions since 1999.

Chart 4.17 World refinery capacity: 1999, 2004 and 2009

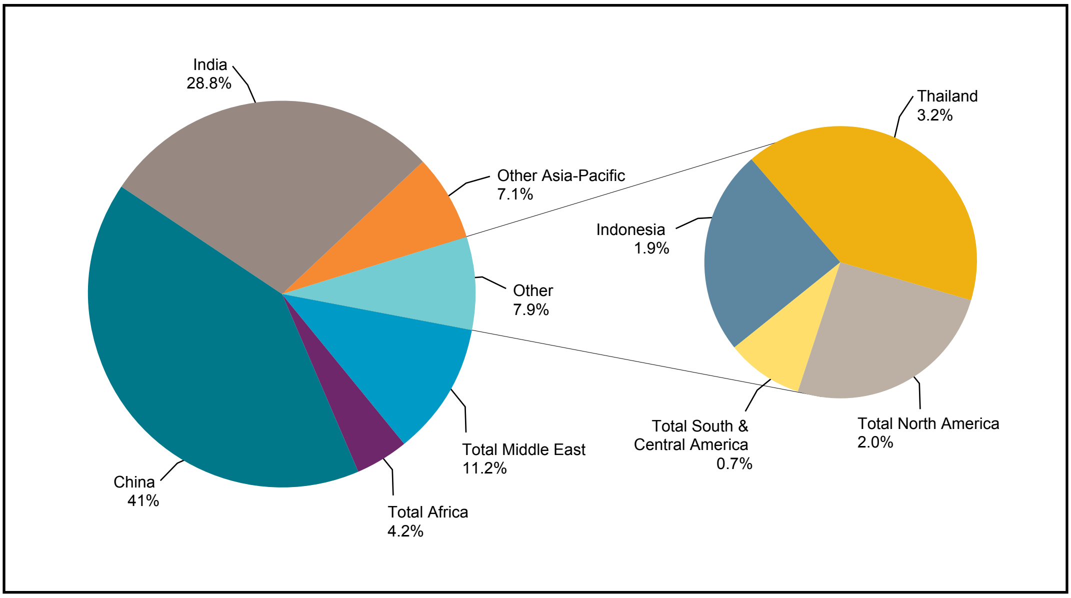


Source: ACCC calculations based on data from *BP Statistical Review of World Energy,* June 2010

With refining capacity of 26.8 million barrels per day, the Asia-Pacific region has surpassed total capacity in Europe and Eurasia. Since 1999, capacity in Asia-Pacific has grown by 25 per cent. Asia-Pacific now accounts for approximately 30 per cent of the world's refining capacity, up from 26 per cent in 1999. Europe and Eurasia now accounts for 27.5 per cent of world capacity compared with 31 per cent in 1999.

Refining capacity in other regions of the world has not changed significantly. Most of the increase in refining capacity in the Asia-Pacific region since 1999 has taken place in refineries in China and India (see chart 4.18).

Chart 4.18 Share of growth in world refining capacity: 2008–09



Source: ACCC calculations based on data from *BP Statistical Review of World Energy*, June 2010[56]

While China's growth in capacity has mostly serviced its increasing needs for refined fuel, the growth in India's refining capacity, including at the Reliance refinery in Janmagar, may have created spare capacity for exports. Being a high-complexity facility, the Reliance refinery is capable of refining fuel to a very broad range of standards, including Australian standards.

That said, some concerns exist that global refinery capacity may come under pressure as governments around the world move to cleaner fuels. There is limited scope for refineries to meet lower sulphur specifications without significant new processing investment, principally, in hydropocessing equipment. Some refinery capacity may be lost as marginal refineries not able to justify the cost of new equipment close.[57]

4.7 Final observations

Crude oil and refined fuel are internationally traded commodities. The price of crude oil is the most important determinant of benchmark prices of refined fuel. Global oil prices are set through the interplay of global demand and supply conditions with the OPEC cartel having a significant influence of the price of oil. Since movements in Australian retail petrol prices closely follow international market prices, movements in global oil markets will continue to impact Australian consumers.

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56 BP Statistical Review of World Energy, June 2010, http://www.bp.com/bodycopyarticle.do?categoryId=1&contentId=7052055.

57 See, for example, The Emerging Oil Refinery Capacity Crunch – a global clean products outlook; Summer 2005, at: http://www.icfi.com/markets/energy/marketing/refinery-capacity.pdf.

5 The potential for independent imports

Key points:

- Australia does not produce enough refined fuel to satisfy domestic demand and depends on imports of refined fuel for its marginal supply. This dependence is likely to grow in the future. The refiner-marketers account for the bulk of Australia's imports of refined fuel.
- Independent wholesalers and resellers face a number of challenges in importing fuel as an alternative to purchasing their fuel from refiner-marketers.
- However, availability of fuel meeting Australian standards in the Asia-Pacific region is increasing, providing greater opportunities for independent imports.
- Imports from independent wholesalers and resellers have been somewhat opportunistic, but have grown in recent years and help maintain a competitive discipline in the market.

5.1 Foreign and domestic challenges to importing cargoes of fuel into Australia

It was noted in chapter 3 that on the basis of recent trends, it appears likely that Australia will increasingly rely on imports to meet its future fuel requirements.

The majority of fuel imports are undertaken by the refiner-marketers, who also own most of the import infrastructure in Australia for clean petroleum product.[58]

While imports are currently a marginal source of supplies, a viable independent import sector can be effective in maintaining competitive discipline on the refiner-marketers.

Independent wholesalers and resellers operating in Australia can purchase petrol and diesel from one or more refiner-marketers locally, or can import their own fuel.

If an independent reseller decides to import fuel instead of sourcing it from the refiner-marketers, it may encounter some or all of these challenges:

- availability of Australian-standard fuel from foreign sources
- access to cost-effective import infrastructure
- ability to obtain economic supply
- increased risks (e.g., currency risk, commodity price risks).

58 Crude oil goes through a refinery before going to the consumer and so can tolerate greater levels of contaminants than refined products which have to be transported and stored using separate 'clean' infrastructure.

5.2 Improving availability of Australian-specification unleaded petrol and diesel

Historically, one of the most challenging difficulties faced by potential Australian independent importers has been locating sustainable sources of Australian-standard fuels.

To minimise import freight costs, it is more economical for importers to source fuels from the closest physical location. The Asia-Pacific region is the most economic source of fuels for Australia. For example, source refineries for imports to Australia's west coast locations could include Singapore, Malaysia and potentially India. For imports to Australia's east coast, source refineries could include North Asian export refineries such as Japan, South Korea, Taiwan and potentially Russia.

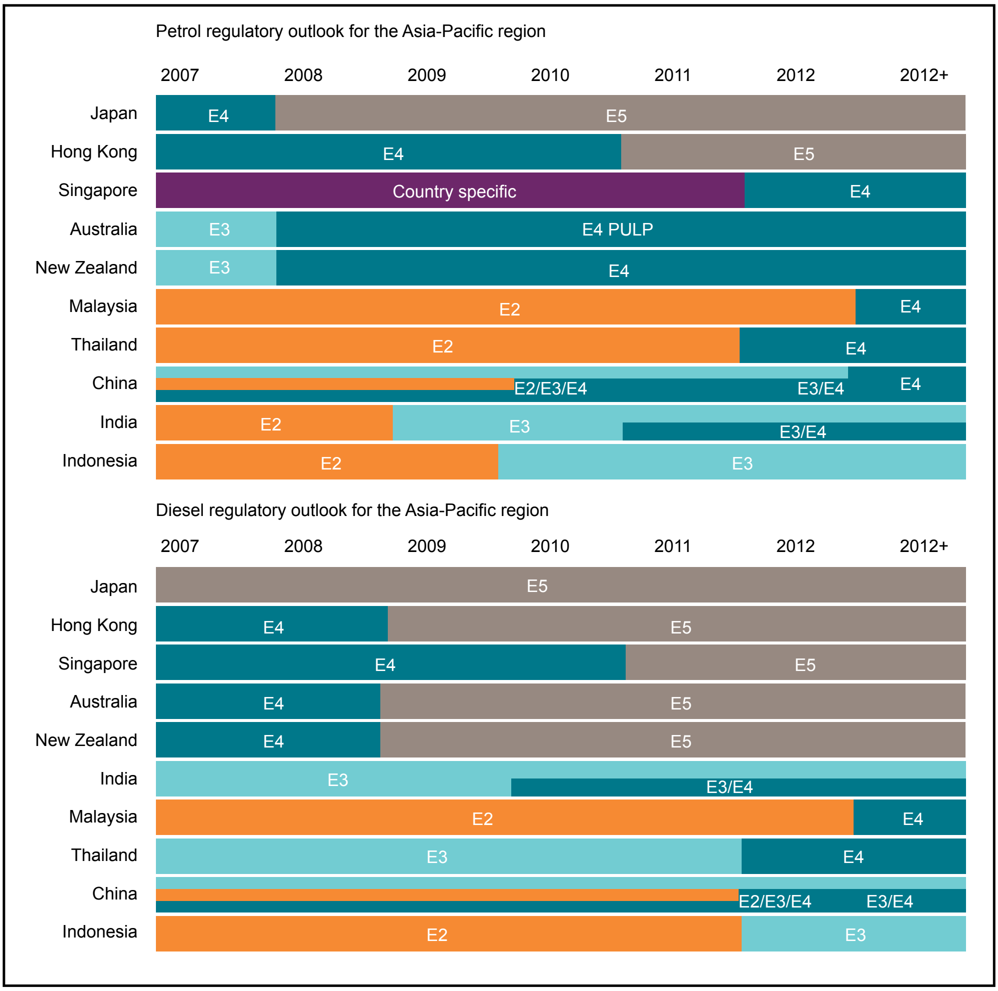
Refiners in Asia will generally be the most economic and reliable source of product imports for Australia, particularly while there is refining overcapacity in the region. As Asian demand increases for cleaner fuels and if regional refining overcapacity is reduced, Australia may need to compete for regional export production. However, it is generally anticipated that required import volumes will continue to be secured at prevailing market prices. From time to time, there can be periods when unusual market circumstances mean that imports from locations outside the Asia-Pacific region are also viable. However, these are generally opportunistic, one-off cargoes that are not generally repeatable on a regular and consistent basis.

From 2002, Australia tightened fuel specifications for petrol and diesel. At the time, Australian-specification fuels were more difficult to import, as there was less export capacity and capability among independent refiners in Asia to meet Australia's clean fuel specifications.

More recently, however, there has been improved availability of Australian-specification fuels as additional complex refinery capacity in Asia has been commissioned.

Many independent refiners in Asia have invested in significant desulphurisation capacity to meet European-specification diesel, which is increasingly becoming the standard in our region (see figure 5.1). In so doing, they have also developed the capability to meet Australian-specification diesel.

Figure 5.1 Regional fuel specifications over time



Source: Australian Institute of Petroleum, 'Downstream Petroleum 2009'

Note: Euro standards (E2, E3, E4, E5) relate mainly to the reduction of sulphur in petrol and diesel, although they also set standards for other product parameters such as benzene and other aromatics, olefins, cetane, density, lead and oxygen.

For sulphur levels in petrol: E2 sets the limit at 500 ppm, E3 at 150 ppm, E4 at 50 ppm and E5 at 10 ppm.
For sulphur levels in diesel: E2 sets the limit at 500 ppm, E3 at 350 ppm, E4 at 50 ppm and E5 at 10 ppm.

Regular cargoes of Australian-specification diesel have been economically imported into Australia from independent refiners in Japan, South Korea, Taiwan and Malaysia. Most of the cargoes have been imported by the refiner-marketers.

The recent additions to complex refining capacity in Asia have provided an increased supply of the clean unleaded petrol components required to blend Australian-specification RULP (91RON).[59] The increased supply combined with the decreased demand for unleaded petrol from Europe, US and Japan following the Global Financial Crisis, has increased the focus of some regional refiners on Australia as an export market.

59 There still remain some challenges, however, to economically importing Australian PULP (95 RON and 98 RON) and Western Australian specification – RULP grades.

Imports of diesel, and to a lesser extent petrol, by refiner-marketers from related and independent refineries in Asia continue to increase. This trend is likely to continue for the foreseeable future, particularly as diesel demand is forecast to rise more quickly than Australian domestic refining capacity.

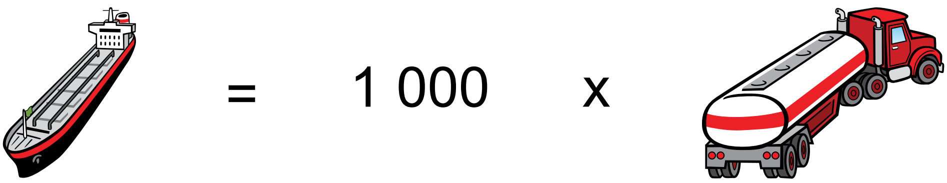
5.3 Access to cost-effective import infrastructure

For independent resellers, obtaining access to import infrastructure at a competitive price (whether by owning or leasing) is another significant challenge.

The most efficient and economic way to import fuel is by vessel with a minimum 30 000 metric tonnes (MT) cargo, fully loaded at one port and fully discharged at another port. Mid-range vessels are commonly used to import fuels into Australia and carry approximately 30 000 MT. The most critical import infrastructure required to support the import of a 30 000 MT cargo is adequate tank storage and sufficient draft at the initial discharge port.[60] Other important infrastructure considerations include port and jetty access, pipeline capacity and gantry capacity.

The minimum 30 000 MT cargo equates to approximately 36 megalitres (ML) of diesel or approximately 40 ML of petrol. By comparison, a tanker truck may hold approximately 35 000 litres or 1/1000th of a mid-range ship cargo (see figure 5.2).

Figure 5.2 Volume of a standard mid-range vessel for importing fuel is approximately equivalent to 1 000 tanker trucks



Source: ACCC

To support an import cargo of 30 000 MT of fuel at one discharge port would require access to at least 40–45 ML of clean tank storage to efficiently discharge the cargo. The extra tank storage capacity is an allowance for buffer stock to manage any increases in deliveries and to avoid running out of stock in the event of any vessel delivery delays. The amount of buffer stock required would depend on the volume of stock delivered per month, the ability to resupply locally, the supply chain length and the consequences to the business of running out of stock.

Another important infrastructure requirement to support the import of a minimum 30 000 MT cargo of fuel, is a draft of approximately 11–12 metres at the first discharge port in Australia. The exact draft of the loaded vessel would depend on the dimensions and loading configuration of the vessel. The draft available at a discharge port location would depend on factors such as the port and channel configuration, the tide on arrival, berthing and departure of vessel and under keel clearance allowance required by the port authorities.

60 The 'draft' is the depth to which a vessel is immersed when bearing a given load.

Figure 5.3 provides a schematic representation of the characteristics of major Australian ports and import terminals. Independently owned import terminals are shown in table 5.1. As noted in chapter 3, some of these terminals may have spare capacity.

Figure 5.3 Australian major oil infrastructure

Source: Prepared by RLMS Pty Ltd for the ACCC

Table 5.1 Selected independently owned import terminals: Draft and storage capacity

Terminal location	Owner	Capacity (ML)	Draft (m)	Comments
Botany	Vopak	Petrol: 248 Diesel: 99	14.0	
Botany	Terminals Pty Ltd	Diesel: 14	14.0	
Port Kembla	Manildra Park	Currently bunker fuel	9.5	Could be used to import petrol.
Darwin	Vopak	Petrol: 68 Diesel: 56	11.5	
Eagle Farm	Neumann	Petrol: 21.7 Diesel: 22.4	9.1	Draft will be 10.4m when pipeline is completed in February 2011.
Bundaberg	Marstel	Under refurbishment	9.7	Could be used to import petrol and/or diesel
Port Alma	Marstel	Diesel: 23	9.2	
Bell Bay	Marstel	Petrol: 20 Diesel: 25	12.0	
Hastings	United	Petrol: 62.7 Diesel: 29.2	15.0	
Kwinana	Coogee Chemicals	Petrol: 50 Diesel: 27	12.4	Includes former Gull terminal

Sources: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process; DeRiSC Pty Ltd; ACIL Tasman for DRET, *Petroleum Infrastructure in Australia*, August 2009.

Other important infrastructure considerations relate to the logistical capacity at the discharge port location. The vessel's length and physical measurements would need to fit within acceptable limits at the discharge location port and berth. The importer would also need to secure a discharge-berthing window, pilots and tug boats to assist with managing the discharge of the vessel in a timely manner. There would need to be sufficient pipeline capacity to be able to discharge the cargo in approximately 24–36 hours to avoid incurring demurrage[61]; and sufficient gantry availability to enable the timely removal of product by truck or rail.

5.4 Ability to obtain economic supply

The Australian benchmark price for economic supply for independent resellers is the price paid by the refiner-marketers, as they represent the alternative source of supplies.

For many major capital city locations where it is logistically feasible, the ocean freight cost per litre for fuels is calculated on a 30 000 MT cargo loading in one port, Singapore, and discharging into another port in Australia. Import parity pricing (IPP)[62] uses this basis for the ocean freight calculation. If a discharge port location is logistically constrained by tank storage and/or draft restriction, the ocean freight cost per litre may be based on a second port discharge as the most economic alternative.

61 Demurrage in this context is a cost incurred by the vessel charterer for additional time taken beyond the 72 hours allowance provided to load and discharge the vessel. The financial penalty is generally calculated as USD per day. The demurrage rate is negotiated as a term of the charter. For example, a demurrage rate for a 30 000 MT vessel could typically be 24 000 USD per day or pro-rata period 1 000 USD per hour.

62 See chapters 7 and 8 for a detailed discussion of the IPP concepts for PULP and RULP, respectively.

5.4.1 Minimum efficient scale of imports

For an independent reseller, the viability of imports as an alternative source of fuel depends on two things: its ability to achieve minimum efficient scale of imports into competitive locations such as major capital cities; and finding a market for its fuel at a price based on the Australian benchmark price for fuel.

For an independent reseller, if a discharge port location has less than 40–45 ML tank storage capacity and/or draft restrictions, additional costs for freight and product could be incurred and may result in the cargo being uneconomic compared with prices offered by the refiner-marketers. The increased freight cost results from the diseconomies of small-scale operation.

If spot-chartered for a specific voyage, the minimum freight lump-sum cost is usually based on a cargo load of 30 000 MT, regardless of the size of the cargo actually loaded. This means that on a per litre basis, the smaller the cargo the higher the freight cost. The magnitude of the higher freight cost per litre (for the smaller load compared with freight cost per litre for the 30 000 MT load), depends on the actual loaded volume and the agreed freight lump sum cost. This will in turn depend on the strength of the shipping freight market (freight charges are negotiated and may vary according to demand and supply conditions).

Shipping a non-standard cargo size can also increase product costs. For diesel and petrol cargoes traded in Asia, the standard cargo size is approximately 30 000 MT. If, for example, only 20 000 MT is able to be loaded on the vessel due to tank storage constraints or draft limitations at the discharge port, an incremental premium per barrel may be charged by the supplier. This is to compensate the supplier for having to deal with a non-standard small cargo and the resulting supply chain inefficiencies. Some refiners/suppliers may refuse to sell a cargo significantly smaller than 30 000 MT.

To improve the economics of importing fuels into Australia, cargo optimisation across ports may be an option. For example, if port A has 10 000 MT tank capacity and port B has 20 000 MT tank capacity, then a vessel may still take an initial load of 30 000 MT and discharge it at the two ports, provided that there is sufficient draft at port A. This improves the freight economics compared with two separate cargoes of 10 000 MT and 20 000 MT. If the importer is in control of the two discharge ports, the opportunity to optimise across ports is improved.

For an independent reseller with limited tank capacity, loading two product grades, for example, petrol and diesel on the same vessel from one load port is desirable. This, however, is difficult to achieve consistently and economically. The two products would likely be treated as two small non-standard cargoes, and therefore attract an incremental premium.

The ability to achieve minimum efficient scale of imports may be constrained by the lack of a domestic market for petrol. In recent years, a number of independent resellers and specialist retailers have established sufficiently solid customer bases to justify importing fuel rather than purchasing it from the refiner-marketers. Refiner-marketers have reduced their presence in the retail market over the course of the last few years and this has provided smaller independent operators with an opportunity to develop a substantial customer base.

5.4.2 Minimum volume throughput at an import terminal

To manage both quality control and working capital costs, it is common for terminal owners to aim to turn tanks (that is, have them filled and emptied) every three months. Based on economic cargoes of 30 000 MT, one cargo per three months, the minimum volume per annum at a location is approximately 120 000 MT (approximately 145 ML diesel per annum or 162 ML petrol per annum). This would be the expected minimum volume throughput at a terminal where import of 30 000 MT was possible. As shown in chapter 3, on average, independently owned import terminals in Australia have a turnover rate of over six times per annum.

5.5 Other risks

Other significant risks for an independent importer are price risk, currency risk and freight risk.

The price and currency risks occur because of the time lag between buying and selling imported fuel. In a domestic transaction, often the supply of fuels for an independent reseller is measured in truck tanker loads of approximately 35 000 litres. The terminal gate price for a tanker load of fuel can change daily or every few days predominantly due to changes in the market price of refined fuel, freight prices and the AUD–USD exchange rate. A reseller might buy a tanker load of fuel and on-sell this fuel within the day or next few days and take on little or no price risk. As all terminal gate prices in Australia are expressed in AUD, an independent reseller purchasing fuel from a refiner-marketer would buy in AUD and sell in AUD and therefore would not be exposed to foreign currency risk.

On other hand, if an independent reseller imports fuel into Australia, the cargo of fuel would be approximately 35 ML, instead of 35 000 litres, magnifying any risks. The importer's purchase price for the cargo is likely to be specified in USD, unless otherwise agreed. As it would probably take weeks for the cargo to be sold in Australia (possibly months, for smaller independent operators), there is a greatly increased risk of losses due to adverse product price, freight cost or exchange rate movements. An importer could find that its price of supply is now above current market levels and that it cannot profitably sell its fuel due to international market price movements beyond its control. In a volatile market significant losses could be incurred unless these price risks are managed.

It may be possible for a reseller to effectively hedge the price and currency risks; however, it is more difficult to effectively hedge the freight component due to a lack of liquidity in markets for Asian freight instruments. Of the three risks, freight would be a smaller component than refined petrol price and currency risk. While there are transaction costs and basis risks[63] associated with using hedging instruments, for an independent reseller the risks of being unhedged are significant.

For an independent importer, other risks include supply chain risk and product specification risk. An importer takes custody of the product earlier in the supply chain, for example, upon discharge of the product from the vessel into a terminal in Australia, rather than at the truck-loading gantry or upon delivery to the retail site. The importer would therefore be responsible for ensuring the supplier performs as agreed, and in the event of a *force majeure* where the supplier is excused from performing, the reseller would be responsible for arranging alternate supply.

If the importer takes custody of the product into the import terminal, the reseller would be responsible for all legislated specifications of the imported product while in the terminal and upon sale from the terminal. The reseller would also be responsible for correcting any product specification issues.

63 Basis risk is the risk that the change in price of a hedge may not match the change in price of the particular asset it hedges, leaving the purchaser exposed.

5.6 The likelihood of significant volumes of independent imports into Australia

Based on recent trends in refining capacity in Australia and demand for petrol and diesel, it is likely that the shortfall in local supply will continue to be largely filled by imports from the Asia-Pacific region, mainly by the refiner-marketers (see further data and comments in chapter 3).

Given the challenges involved, the likelihood of significant volumes of product being imported from the Asia-Pacific region, or elsewhere by existing or new independent resellers in the near future, remains uncertain. Even with improved availability of Australian-specification diesel and motor gasoline from Asian suppliers, there still remain a number of key challenges.

That said, there is no question that the increasing availability of Australian-specification fuel at competitive prices in our region provides a window of opportunity for Australian independent importers.

In the past few years, some of the larger independent wholesalers/importers have invested in infrastructure designed to improve their importing capability. These companies have also developed sizeable retail networks; hence they have a ready-made customer base for their imports. Partly as a result of this, the past two years have seen marked increases in independent imports, albeit from a low base.

In addition, the development of a significant market presence by retail chains such as Woolworths, Coles Express and 7-Eleven provides them with the critical mass required for economic imports.

The growth of independent imports and of the potential to import by independent and specialist retail chains are among a broader range of changes occurring in the Australian petrol industry. A more detailed discussion of these changes is presented in chapter 15.

5.7 Final observations

This chapter has described some of the challenges faced by independent resellers who wish to source their fuel directly from an overseas supplier as an alternative to purchasing fuel from domestic refiner-marketers.

Evidence available to the ACCC suggests that independent imports have grown considerably in the past two years.

Given the challenges involved and the relatively low margins to be made, independent wholesalers/importers have tended to operate opportunistically. They look to increase their levels of imports when competitively priced supplies are not available from the refiner-marketers and there are inexpensive and adequate supplies of Australian-standard fuel in accessible overseas markets.

Depending upon margins in the Australian domestic fuel market, in the future it may also become economically viable for other independents, or even retail chains, to import in their own right or contract with an existing independent importer. In particular, the growth and development of Australia's independent import sector provides alternative sources of imported fuel for established retailers with large customer bases.

While they currently operate on the market fringes, the existence of current and potential independent importers provides an important source of competitive discipline on the broader market.

6 Biofuels

Key points:

- Biofuels are becoming an increasingly important part of the fuel mix in Australia and worldwide. During 2009-10 there has been a substantial increase in sales of E10, primarily as a result of the scaling up of the New South Wales (NSW) Government ethanol mandate and anticipation of an ethanol mandate in Queensland (which was suspended in October 2010).
- A number of retail sites in NSW and Queensland have removed regular unleaded petrol (RULP) from sale to comply with the existing and proposed mandates. This has resulted in reduced availability of RULP in these states. There has also been a related increase in sales of premium unleaded petrol (PULP).
- Given increasing demand, limited domestic ethanol production capacity and an effective excise treatment that favours domestic production over imports, there are concerns in the short to medium term regarding the supply and price of ethanol used for automotive fuel.

6.1 Overview

Biofuels, such as ethanol and biodiesel, are becoming increasingly important in Australia. The shift towards biofuels has largely been driven by government (particularly state government) policy. Consumer concerns about the depletion of crude oil and the environmental impact of its use have also led many consumers to actively seek what they perceive as more sustainable alternatives. Governments are responding to these concerns and simultaneously supporting local economic development through policies promoting alternative fuels. To date this has largely focused on biofuels. Industry has responded by offering biofuels for sale and marketing these products.

6.2 Biofuels in Australia

Unlike petrol and diesel, which are made from ‘non-renewable’ resources like crude oil, biofuels are derived from ‘renewable’ materials such as vegetable and animal products. Biofuels can be fully or partially substituted for petroleum-based fuels, and because they can be produced from renewable sources, have the potential to emit less greenhouse gases than fuels derived from crude oil. The two main types of biofuels used as transport fuels in Australia are ethanol and biodiesel.

6.2.1 Ethanol

Ethanol in its pure state is otherwise referred to as ethyl alcohol, alcohol or grain spirit.[64] Globally, most ethanol is produced by fermenting raw materials such as sugar cane, sugar beet, molasses, wheat, grains and forest products.[65] Fuel ethanol is typically used as a replacement for or additive to petrol. In Australia, it is added to petrol to produce various grades of ethanol blended petrol (EBP). Most commonly, ethanol is blended with RULP to produce an EBP known as E10 (petrol containing up to 10 per cent ethanol). It is also sometimes blended into PULP and proprietary products.

Fuel with greater than 10 per cent ethanol is also available but is generally only suitable for purpose-built vehicles. E85 (containing up to 85 per cent ethanol) is a relatively new product in Australia. Its usage is expected to increase over the next few years as more flex fuel vehicles (FFV), such as the latest version of the Holden Commodore VE Series II, are sold and more retail outlets offer the fuel.

6.2.2 Biodiesel

Biodiesel is derived from plant or animal feedstocks containing fatty acids, such as vegetable oils and tallow. Biodiesel is usually blended with petroleum-based diesel to produce fuels for use in diesel-powered vehicles and equipment. In Australia, biodiesel is typically used as a fuel additive in 5 per cent (B5) and 20 per cent (B20) blends.

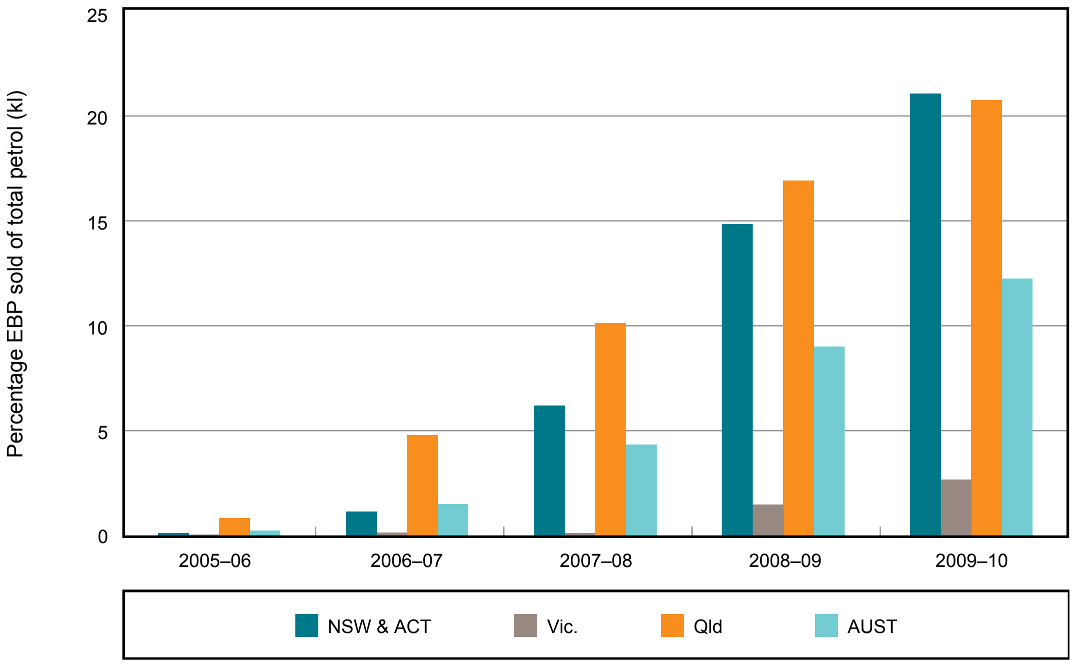
64 Energy Quest, *Report to the ACCC: Benchmarking the price of fuel ethanol in Australia,* July 2010, p. 10.

65 Energy Quest, ibid. p. 10.

6.2.3 Increasing use of biofuels

Use of biofuels, particularly E10, has been growing steadily in recent years. There is currently no data available for biodiesel sales. Most of the growth in E10 consumption has been in NSW, where there is a mandate for the sale of EBP, and Queensland, where a mandate has been proposed (although it is currently suspended). Notably, consumption has also been growing in Victoria where no mandate for EBP has been proposed or implemented (chart 6.1).

Chart 6.1 EBP as a percentage of total petrol sales: 2005–06 to 2009–10

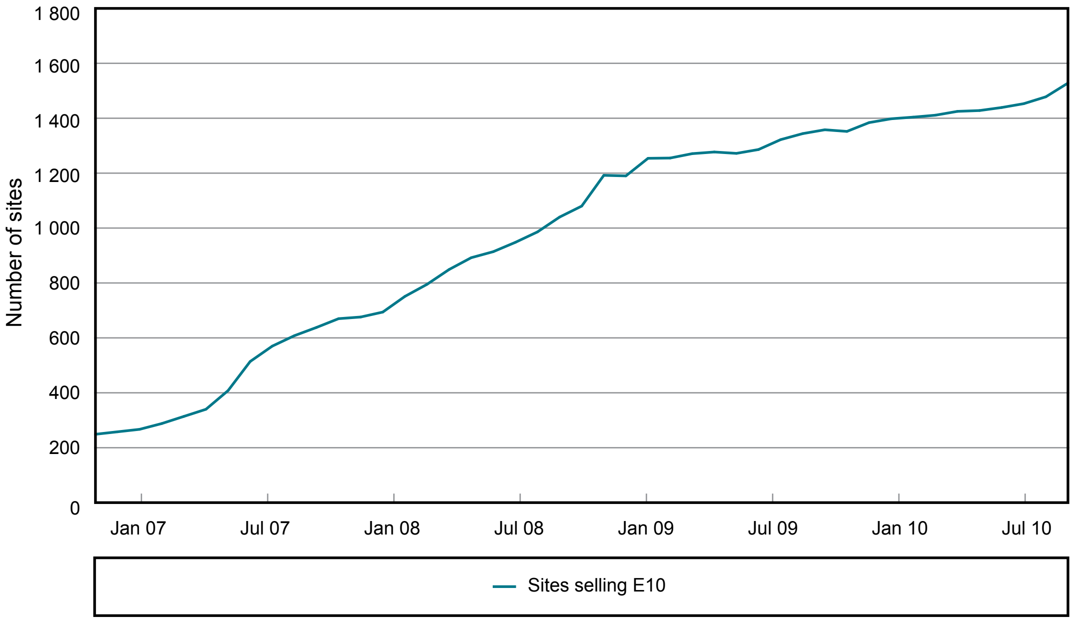


Sources: ACCC analysis based on RET *Australian Petroleum Statistics data*, various issues[66]

66 RET data does not include the bulk of sales from independent retailers, nor sales in South Australia or Tasmania. Therefore it is likely that sales of EBP are higher than reflected in the data.

The number of sites selling E10 across Australia has grown substantially in recent years (chart 6.2).

Chart 6.2 Number of sites selling E10 in Australia: January 2007 to September 2010



Source: ACCC analysis based on Informed Sources data

6.3 Biofuels and government regulation

6.3.1 Mandates for biofuel consumption

New South Wales

Growing consumption of biofuels in Australia has largely been driven by the biofuel mandate in NSW. The *Biofuels Act 2007* (NSW) came into effect in October 2007, with the aim of increasing EBP sales. Initially a 2 per cent mandate, since 1 January 2010, it has required that volume fuel sellers[67] ensure that the volume of ethanol sold makes up a minimum of 4 per cent of the total volume of petrol sales.

In early December 2010, the NSW government announced a delay in the implementation of their ethanol mandate.[68] From 1 July 2011 the NSW ethanol mandate is scheduled to increase to 6 per cent. From 1 July 2012, all RULP sold by 'primary wholesalers' will be replaced with E10. In effect this means that RULP will be largely unavailable in NSW, and effectively in the Australian Capital Territory (ACT) from this time. A number of sites in NSW have already withdrawn RULP from sale and switched to E10 in preparation for the changes to the mandate. In Sydney there are already more sites selling E10 than RULP (see chart 6.3).

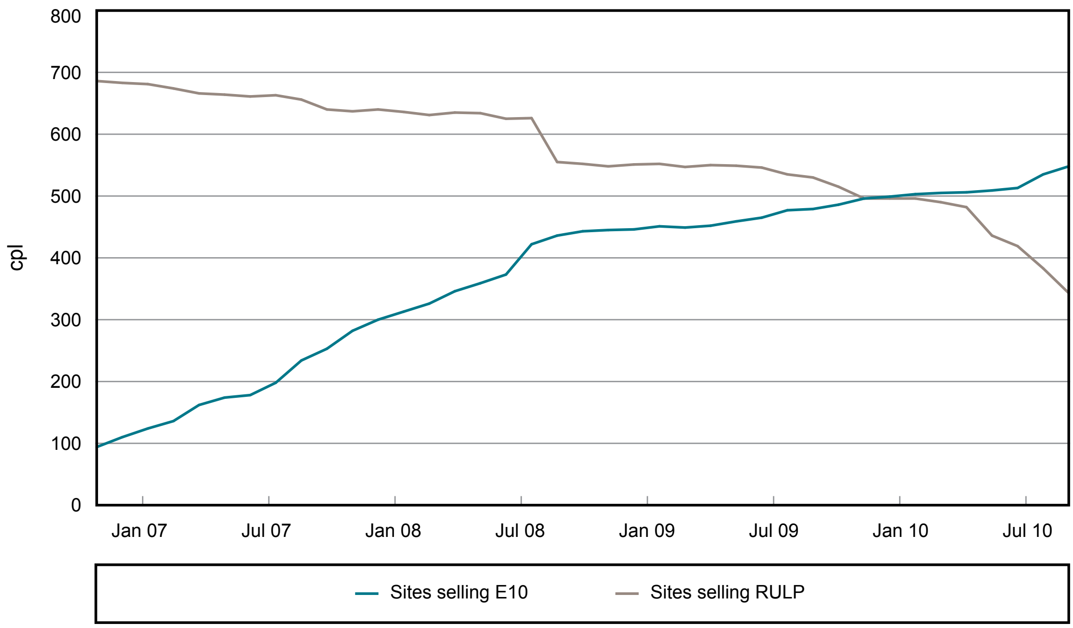
67 Under the Act, a volume fuel seller means a major retailer (a person who operates or controls the operation of more than 20 service stations) or primary wholesaler. See the legislation at http://www.legislation.nsw.gov.au/maintop/view/inforce/act+23+2007+cd+0+N for more details.

68 Hon Tony Kelly MLC (Minister for Lands), Suspension of NSW ethanol mandate, media release, NSW government, 2 December 2010.

The NSW mandate also covers biodiesel. Since 1 January 2010, the mandate has required that volume sellers ensure that the volume of biodiesel sales is not less than 2 per cent of the total volume of total diesel fuel sales.

In January 2012, the mandate for biodiesel in NSW will increase to 5 per cent.

Chart 6.3 Number of sites selling E10 and RULP, Sydney: July 2007 to September 2010



Sources: ACCC analysis based on Informed Sources data

Queensland

The Queensland Government had proposed the introduction of an ethanol mandate for petrol sold in Queensland by 31 December 2010. The final draft report of a public benefit test was tabled in the Queensland Parliament on 11 November 2009. The intention of the mandate was to ensure that the volume of ethanol was not less than 5 per cent of the total volume of RULP and EBP sold in Queensland from 31 December 2010.

However, on 28 October 2010, it was announced that the timing for the commencement of the mandate had been delayed. The Queensland Treasurer, Andrew Fraser MP commented that due to proposed changes to national ethanol taxation arrangements, the government had decided to exercise caution and suspend the implementation of the mandate to allow for careful consideration.[69]

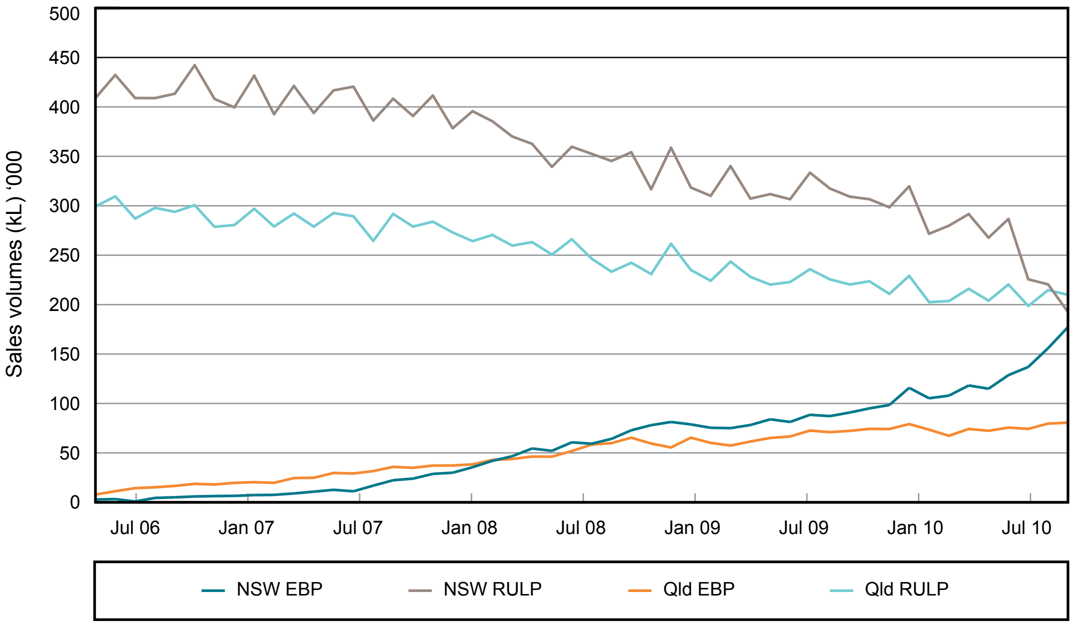
Although there is no ethanol mandate in place in Queensland, sales of EBP have grown there in recent years. Some retailers in Queensland removed RULP from sale at selected sites, possibly in anticipation of the proposed ethanol mandate. As of September 2010, approximately 160 of the 1200 service stations in Queensland had already removed RULP from sale.[70]

69 A. Fraser MP (Queensland Treasurer and Minister for Employment and Economic Development), *Ethanol mandate suspended*, media release, Queensland Treasury, 28 October 2010.

70 Informed Sources.

Sales of EBP have grown steadily in NSW and Queensland since 2007. In NSW, RULP sales have significantly decreased since the inception of the mandate in October 2007 (chart 6.4).

Chart 6.4 Monthly sales of EBP and RULP in NSW and Queensland: July 2006 to August 2010



Sources: ACCC analysis based on RET *Australian Petroleum Statistics data*, various issues

6.3.2 Excise on ethanol

Currently, an excise of 38.1 cpl is applied to ethanol (the same level as for petrol and diesel). Domestic producers are eligible for a production grant, which fully offsets the fuel excise. Therefore domestically produced ethanol for use in fuel is effectively excise free. Ethanol imports, however, are subject to the full level of excise, plus a 5 per cent import duty (depending on the country of origin). Consequently, ethanol imports have not been able to compete with locally produced ethanol.

Changes to excise on ethanol from 1 July 2011

The 2010–11 federal budget included two measures that will impact upon ethanol excise. Further changes were also announced after the federal election in July 2010. In addition, in October 2010, Treasury released a discussion paper, *Implementation of alternative fuels taxation policy*. The proposed changes involve reducing excise from 38.1 cpl to 25 cpl on 1 July 2011, for both domestically produced and imported ethanol, and progressively phasing the excise rate down to a final rate of 12.5 cpl on 1 July 2015.

At the same time, domestic ethanol producers will also be eligible for an offsetting grant payment of 23.75 cpl in 2011, to 'provide the ethanol industry with adequate time to prepare for the forthcoming changes'.[71] The offsetting payment will progressively phase down each year before reaching zero on 1 July 2020.[72] If the proposed changes go ahead, domestic and imported ethanol will not be subject to equivalent levels of effective excise until 2020.

6.3.3 Fuel quality standards for petrol and diesel blended with biofuels

The *Fuel Quality Standards Act 2000* empowers the minister responsible to determine standards in respect of specified kinds of fuel. Various standards under that Act are currently in force. Relevantly, the *Fuel Standard (Petrol) Determination 2001* allows for RULP to be blended with a maximum of 10 per cent ethanol.[73] There is also a labelling standard for petrol containing ethanol, which requires that service stations display at the pump either the exact percentage of ethanol contained in the blend or that the blend contains up to a percentage of ethanol (maximum 10 per cent).[74]

The *Fuel Standard (Automotive Diesel) Determination 2001* allows for petroleum-based diesel to be blended with up to 5 per cent biodiesel. Diesel containing more than 5 per cent biodiesel needs to be labelled as biodiesel. Unlike the percentage of ethanol in unleaded petrol, there is no maximum amount of biodiesel permitted to be blended with diesel.[75]

6.4 Biofuel production in Australia and worldwide

Production and sales of biofuels, both in Australia and globally, have been increasing in recent years. Globally, both ethanol and biodiesel production increased by approximately 16 per cent from 2008 to 2009.[76] Production growth has largely been in response to government mandates for biofuels, such as the United States' Renewable Fuels Scheme (US RFS) and the *NSW Biofuels Act*.

Under the US RFS, regulation has been developed to ensure that transportation fuel sold in the US contains a minimum volume of renewable fuel.[77] Ethanol use is increasing rapidly in the US and is expected to rise further in the future with the US Environmental Protection Agency (EPA) recently approving E15 (fuel containing up to 15 per cent ethanol) for vehicles made after 2006.[78]

Chart 6.5 shows that the US and Brazil were the major producers of ethanol in 2009. European countries were the largest producers of biodiesel (chart 6.6). Australian production of ethanol and biodiesel is quite small compared with many other nations. Australia produced 0.3 per cent and 0.6 per cent of global ethanol and biodiesel respectively in 2009. In its 2001 election policy, the then federal government set a target for production of 350 ML of biofuels by 2010.[79] This amounts to 0.004% of 2009 world production. It is estimated that biofuel production capacity in 2010 will easily exceed that target.[80]

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71 Treasury Department, Budget 2010–11, May 2010, viewed 1 August 2010, <http://www.budget.gov.au/2010-11/content/bp2/html/bp2_revenue-06.htm>

72 Treasury Department, 'Implementation of alternative fuels taxation policy', Discussion paper, October 2010, viewed 26 October 2010, <http://www.treasury.gov.au/contentitem.asp?NavId=037&ContentID=1845>.

73 Fuel Standard (Petrol) Determination 2001.

74 Fuel Quality Information Standard (Ethanol) Determination 2003 (as amended).

75 Fuel Standard (Automotive Diesel) Determination 2001.

76 APAC, 2009, pp. 15–16; *Australian Biofuels 2010–11,* client report, September 2010, pp. 11–12.

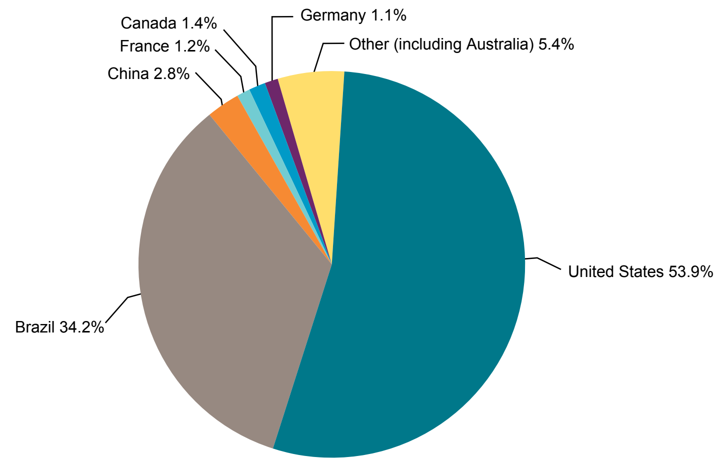
77 US EPA 8 July 2010, viewed 18 August 2010, <http://www.epa.gov/otaq/fuels/renewablefuels/index.htm>.

78 APAC Biofuel Consultants, *Australian Biofuels 2009*, final report, 28 August 2009, p. 14; Biofuels Digest, 'E15 fuel approved in US', 16 October 2010, viewed 16 October 2010, <http://www.tandlnews.com.au/2010/10/16/article/E15-fuel-approved-in-US/MRNEQMBNGM.html

79 Australian Government Biofuels Taskforce, *Report of the Biofuels Taskforce to the Prime Minister*, August 2005, p. 5.

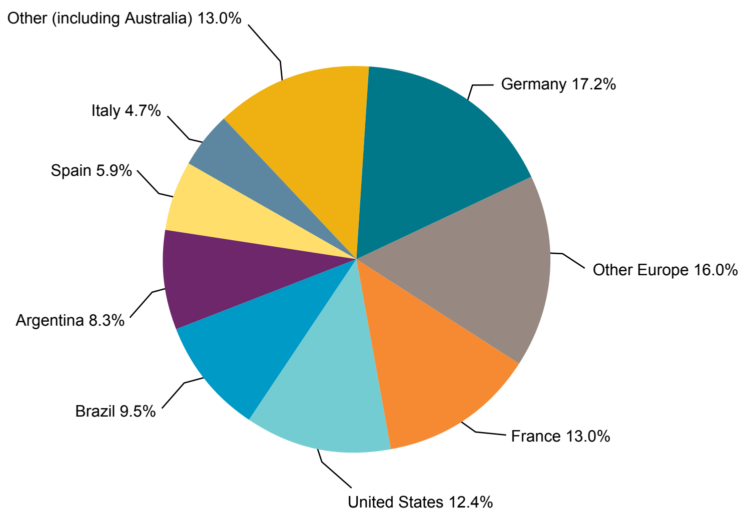
80 APAC, 2009, pp. 36, 47.

Chart 6.5 Global ethanol production: 2009



Sources: ACCC analysis based on APAC *Australian Biofuels 2010–11* data

Chart 6.6 Global biodiesel production: 2009



Sources: ACCC analysis based on APAC *Australian Biofuels 2010–11* data

6.4.1 Biofuel feedstocks in Australia

As discussed in section 6.2, biofuels can be produced from a variety of different feedstocks. In Australia, the main feedstocks for ethanol production are sugarcane, wheat starch waste and sorghum. Biodiesel feedstocks include tallow, canola, and used vegetable oil.

6.4.2 Australian ethanol production capacity

Prior to 2007, Manildra's plant in Nowra, NSW, accounted for almost all of Australia's ethanol production. Manildra is still the largest producer, having increased capacity to 210 ML per annum in 2010. A further capacity increase to 300 ML is planned for 2011. Ethanol production in Queensland has also grown. Sucrogen BioEthanol (formerly CSR Ethanol) at Sarina increased capacity to 60 ML in 2009 and a further capacity increase is planned in 2013. A new 'greenfields' plant at Dalby in Queensland opened in 2009, with a capacity of 80 ML.

The Dalby plant went into voluntary administration in June 2010. The receivers advised that the plant will continue to operate as normal and will be prepared for sale.[81] It has also been reported that Sucrogen has entered into an arrangement to sell its business to Singapore-based Wilmar International.[82]

Table 6.1 shows current operating ethanol production capacity (in blue) and potential future capacity (in orange) to 2015 if planned plants go ahead. In 2010 total ethanol production capacity is 350 ML. There are four proposed plants which may come online from 2013 onwards. If all planned plants go ahead in the coming years, production capacity could be up to 910 ML in 2015.

Table 6.1 Australian ethanol production capacity (ML): 2010 to 2015

Operator	Location	Feedstock	Current Status	2010	2011	2012	2013	2014	2015
Manildra	Nowra, NSW	waste starch, wheat	Operating	210	300	300	300	300	300
Sucrogen Bio-Ethanol	Sarina, Qld	molasses	Operating	60	60	60	100	100	100
Dalby Bio	Dalby, Qld	sorghum, other grain	Operating	80	80	80	80	80	80
Austcane	Ayr, Qld	sugar juice, molasses	Potential	0	0	0	50	100	100
NQBR	Ingham, Qld	sugar juice, molasses	Potential	0	0	0	35	70	70
Coskata	Vic.	biomass	Potential	0	0	0	50	100	200
Mackay Sugar	Mackay, Qld	molasses	Potential	0	0	0	0	30	60
Total from existing plants				350	440	440	480	480	480
Total from (proposed) new and existing plants				350	440	440	615	780	910

Source: APAC *Australian Biofuels 2010–11.*

81 Stuart Cumming, 'Bio-refinery in financial trouble', *Toowoomba Chronicle*, 23 June 2010, viewed 10 August 2010, <http://www.thechronicle.com.au/story/2010/06/23/Dalby-Bio-refinery-financial-trouble/>.

82 Dave Ernsberger, 'Singapore's Wilmar buys Australian ethanol maker', *Platts Oilgram News,* 8 July 2010, p. 2.

6.4.3 Australian biodiesel production capacity

The Australian biodiesel industry suffered from high feedstock prices in 2008 and 2009. Natural Fuels' Darwin plant (capacity 140 ML per annum) went into liquidation, while ABG's Narangba (Queensland) plant (capacity 160 ML) ceased operations. A number of other plants are still operating in 'stand-by' mode.[83] Elements of the industry claim to be suffering as a result of the 'dumping' of US biodiesel in the Australian market, undercutting Australian producer's prices. Industry participants lodged an 'Application for Dumping or Countervailing Measures' to the Australian Customs and Border Protection Service in June 2010, requesting an investigation into the potential need for imposing an anti-dumping duty on US biodiesel. This is currently being investigated by Customs.[84]

Table 6.2 shows current operating biodiesel production capacity (in blue) and potential future capacity (in orange) to 2015 if planned plants go ahead. Plants on stand-by are in grey. In 2010 total (operating) biodiesel capacity is 131 ML. If all planned plants go ahead in the coming years, production capacity could be up to 609 ML in 2015.

Table 6.2 Australian biodiesel production capacity (ML): 2010 to 2015

Operator	Location	Feedstock	Current Status	2010	2011	2012	2013	2014	2015
Biodiesel Industries	Rutherford, NSW	tallow, canola	Operating	20	20	20	35	35	35
Biodiesel Producers	Barnawatha, Vic.	tallow	Operating	60	60	60	60	60	60
Biomax Fuels (Energetix)	Laverton, Vic.	used cooking oil, tallow, algae	Operating	30	30	50	50	50	50
Macquarie Oil	Tasmania	poppyseed, tallow	Operating	15	15	15	15	15	15
Australian Renewable Fuels	Laverton, Vic.	tallow	Operating	6	6	6	6	6	6
Total operating				131	131	151	166	166	166
Australian Renewable Fuels	Picton, WA & Adelaide, SA	tallow, canola	Stand-by	90	90	90	90	90	90
BP	Bulwer, Qld	tallow	Stand-by	35	35	35	35	35	35
Eco Tech (Gull)	Narangba, Qld	waste oil, tallow	Stand-by	30	30	30	30	30	30
Total operating and stand-by				286	286	306	321	321	321
National Biofuels	Port Kembla	soybean	Potential new plant	0	0	100	288	288	288
Total from all plants				286	286	406	609	609	609

Source: APAC *Australian Biofuels 2010–11.*

83 APAC, 2010–11, p. 42.

84 Australian Customs and Border Protection Service, 'Anti Dumping and Countervailing Actions – Status Report as at 31 August 2010', viewed 27 September 2010, <http://www.customs.gov.au/webdata/resources/files/MicrosoftWord-2010-08StatusReportPat.pdf>.

6.4.4 Cost of ethanol feedstocks relative to petrol feedstocks

In 2010, the ACCC commissioned biofuel consultants through Energy Quest to prepare a report, *Benchmarking the price of fuel ethanol in Australia*. A copy of this report is available on the ACCC website.[85] According to Energy Quest, the cost of ethanol feedstocks make up between 70 per cent and 85 per cent of the cost of production of ethanol, and is largely influenced by different factors to those affecting petrol inputs. The price of each feedstock is based on the price of the agricultural commodity it is derived from and therefore each feedstock has its own pricing dynamics. The cost of feedstocks is uncertain because of price volatility, which is driven by supply and demand factors influenced by population growth, weather and climate change factors.[86]

'Second-generation' feedstocks

Unlike 'first-generation' feedstocks, which are derived primarily from food crops, 'second-generation' feedstocks are produced from non-food biomass.[87] Use of second-generation feedstocks (such as forest products, wood wastes and crop residues) largely mitigates any 'food for fuel' issues associated with first-generation feedstocks, because second-generation feedstocks are not produced from crops that can be used as food. Ethanol production from cellulose is one second-generation feedstock that has shown promise. Authors of a UN Development Program/World Bank study commented that cellulosic ethanol could potentially be important in the future because of its widespread availability, abundance, low cost, and significant lifecycle greenhouse gas (GHG) emission reduction capability.[88]

To date, second-generation biofuels have been too expensive to compete with petroleum at current price levels on a large scale.[89] The Australian Government announced the release of its *Second Generation Biofuels Research and Development Program* in October 2008, which provides funding for a number of projects undertaking research, development and demonstration of new biofuel technologies.[90]

A consortium of companies is assessing the viability of building a plant in Victoria to produce ethanol from household waste.[91] The plant is still in the planning stage and it may take some time before second-generation biofuels are a viable alternative to conventional petroleum-based fuels.

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85 The report can be found on the ACCC website at <www.accc.gov.au/fuel>.

86 Energy Quest, pp. 17–18.

87 R.Sims, M.Taylor, J.Saddler, and W.Mabee, 'IEA's Report on 1st- to 2nd-Generation Biofuel Technologies', 9 March 2009, viewed 15 May 2010, <http://www.renewableenergyworld.com/rea/news/article/2009/03/ieas-report-on-1st-to-2nd-generation-biofuel-technologies>.

88 M.Kojima and T.Johnson, 'Potential for biofuels for transport in developing countries', World Bank Energy Sector Management Assistance Programme, Washington DC, October 2005, p. 120.

89 K.Kleiner, 'The backlash against biofuels', *Nature reports: Climate change,* Vol.2, January 2008, p. 11, viewed 8 April 2010, <www.nature.com/reports/climatechange>.

90 Department of Resources, Energy and Tourism (RET), 'Second Generation Biofuels Research and Development Program (Gen2)', July 2010, viewed 3 August 2010, <http://www.ret.gov.au/resources/resources_programs/alternative_fuels_programs/second_generation_biofuels_research_and_development_program/Pages/SecondGenerationBiofuelsResearchandDevelopmentProgram.aspx>

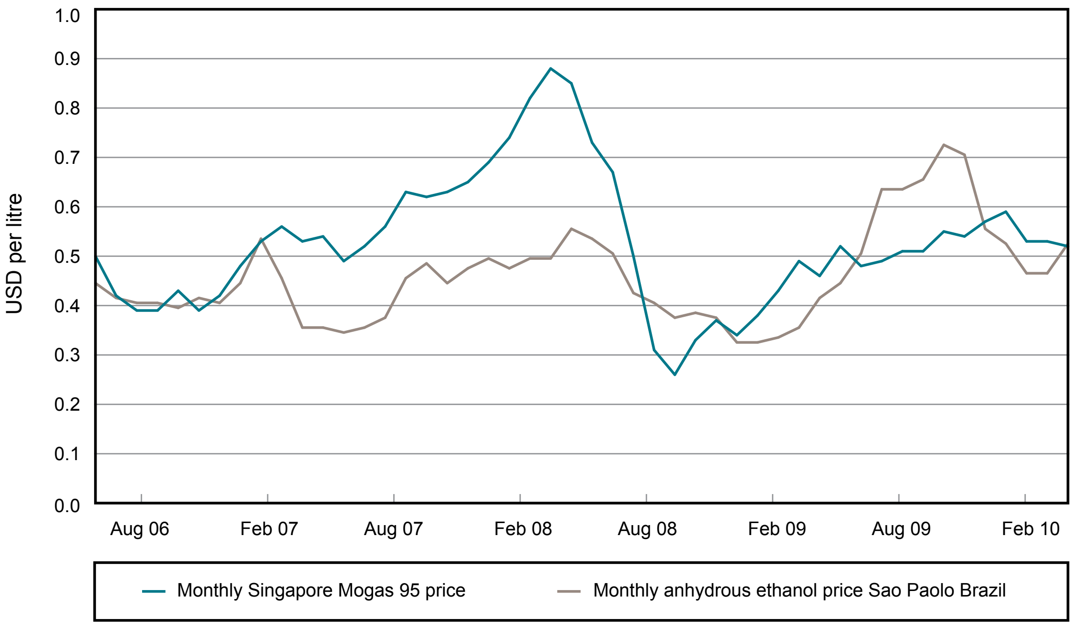
91 Caltex Australia, Holden, Veolia, Mitsui & Co, Coskata, Victorian Government, *High-tech fuel for tomorrow's cars*, joint media release, 24 March 2010.

6.5 Ethanol pricing

6.5.1 Global ethanol pricing

Chart 6.7 shows that movements in ethanol prices do not appear to be strongly correlated with petrol prices. Energy Quest (2010) identified that the Brazilian ESALQ price is the local measure for ethanol pricing in Brazil (the largest ethanol exporter worldwide). It is also the most referenced price for ethanol contracts worldwide (including in the Asian market).[92]

Chart 6.7 Brazilian ethanol price* compared with Australian petrol benchmark (Singapore Mogas 95): August 2006 to July 2010



Source: ACCC analysis based on Platts and CEPEA data

Note: *Brazilian ethanol price is the monthly average ESALQ (Escola Superior de Agricultura Luiz Queiroz) index price in cash for anhydrous ethanol from São Paolo State in USD per litre, as obtained from CEPEA, a research centre of the University of São Paolo.[93]

92 Energy Quest, p. 7.

93 http://www.cepea.esalq.usp.br/xls/SaamensalUS.xls

6.5.2 Ethanol pricing in Australia

Energy Quest found that a number of factors influence the price for ethanol in Australia and also the retail price differential between E10 and RULP.

For ethanol producers, the key consideration in pricing ethanol to be sold into the fuel market is the cost of production of ethanol. As summarised by Energy Quest, the cost of production is dominated by the cost of the ethanol feedstock (i.e., wheat, molasses or sorghum).[94] Pricing of ethanol to be used as transport fuel is also often linked to the price of petrol. According to Energy Quest, the rationale for adopting petrol linked ethanol pricing is that ethanol is used as a volume extender or a replacement for petrol.[95]

6.6 The increasing presence of biofuels

Use of biofuels has increased in Australia in recent years, due in part to state government mandates for consumption. There are a number of reasons why government policy might focus on promoting biofuels and consumers may choose to purchase them. Some reasons for the move to biofuels include price, performance and environmental characteristics, promotion of regional development and diversification of fuel sources.

Some of the considerations taken into account by consumers in determining whether to use E10 include:

- value for money
- potential performance (including octane rating)
- impact on the environment
- vehicle compatibility
- availability of E10, RULP, and PULP
- the degree of confidence consumers have in E10 as an alternative to RULP.[96]

6.6.1 Price of E10

In Australia, to date E10 has usually been sold at a lower price than RULP. This may be because E10 generally gives lower fuel economy or because unlike RULP, the ethanol component of E10 (if domestically produced) is effectively not subject to excise. There are a number of reasons why relative prices of RULP and E10 may vary. Ethanol also has different feedstock costs and production processes to RULP.

ACCC monitoring over the past year across the monitored locations found a differential between RULP and E10 prices of 2.6 cpl in 2009–10, a decrease of 0.2 cpl from 2008–09.[97] Chart 9.27 (chapter 9) shows E10, RULP and PULP prices from July 2007 to September 2010.

94 Energy Quest, p. 13.

95 Ibid p. 14

96 Ibid p. 13.

97 Appendix D shows E10 prices for a number of monitored locations where both RULP and E10 are sold for the period October 2009 to September 2010.

6.6.2 Performance and environmental characteristics

Biofuels and octane rating

Due to its high octane rating (129 RON), the addition of ethanol to petrol generally increases the octane of the fuel.[98] E10 generally has an octane rating of approximately 94 RON, compared with RULP, which is 91 RON.

Although ethanol has a higher octane rating than RULP, it has a lower energy content. This means that generally EBP gives lower fuel economy than RULP. Testing suggests that the increase in fuel consumption will be approximately 2.8 per cent for post-1986 vehicles running on E10.[99]

Biodiesel also typically has a lower energy content than diesel, varying between 88 per cent and 99 per cent of diesel.[100] Although delivering lower fuel economy, motorists are also likely to consider E10's other characteristics, such as its cleaner burning nature, when making purchasing decisions.[101]

Background on octane rating

Research octane number (RON) measures a fuel's performance under normal driving conditions. It gives an indication of its 'anti-knock' quality or resistance to pre-ignition.[102] Higher-octane fuels generally burn more evenly and resist engine knocking. According to the NRMA, running a vehicle on a lower-grade petrol than recommended by the vehicle manufacturer can result in a 'knocking', 'rattling' or 'pinging' sound that means the fuel is not burning with maximum efficiency. Knocking is undesirable because it wastes petrol and can damage an engine in the long run. Using fuel with the correct octane number for a vehicle's engine eliminates knocking.[103]

Vehicle compatibility

The Federal Chamber of Automotive Industries (FCAI) lists suitability of E10 for a range of vehicles on its website.[104] Not all vehicles are compatible with E10, and some motorists will be forced to use PULP where RULP is unavailable. However, PULP may also contain ethanol, and consumers in certain areas may find it difficult to source petrol that does not contain ethanol.

The Queensland Department of Employment, Economic Development and Innovation's final report on the Public Benefit Test in relation to the Queensland mandate noted that as at November 2009 approximately 37 per cent of vehicles in Queensland were incompatible with E10. By 1 January 2011, it was estimated that this number would have declined to 20 per cent. A similar number of motorists unable to use E10 might be expected in NSW. Where RULP is unavailable, motorists who are unable to use E10 in their cars will pay a higher price for fuel, as, on average, five-city[105] PULP 95 prices were 9.3 cpl higher than five-city RULP prices over the 2009–10 financial year.

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98 Energy Quest, p. 6.

99 Australian Government Biofuels Taskforce, p. 32.

100 ibid, p. 33.

101 ibid, p. 25.

102 Australian Institute of Petroleum (AIP), 'Biofuels Factsheet', viewed 9 August 2010, <http://www.aip.com.au/pdf/BioFuelFactSheet.pdf>.

103 NRMA, 'Fuel types - E10, ULP, PULP, UPULP...', viewed 24 September 2010, <http://www.mynrma.com.au/cps/rde/xchg/mynrma/hs.xsl/fuel_types.htm>.

104 Federal Chamber of Automotive Industries (FCAI) 2010, 'Can my vehicle operate on Ethanol blend petrol?', viewed 2 August 2010, <http://www.fcai.com.au/publications/all/all/all/3/can-my-vehicle-operate-on-ethanol-blend-petrol->.

105 Average five-city prices refers to average prices in Sydney, Melbourne, Brisbane, Adelaide and Perth.

Warranties might also restrict some motorists from switching to E10. Although many new vehicles sold in Australia can use E10, some vehicles are not warranted to run on E10 and some consumers may be concerned about warranty cover.[106]

Biofuels and the environment

Depending on the feedstocks and production processes used, biofuels can be better for the environment than conventional fuels sourced from crude oil. Many consumers choose to use biofuels due to perceived environmental benefits. This is largely because biofuels are made from renewable sources such as plant and animal materials. However, environmental claims made about biofuels should consider the whole life cycle production process in order to give an accurate representation of the environmental benefit of the product. Full fuel-cycle analysis of emissions takes into account not only direct emissions from vehicles, but also those associated with the extraction, production, transport, processing, conversion and distribution of the fuel. That is, both upstream (pre-combustion) and downstream (tailpipe or combustion) emissions.[107]

Promoting regional development

Both the NSW and Queensland governments cite promoting regional development (through job creation and supporting farmers) as a key reason for introducing or intending to implement biofuel mandates in those states.[108]

Diversifying fuel sources

Use of biofuels reduces reliance on crude oil, a non-renewable resource. Some governments consider that reducing reliance on crude oil is important for energy security. Currently biofuels are only blended into petrol at relatively low ratios in Australia. For example, as shown in chart 6.1, EBP made up approximately 12.2 per cent per cent of Australian petrol sales in 2009–10. At present ethanol replaces about 1.2 per cent of Australia's petrol needs.[109] Petrol containing greater concentrations of ethanol such as E85 is not widely available in Australia, but is widespread in Brazil.

The food for fuel debate

There has been much debate globally regarding increased biofuel consumption potentially affecting feedstock prices (and consequently food prices). The IEA noted in 2008 that competition from biofuel production was one of the many factors contributing to higher food prices.[110] The Australian Bureau of Agricultural and Resource Economics (ABARE) and the Grains Research and Development Corporation (GRDC) also noted in its May 2009 *Australian Grains Report* that world demand for biofuels will continue to be a key driver of demand for grain and oilseeds over the medium term, particularly in the US, the European Union and Asia.

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106 Caltex, Caltex Star, *Time to get serious about biofuels*, December 2009 – January 2010, p. 6.

107 Australian Government Biofuels Taskforce, p.32.

108 NSW Land and Property Management Authority, *Biofuels in New South Wales*, viewed 12 November 2010, <http://www.biofuels.nsw.gov.au/>; Queensland Department of Employment, Economic Development and Innovation, *Ethanol factsheet,* viewed 12 November 2010, <http://203.210.126.185/dsdweb/v4/apps/web/secure/docs/1838.pdf>.

109 RET *Australian Petroleum Statistics,* ACCC.

110 International Energy Agency (IEA), *IEA World Energy Outlook* 2008, viewed 1 June 2010, p. 174, .<http://www.worldenergyoutlook.org/docs/weo2008/WEO2008.pdf>.

According to ABARE and the GRDC, biofuel feedstock prices have become linked to the price of oil. Ethanol and biodiesel compete directly with petroleum-based petrol and diesel in energy markets, therefore oil prices have the potential to drive biofuel prices and influence the prices of their agricultural feedstocks.[111] Some industry participants have raised concerns about increased demand for biofuels driving up grain prices in Australia. APAC industry consultants, however, have noted that because the Australian biofuel industry is at present very small relative to the US/Brazil/EU producing regions, there may be less potential for Australian demand for biofuels to drive up food prices.[112]

6.7 Take up of biofuels and flex-fuel vehicles in Australia and overseas

In NSW and Queensland many petrol retailers offer E10 for sale in the capital cities as well as many regional areas. Sales of E10 in Victoria and South Australia are largely limited to the capital cities. There are also a few retailers offering E10 in Tasmania.

A small number of retailers started offering E85 in Melbourne and Sydney in recent years. This has expanded in 2010. For example, Caltex now offers an E85 fuel at approximately 30 service stations in the eastern capital cities and plans to increase the number of locations to approximately 130 in 2011.[113]

6.7.1 Flex-fuel vehicles

Flex Fuel Vehicles (FFV) are able to run on both high ethanol content EBP and RULP. These vehicles have experienced differing levels of success worldwide. Brazil was the first country to broadly embrace FFV and high ethanol petrol blends. FFV are also available in the US, but vehicle uptake has been less widespread than in Brazil. Understandably, FFV have seen more take-up in the corn producing states of the Midwest US, where ethanol pricing might be more attractive and consumers potentially more enthusiastic about supporting the local corn industry.[114] Although there have been relatively few FFV available for sale in Australia to date, they are becoming more widely available. Saab introduced a flex-fuel ‘Biopower’ model into Australia in 1996, and the latest versions of the Holden Commodore VE Series II, released in September 2010, are FFV.[115]

6.7.2 Take up of biodiesel

Germany and France are the largest biodiesel producers worldwide (see chart 6.6). European countries accounted for approximately 57 per cent of global biodiesel production in 2009. Given the increasing demand for diesel in many European countries, it is not surprising that Europe is the biggest global market for biodiesel. Biodiesel blends are becoming more widely available at an increasing number of service stations across Australia.[116] Not all vehicles are compatible with biodiesel and the FCAI notes that vehicle owners should confirm with the manufacturer if their vehicle is suitable for use with biodiesel.[117]

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111 Grains Research and Development Corporation (GRDC) and Australian Bureau of Agricultural and Resource Economics (ABARE), *Australian Grains*, May 2009, p. 5, viewed 2 June 2010, <http://www.abare.gov.au/publications_html/crops/crops_09/crops_08.pdf>.

112 APAC, 2009, p. 18.

113 Caltex media release, 2 August 2010, viewed 8 August 2010, <http://www.caltex.com.au/LatestNews/Pages/NewsItem.aspx?>.

114 US Department of Energy, ‘Alternative and Advanced Vehicles: Flexible Fuel Vehicles‘, 2010, viewed 1 September 2010, <http://www.afdc.energy.gov/afdc/data/geographic.html>.

115 SAAB media release, 19 December 2008, viewed 16 September 2010, <http://www.saab.com.au/au/en/start#/world/news-and-events/press-releases/e85/carrousel:all/commodore2>.

116 Biofuels Association of Australia, Biodiesel in Australia, 2010, viewed 1 July 2010, <http://www.biofuelsassociation.com.au/index.php?option=com_content&view=article&id=55&Itemid=63>.

117 FCAI 2010, *Information on Biodiesel*, viewed 20 September 2010, <http://www.fcai.com.au/environment/information-on-biodiesel>.

6.8 Biofuels: Consumers and competition

The ACCC is monitoring developments in the emerging market for EBP and biodiesel in Australia in readiness to consider issues of compliance with the Act if they arise. The ACCC is mindful that when markets are developing and competitors are attempting to carve out a niche or gain a competitive advantage, competition, consumer protection and supply issues may be more likely to occur.

6.8.1 Concerns for consumers

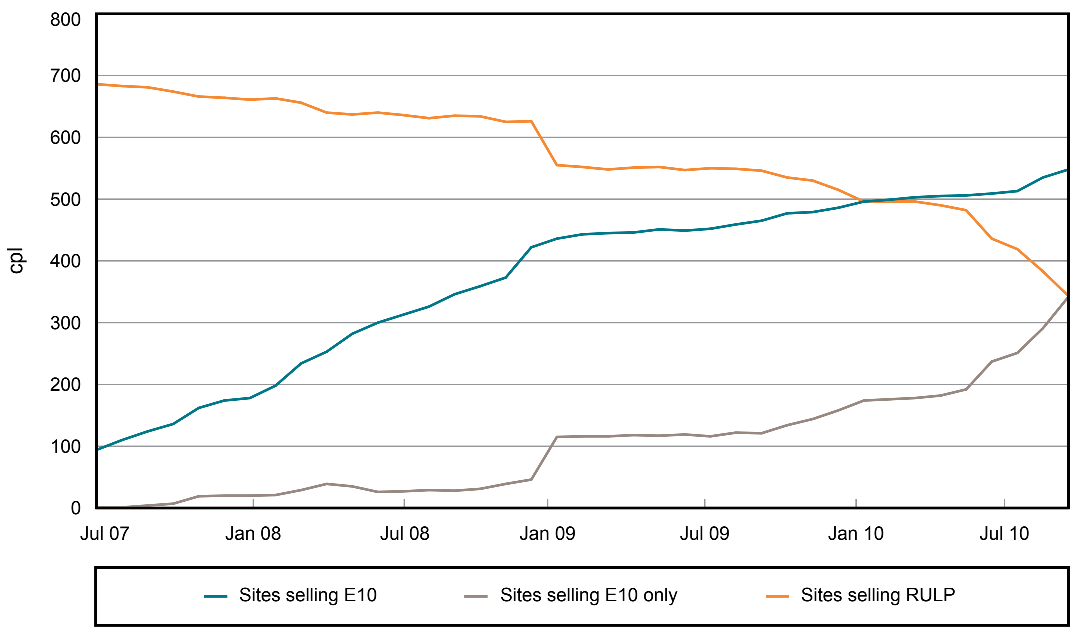
As is often the case with new products, there is a need for improved consumer awareness regarding biofuels so that consumers can make informed choices. This is especially important where use of biofuels is mandated, as in NSW and potentially in Queensland in the future.

Reduced consumer choice

Effectively, the NSW mandate results in reduced consumer choice in NSW because the decision by petrol companies to cease offering RULP has been largely driven by the mandate. There has already been a gradual decrease in the number of sites offering RULP in NSW. Chart 6.8 shows this trend in Sydney. This trend has also been seen in parts of Queensland, even though plans for the introduction of the Queensland mandate have been delayed (chart 6.9).

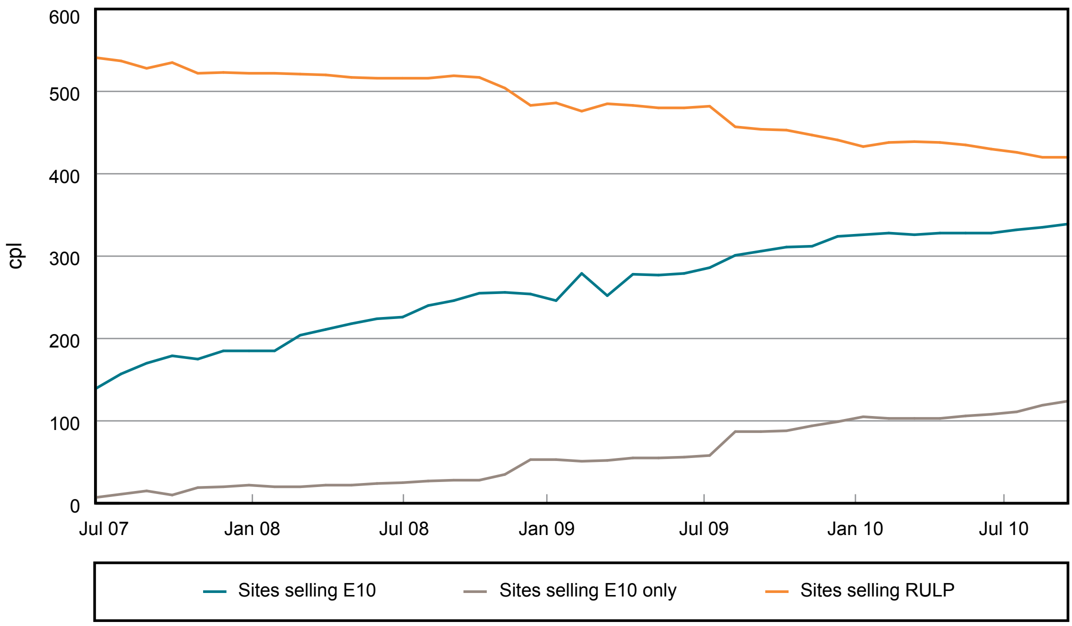
While the number of sites selling RULP has been relatively constant in Melbourne over the past few years, sites selling RULP in Sydney and in Brisbane have gradually decreased (charts 6.8, 6.9 and 6.10). In Brisbane and Sydney the number of sites selling E10 only (and no RULP) has also been increasing steadily. There are very few sites in Melbourne selling E10 only.

Chart 6.8 Number of sites selling RULP, E10 and E10 only in Sydney: July 2007 to September 2010



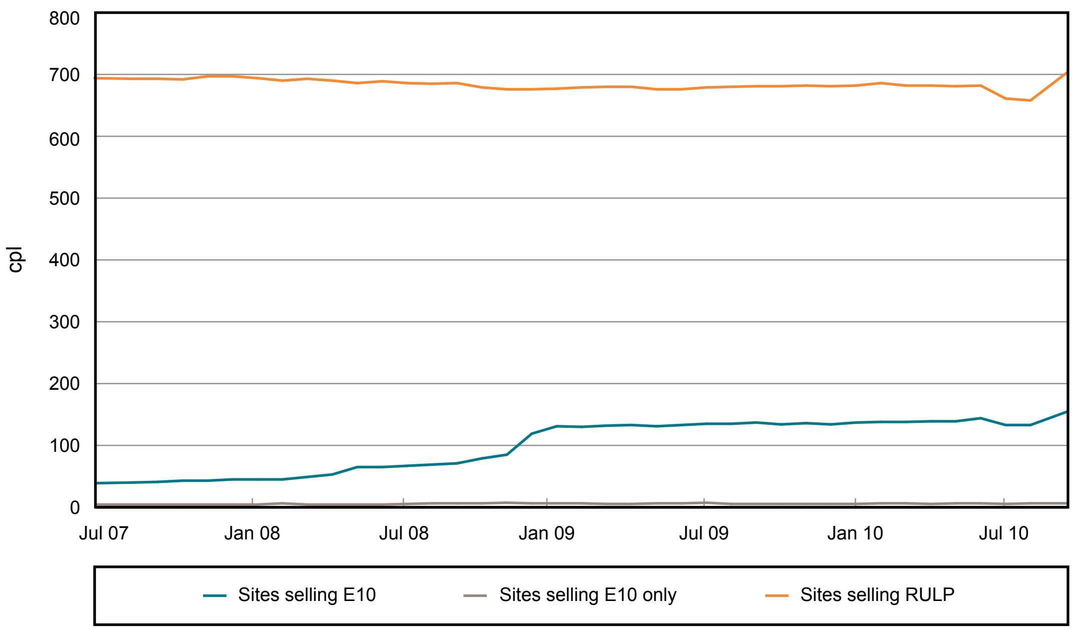
Sources: ACCC analysis based on Informed Sources data

Chart 6.9 Number of sites selling RULP, E10 and E10 only in Brisbane: July 2007 to September 2010



Sources: ACCC analysis based on Informed Sources data

Chart 6.10 Number of sites selling RULP, E10 and E10 only in Melbourne: July 2007 to September 2010



Sources: ACCC analysis based on Informed Sources data

Consumer knowledge

The ACCC has received a number of complaints in recent years about EBP, particularly in NSW and Queensland. These are discussed in more detail in chapter 2. Consumers need to have information available to them to make informed decisions, particularly in states where EBP use is mandated. Given different state requirements, consumers travelling interstate will need to pay close attention to the labelling at the pump to ensure that they purchase the right type of fuel for their vehicle.

Labelling and signage

The ACCC is receiving an increasing number of complaints about unclear labelling of E10. It should also be noted that the *Fuel Quality Standards Act 2000* requires petrol containing ethanol to be clearly labelled. This legislation is administered by the Department of Sustainability, Environment, Water, Population and Communities.

Consumers have also raised concerns that petrol products and prices may be advertised on price boards without clearly stating that the fuel contains ethanol. Because not all vehicles are compatible with E10, it is important that retailers label E10 appropriately so that consumers can make informed purchasing decisions.

Where there is evidence that consumers are misled or likely to be misled by retailers failing to ensure that labelling and signage of E10 is clear and accurate, the ACCC will take action to enforce the Act.

ACCC green marketing guide

The ACCC released the *Guide to green marketing and the TPA* in 2008, with the aim of educating businesses about their obligations regarding environmental claims under the Act. Manufacturers, suppliers and advertisers of biofuels may find the guide useful in assessing the strength of any environmental claims they make and improving the accuracy and usefulness to consumers of their labelling, packaging and advertising.

Issues raised at the ACCC Fuel Consultative Committee (FuelCC)

Ethanol mandates were one of the key issues raised at meetings of the FuelCC[118] in April and November 2010. FuelCC members raised concern about:

- ethanol mandates restricting consumer choice
- lack of consumer education about ethanol mandates
- consumer perceptions about EBP
- signage and labelling of E10
- value for money and energy content of E10
- competitiveness of ethanol pricing in a mandated environment with few suppliers
- retailers experiencing difficulty complying with the mandate requirements due to supply constraints
- price competitiveness of imports in the absence of domestic supply
- changes to ethanol excise
- implications of the NSW mandate and a potential increase in PULP sales
- the suspension of the Queensland mandate

118 See chapter 2 for more details on this committee.

- the cost of implementing the mandates, including the additional cost to petrol retailers in reforming their sites and further costs where mandates are withdrawn
- the effect of reduced availability of RULP on the marine fuel market.

6.8.2 Potential competition issues

Supply

Future investment in the Australian ethanol industry has been affected by a number of factors in recent years. The global financial crisis in 2008 had the effect of threatening plant closures and capacity expansions worldwide. Asset financing of bio-refineries decreased.[119] Future plant capacity in Australia was affected with many planned ethanol and biodiesel projects having been cancelled or delayed.[120] Feedstock prices and volatility of oil prices are also likely to have impacted on investment decisions.

State government mandates promoting ethanol consumption have also affected supply. On one hand, existing ethanol producers have increased capacity to meet increasing demand. On the other, investors in new plants and planned capacity expansions at existing plants might have been affected by uncertainty about whether state mandates would be implemented. The federal government is also currently considering taxation on ethanol which will also be taken into account by industry when making investment decisions.

Due to the small number of ethanol producers and limited capacity of ethanol production in Australia, ethanol shortages may occur, and could lead to price increases for ethanol and EBP (see Chart 6.11).

In chart 6.11 it is assumed that all RULP volumes sold in NSW are replaced by E10 when RULP becomes unavailable from 1 July 2012. In practice, however, it is likely that a minority of NSW motorists will switch to more expensive PULP instead of E10. However, the chart also assumes that current ethanol suppliers will meet their projected production capacities. This may not be the case. Demand from Victoria and Queensland is estimated to be the same as sales in 2009-10, as reported by RET.[121]

Although there are some new plants proposed for 2013 and 2014, given the current suspension of the Queensland mandate and the delay in the full implementation of the NSW mandate and other uncertainties it is unclear if these will go ahead. Therefore chart 6.11 does not take supply from proposed new plants into account.

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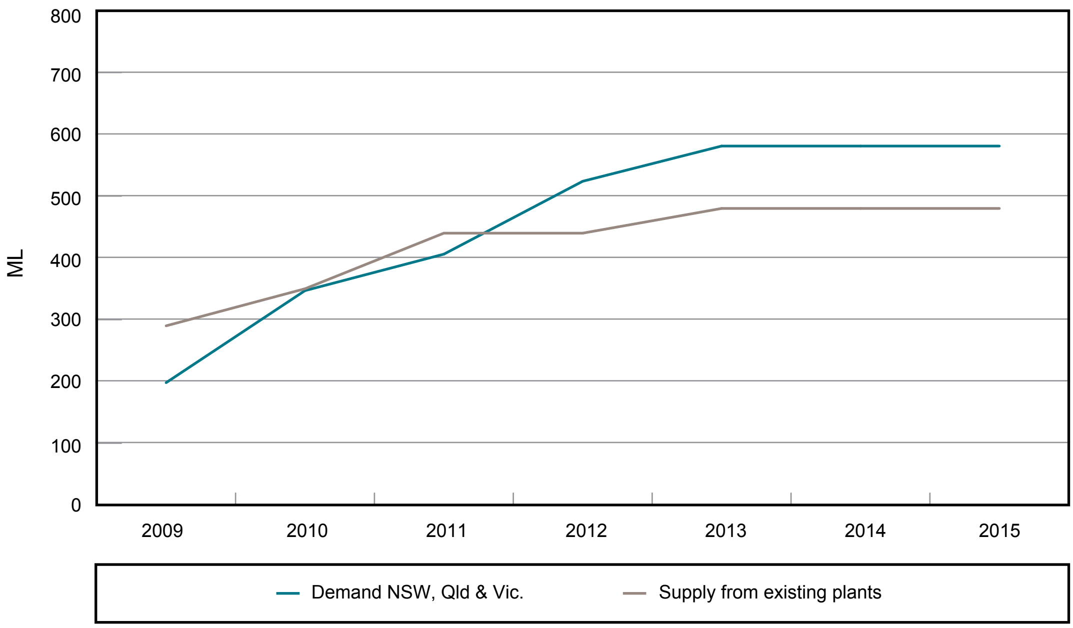
119 APAC, 2009, p. 6.

120 Ibid, p. 30.

121 Potential growth in E10 demand from Queensland and Victoria as well as demand for higher blends of EBP such as E85 in all states where it is sold is not taken into account in the chart. This chart also does not include demand from South Australia and Tasmania, as RET does not report EBP sales from these states. Because of this and also because RET does not report the bulk of sales from independent retailers, shortages could potentially be greater than estimated here. The potential shortage of ethanol will be reduced to the extent that, when RULP is effectively prohibited, NSW motorists switch to more expensive PULP rather than E10.

Chart 6.11 Current and estimated mandated ethanol demand in NSW and sales demand from Queensland and Victoria and Australian ethanol production capacity (supply): 2009 to 2015



Sources: ACCC analysis based on RET Australian Petroleum Statistics (APS), various issues and APAC Australian Biofuels 2010-11 data.

Note: Estimates based on 2009-10 petrol sales reported to RET (APS). Data for 2009 is based on actual sales reported to RET in all states. 2010 data is based on actual sales reported to RET in Victoria and Queensland to August 2010; average monthly sales to August 2010 are used as an estimate for the remaining four months. 2010 data for NSW is an estimate based on total petrol sales reported to RET for 2009-10 and a 4 per cent ethanol mandate. The first half of 2011 is an estimate based on 2009-10 total petrol sales and a 4 per cent mandate. The second half of 2011 and the first half of 2012 are estimated based on 2009-10 total petrol sales and a 6 per cent mandate. Estimated mandated volumes in NSW from July 2012 are based on the assumption that demand for RULP is transferred to EBP when RULP is effectively prohibited (and is estimated from 2009-10 sales). In practice it is likely that some RULP users will switch to more expensive PULP rather than use E10. Sales in Victoria and Queensland are estimated to be constant from 2009-10. Supply from existing plants assumes all existing plants produce at their maximum projected production capacity as reported by APAC. It is possible that exemptions will be granted by the NSW government so that retailers will not have to meet their full legislated requirements if there is a shortage of ethanol.

Even if the Queensland mandate is indefinitely suspended and taking account of the recently announced delays in scaling up of the NSW mandate, in the short to medium term there are still concerns over the supply of ethanol.

Restrictions on ethanol imports

As discussed in section 6.3, the current excise policy for ethanol combined with the production grant and import duty arrangements effectively restrict ethanol imports. At present (and possibly up until 2020), domestic ethanol potentially has a pricing advantage over ethanol imports because of the production grant payable to domestic ethanol producers. Largely because of this, there have not been any significant fuel ethanol imports into Australia in recent years, despite the growing demand for ethanol. For imported ethanol to be competitive in the Australian market (under the current effective taxation arrangements), substantially higher petrol prices or lower global ethanol prices would be required.

Energy Quest predicts that any imports of ethanol will be limited until the excise treatment for both domestic and imported ethanol becomes more aligned.[122] Even then, the possibility of ethanol imports may be affected by the availability of fuel grade ethanol imports and appropriate coastal terminal infrastructure with the facilities to accept volumes of ethanol. Because fuel ethanol easily absorbs water or moisture, it requires specialised storage facilities to prevent it from being exposed to moisture.[123] According to Energy Quest, Australia currently has a very limited number of coastal terminals that have the facility to accept ethanol cargoes greater than 4,000 tonnes.[124]

The NSW Biofuels Act also requires that ethanol blended into fuel to meet mandate requirements complies with a biofuel sustainability standard.[125] This might have the effect of restricting retailers in NSW from selling imported ethanol, if the ethanol supplier was unable to comply with the conditions of the standard, or substantiate compliance with it.

6.8.3 Possible outcomes of limited supply

Price implications

There is a risk that limited supply and capacity, and growing mandated consumption will lead to higher ethanol prices. It is possible that consumers will bear any ethanol price increases by paying higher prices for EBP.

In both NSW and Queensland (if the mandate is introduced) it is possible that mandates might be temporarily relaxed if there is evidence of ethanol shortages or if mandates are having an adverse effect on petrol prices. In practise, this is likely to mean a lower percentage of ethanol is blended into RULP.

Data available to the ACCC shows that there may already be a trend towards higher E10 prices and that the price differential between RULP and E10 has been decreasing over time (Table 6.3). It is likely that any costs of additional investment in ethanol production and distribution infrastructure will be borne by consumers.

122 Energy Quest, p. 5.

123 Ibid, p. 10.

124 Ibid, p. 33.

125 *Biofuels Act 2007*(NSW) No. 23, Part 1, Section 3.1.

Table 6.3 Price differential between RULP and E10 across the monitored locations[126] : January 2007 to September 2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
2007	3.0	3.0	3.0	3.0	3.0	2.9	2.9	3.0	3.0	3.0	3.0	2.7	3.0
2008	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.9	2.9	2.9	2.9	3.0	2.8
2009	3.0	2.7	2.5	2.6	2.5	2.6	2.5	2.5	2.5	2.6	2.5	2.6	2.6
2010	2.6	2.6	2.6	2.5	2.6	2.5	2.6	2.6	2.6	—	—	—	2.6

Sources: ACCC, Informed Sources

Limited supply and the Act

The ACCC would be concerned if limited supply of biofuels led to possible anti-competitive exclusive dealing or other anti-competitive agreements or conduct in breach of the Act. Such agreements could potentially have the effect of stopping smaller players from getting access to the biofuel market and limit their ability to provide competition in the market.

Potential outcomes of increased demand for ethanol

Given expected shortages of ethanol in Australia, more pressure on supply could arise if E85 experienced a large take-up, or if other states decided to implement ethanol mandates. As the Australian biofuel industry grows, demand for biofuels could also put pressure on other industries, especially where food crops are being used for biofuel production. This could result in higher crop prices.

126 See appendix D for more details on the locations where both E10 and RULP prices are monitored bt the ACCC.

7 Premium unleaded petrol

Key points:

- Consumption of Premium Unleaded Petrol (PULP) has increased in recent years, particularly in New South Wales.
- It is likely that some of the increase in demand for PULP may be due to the ethanol mandate in NSW and the proposed (and recently postponed) mandate in Queensland. These legislated or proposed mandates have had the effect of reducing supplies of Regular Unleaded Petrol (RULP) and forced some motorists to switch to PULP.
- PULP imports into Australia have grown in line with the increase in demand. If demand for PULP continues to grow in the future, it is likely that Australia will become more dependent on PULP imports.
- Further increases in demand for PULP may put pressure on PULP supplies and prices.

7.1 Overview

Consumption of premium unleaded petrol (PULP) has increased considerably in recent years relative to regular unleaded petrol (RULP). The importance of PULP as a domestic transport fuel has grown as more manufacturers specify the use of PULP for high performance engines and petrol companies promote their proprietary premium blends. In addition, the government ethanol mandate in NSW and to some extent the proposed but currently suspended mandate in Queensland have had the effect of diminishing the availability of RULP and as a result have further increased the demand for PULP.

This chapter looks at the characteristics of PULP, factors affecting the supply of, and demand for PULP and wholesale and retail prices of PULP.

7.2 What is PULP?

As the name suggests PULP is a premium-grade fuel with superior performance characteristics to RULP. PULP is available in different grades usually sold as: PULP 95 and PULP 98. Petroleum fuels refined or imported into Australia are required to meet quality specifications set out in the Fuel Standard (Petrol) Determination 2001. According to this standard, premium unleaded fuel must have the following properties:

- sulphur: less than 50 mg/kg
- minimum of 95 RON (Research Octane Number)[127]
- minimum of 85 MON (Motor Octane Number).[128]

127 The RON is a rating of a fuel's resistance to auto-ignition given to the fuel after being tested in an engine simulating road conditions where pure iso-octane has a rating of 100. See section 6.6.2.

128 MON is a similar rating to RON but with the fuel being tested in an engine simulating conditions of greater stress.

These properties are unique to PULP 95. PULP 98 has a higher RON than PULP 95. The quality standards for PULP are higher than the standards for RULP which must have sulphur levels below 150mg/kg, a RON of 91 or greater and a MON of 81 or greater.

7.2.1 PULP refining

The refining process to produce PULP is more complex than for RULP. Among other things, crude oil must be refined to a greater degree to produce PULP, as the Australian standard for PULP requires lower sulphur levels than RULP. In addition, as desulphurisation has the effect of decreasing the octane rating of fuel, additional processing is generally required in order to boost the octane rating to the higher standard required for PULP.

There are different methods for upgrading the octane rating of hydrocarbons such as petrol. Reforming is the method most commonly used in Australia.[129] Reforming involves the application of heat, pressure and the use of a catalyst to change the chemistry of the oil component. The end result of this is a mixture of higher octane rated hydrocarbons.

In addition, it is common for sellers of PULP to add a cleaning agent or detergent to premium fuels to help prevent build-up of carbon deposits in the engine. In many cases a patented additive is combined with the fuel to make a proprietary premium blend.

Production costs for PULP are typically greater than RULP because additional refining is required to produce PULP and because proprietary additives are often added to the final product.

7.2.2 Characteristics of PULP

Apart from being a 'cleaner' fuel than RULP, owing to the lower sulphur and presence of cleaning agents, PULP generally gives better 'mileage' than RULP. PULP has a higher octane rating and is less likely to prematurely or unevenly combust. Premature or uneven combustion increases fuel wastage and reduces overall efficiency. High-performance vehicles perform better on PULP because they are able to take advantage of the higher octane fuel by using higher compression engines.[130]

However, PULP may not always be more economical than RULP. The greater fuel efficiency of PULP must be weighed against its greater cost. In an older engine designed to run on RULP, the fuel economy advantages of PULP may be marginal and so on a pure cost per kilometre basis the additional cost of PULP may not be justified.

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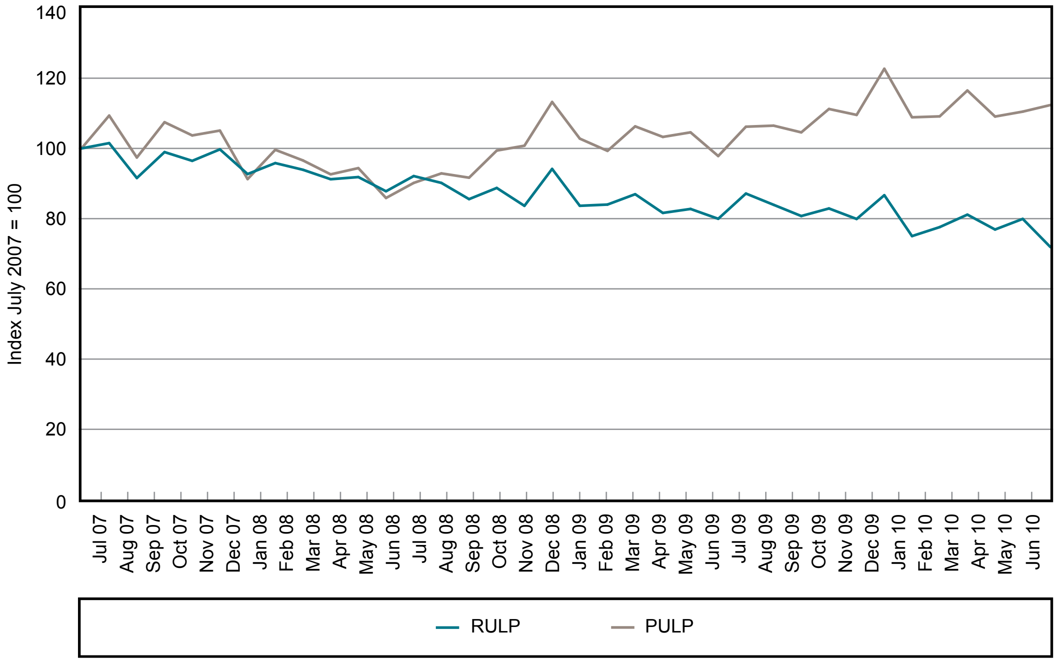
129 However, hydrocarbons can also be converted from a heavier state through the process of cracking and then used to produce higher octane fuel.

130 The more compressed the fuel is when it ignites the greater the energy output or the more efficiently the energy is used.

7.3 Demand for PULP

Demand for PULP in Australia is increasing while demand for RULP appears to be on a downward trend.[131] The diverging trends for retail sales of RULP and PULP since July 2007 are highlighted in chart 7.1.

Chart 7.1 Change in volumes of PULP and combined RULP and E10, indexed July 2007 = 100, all states and territories: July 2007 to June 2010



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

Chart 7.1 shows consumption trends for RULP and PULP in index form from a common base, July 2007 = 100. The divergence in the trend becomes particularly evident from around June 2008.

Additional data on total consumption of RULP, PULP and total petrol, including E10, is shown in table 7.1. From 2007–08 to 2009–10, demand for PULP increased 12 per cent by 387 mega litres (ML) to 3 573 ML. Much of this growth in demand occurred in NSW where PULP consumption increased by 285 ML (28 per cent).

To a significant extent the reduction in RULP consumption and the increase in PULP consumption has been driven by the NSW ethanol mandate, which has had the effect of making RULP increasingly less available. Thus NSW was responsible for 73 per cent of the increase in national demand for PULP over the three years to June 2010. National sales of regular unleaded petrol fell by 20 per cent to 12 841 ML during this period.

131 This trend has been evident in other developed countries. Recent research from the US suggests that the number of cars that require premium unleaded fuels increased by 70 per cent from 2002 to 2008. Chris Woodyard, 'More cars use pricier premium gas', *USA Today*, 13 April 2008. Research conducted by Kelley Blue Book Co., Inc. and *USA Today.*

Table 7.1 Sales volumes, RULP and PULP and total petrol, (including E10): 2007–08 to 2009–10

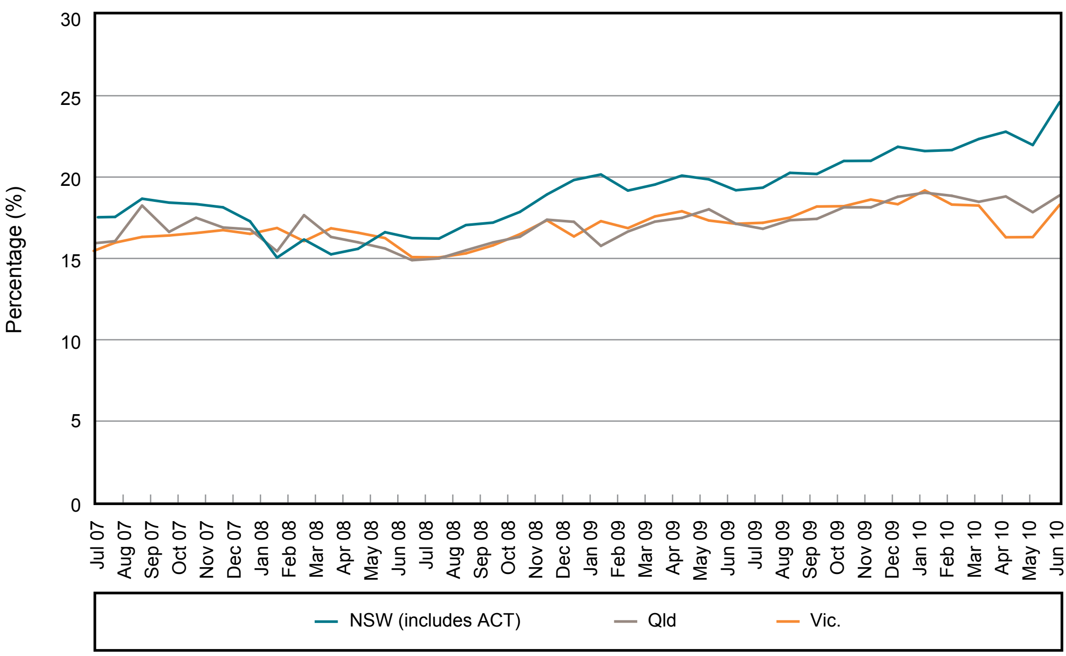
	2007–08			2008–09			2009–10		
	PULP ML	RULP ML	TOTAL PETROL Incl. E10 ML	PULP ML	RULP ML	TOTAL PETROL Incl. E10 ML	PULP ML	RULP ML	TOTAL PETROL Incl. E10 ML
NSW (Includes ACT)	1 030	4 666	6 072	1 124	3 981	5 995	1 316	3 508	6 112
Vic.	783	3 998	4 787	751	3 684	4 502	804	3 572	4 496
Qld	740	3 282	4 475	715	2 855	4 296	772	2 590	4 243
SA	186	1 139	1 325	189	1 117	1 306	205	1 111	1 316
WA	357	1 610	1 967	370	1 629	1 999	383	1 583	1 966
Tas.	71	384	454	67	370	437	69	351	420
NT	19	131	150	21	133	154	23	126	148
Australia	3 186	15 209	19 230	3 236	13 768	18 687	3 573	12 841	18 702

Source: RET *Australian Petroleum Statistics,* various issues

Table 7.1 shows that since 2007-08 that consumption of PULP has grown in all states except Tasmania.

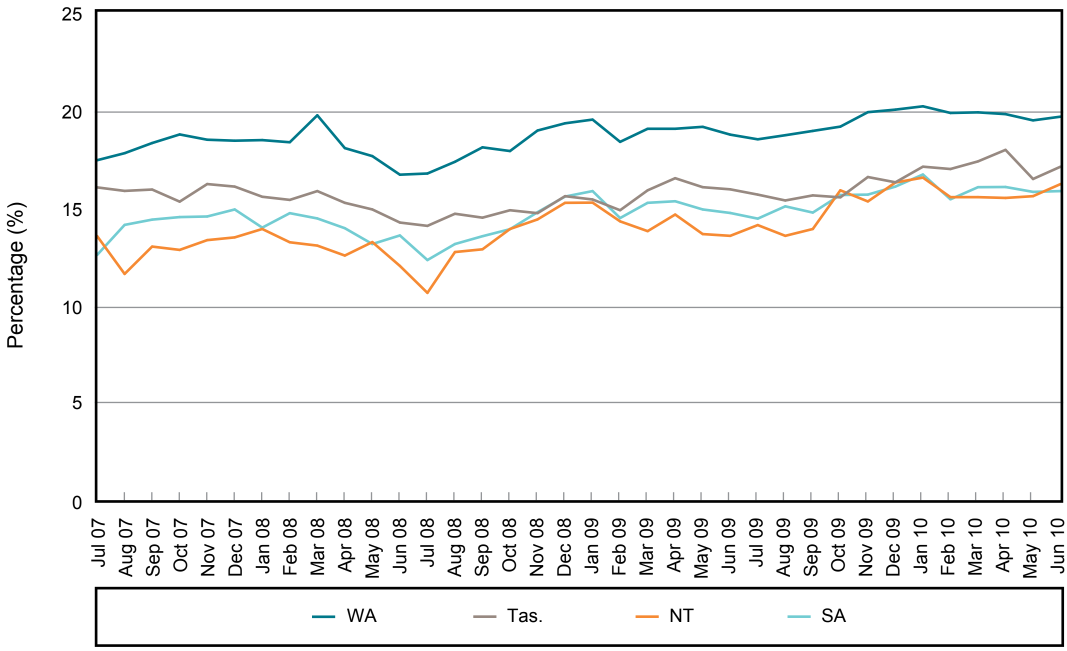
Charts 7.2 and 7.3 show sales of PULP as a proportion of total unleaded petrol sales for each state and the Northern Territory.

Chart 7.2 PULP as a percentage of total unleaded petrol retail sales, NSW, Qld, Vic: July 2007 to June 2010



Source: RET *Australian Petroleum Statistics,* various issues

Chart 7.3 PULP as a percentage of total unleaded petrol retail sales, WA, Tas, NT and SA July 2007 to June 2010:



Source: RET *Australian Petroleum Statistics,* various issues

Charts 7.2 and 7.3 demonstrate that consumption of premium as a proportion of unleaded petrol is growing in all states, particularly since July 2008. The most notable increase has occurred in NSW.

7.3.1 Factors affecting demand for PULP

There are a number of factors that may have contributed to the recent increase in consumption of PULP in Australia. The most important of these are likely to include:

- an increase in car manufacturers specifying the use of PULP for their vehicles
- consumer perceptions about fuel quality
- actual and proposed state government mandates on ethanol-based fuels.

Car manufacturers' specifications

One of the factors that is likely to have stimulated demand for PULP in the past few years has been the increasing trend of car manufacturers specifying the use of PULP. Premium fuels have been the recommended fuel for many recently manufactured cars, particularly high-performance cars. Typically, these vehicles have high-compression engines that perform best on fuel with a high octane rating. Also, PULP is the preferred fuel for many cars manufactured before 1986. These cars were designed to use leaded fuels (lead boosted octane) and could suffer from engine damage with lower octane RULP fuel.

Consumer perceptions

Another factor possibly driving demand for PULP could be perceptions by consumers that PULP may be cleaner or more efficient and cost effective than RULP, notwithstanding the higher price.

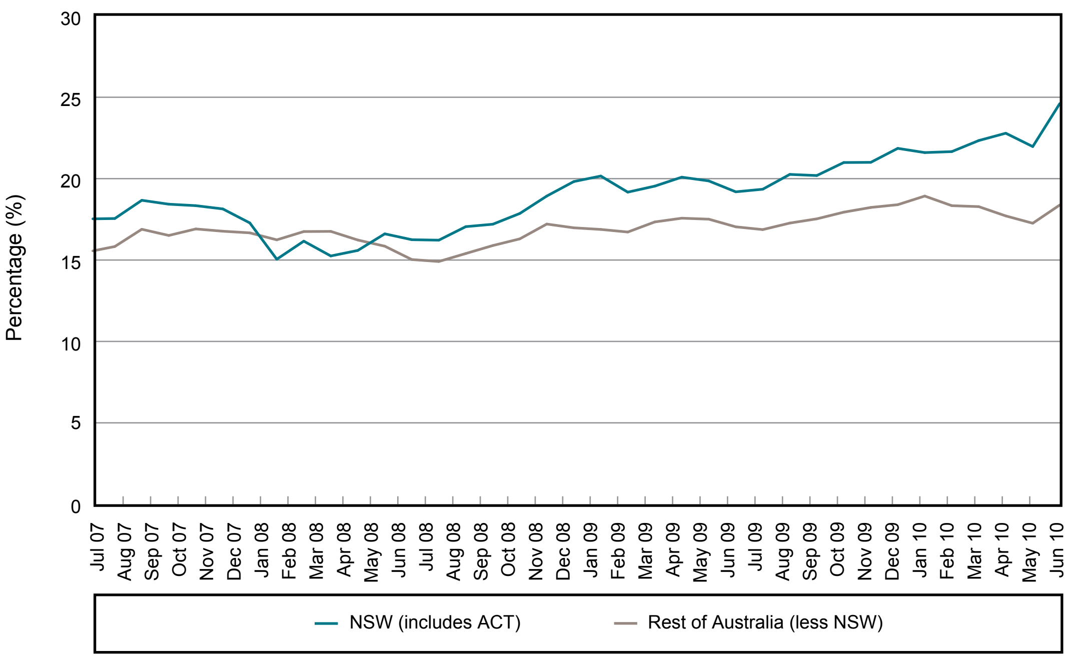
Government mandate on biofuels

In Australia, state government policies on alternative fuels are likely to have been a key driver of the growth in demand for PULP in the past three years. As noted in chapter 6, under the present NSW Government mandate four per cent of unleaded petrol sales volumes must be ethanol. From 1 July 2011, the proportion of unleaded petrol sales that must contain ethanol rises to six per cent, and from 1 July 2012, all RULP sales will have to be E10. The proposed Queensland mandate, which was suspended in October 2010, would have required five per cent of unleaded petrol to be ethanol.

By affecting supplies of RULP, the ethanol mandates impacted on the demand for PULP. In order to meet the mandates in NSW at the presently prescribed levels, retailers have had to restrict RULP supply. Where individual service stations do not have the tank space for both RULP and E10, they have been forced to stop stocking RULP. From 1 July 2012, RULP will be effectively unavailable in NSW. In anticipation of the proposed Queensland mandate, a number of service stations, particularly in south-east Queensland, appear to have switched over to E10. The lack of availability of RULP at the pump appears to have forced some drivers who cannot or choose not to use ethanol blended petrol to switch to PULP.[132]

The effects of the ethanol mandate in NSW on PULP sales are highlighted in chart 7.4, which presents the proportion of total petrol sales accounted for by PULP in NSW and the average for the other states.

Chart 7.4 PULP as a percentage of total petrol sales for NSW and the rest of Australia: 2007–08 to 2009–10



Source: RET *Australian Petroleum Statistics,* various issues

132 As noted in section 6.6.2, The Queensland Department of Employment, Economic Development and Innovation estimated that in November 2009, 37 per cent of vehicles in Queensland were incompatible with E10.

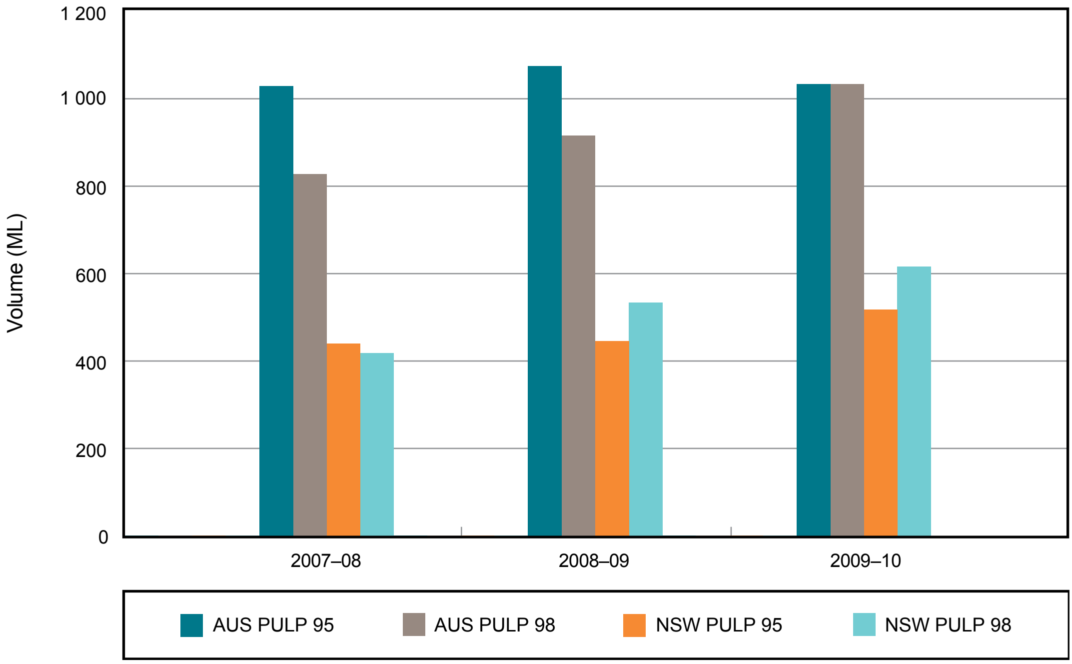
It can be observed in chart 7.4 that the proportion of total sales accounted by PULP fuel in NSW (currently the only state with a mandate on ethanol) is greater than the average for all other states. Further, the differential between NSW and the rest of Australia appears to be widening.

It seems reasonable to expect demand for PULP in NSW to continue to increase in the future as the full effect of the ethanol mandate is felt from 1 July 2012.

Wholesale transaction data provided to the ACCC shows different consumption trends for different types of PULP fuel. In 2007–08, annual wholesale sales of PULP 95 were greater than PULP 98, but in 2009–10 sales of PULP 98 surpassed PULP 95. This trend is particularly evident in NSW.

Chart 7.5 shows annual wholesale sales volumes for PULP 95 and PULP 98 for NSW and the rest of Australia.

Chart 7.5 PULP 95 and PULP 98 wholesale sales volumes for NSW, and the rest of Australia: 2007–08 to 2009–10



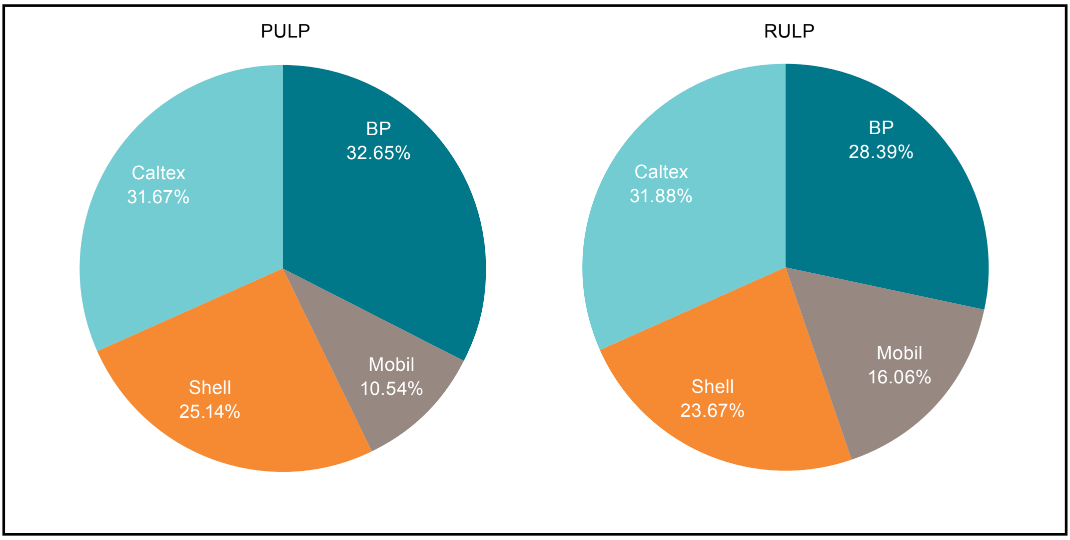
Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process

Chart 7.5 shows that demand for PULP 98 has grown since 2007–08, in absolute terms and also relative to PULP 95. The trend is particularly evident in NSW. In 2007–08, annual wholesale sales volumes of PULP 95 were greater than PULP 98 in NSW and the other states. In 2009–10, sales of PULP 98 exceeded PULP 95 in NSW and were approximately equal to PULP 95 across all states.

7.4 Factors affecting supply of PULP

All Australian refiner-marketers are able to produce PULP. In 2009–10 BP accounted for the largest share of PULP output levels with 32.7 per cent of total PULP production. BP has a larger share of total PULP production than of total RULP production. On the other hand, Mobil's share of PULP output is considerably smaller than its share of RULP output. Shares of refinery production of PULP and RULP in 2009–10 are shown in chart 7.6.

Chart 7.6 Shares of domestic production PULP and RULP: 2009–10



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

However, Australia's current requirements for PULP can not be met entirely from domestic production. With the exception of 2004–05, domestic production has been insufficient to satisfy domestic consumption needs.

Table 7.2 shows PULP production and sales since 2003–04. In 2003–04, refiner-marketers supplied Australia with 92 per cent of its PULP requirements. By 2009–10 this proportion had fallen to 77 per cent. The excess demand for PULP has been satisfied through higher levels of imports.

Table 7.2 Total domestic production and consumption of PULP: 2003-04 to 2009-10

	Production ML	Sales ML	Proportion of sales met by domestic production %	Proportion of sales meet by imports %
2003–04	2 732 741	2 975 763	92	8
2004–05	2 997 787	3 015 529	99	1
2006–07	2 657 241	3 069 066	87	13
2007–08	2 685 555	3 185 696	84	16
2008–09	2 405 732	3 236 326	74	26
2009–10	2 735 564	3 572 706	77	23

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

It is likely that Australia's reliance on PULP imports will increase in future as demand continues to grow. Australian refineries are currently configured to produce a certain mix of refined products and may have limited scope for increasing production of one product without significantly reducing the production of others.

With demand for PULP in Australia increasing, the availability of additional sources of PULP outside Australia could be an issue as consumption increases. Singapore has refineries capable of making PULP to Australia's specification and satisfies the majority of Australia's current import requirements. While small quantities of PULP have been imported from UAE, Taiwan and Korea, Australia's reliance on Singapore is likely to increase in the future.

To the extent that Australia already imports significant supplies of PULP in the region, further increases in demand could put upward pressure on PULP prices if regional suppliers are not able to expand capacity in the next few years.

7.5 Prices of PULP

7.5.1 Benchmark prices of PULP

As is the case with RULP, the basic building block of PULP prices in Australia is the Import Parity Price (IPP). The IPP for PULP reflects a competitive price at which alternative supplies of PULP could be brought into the Australian market.

As PULP imports supplement domestic production and are the marginal source of supplies of PULP, domestic supply is priced to reflect parity with import cost. Parity, however, is not determined on the basis of actual import costs incurred by refiner-marketers but with reference to costs that would be incurred by an importer to purchase PULP fuel overseas and transport it to a specific location in Australia.

The refiner-marketers determine an IPP for PULP fuel on an approximately similar basis to RULP. While the precise formula used by each refiner-marketer varies, the general basis for the IPP formula for refined PULP is:

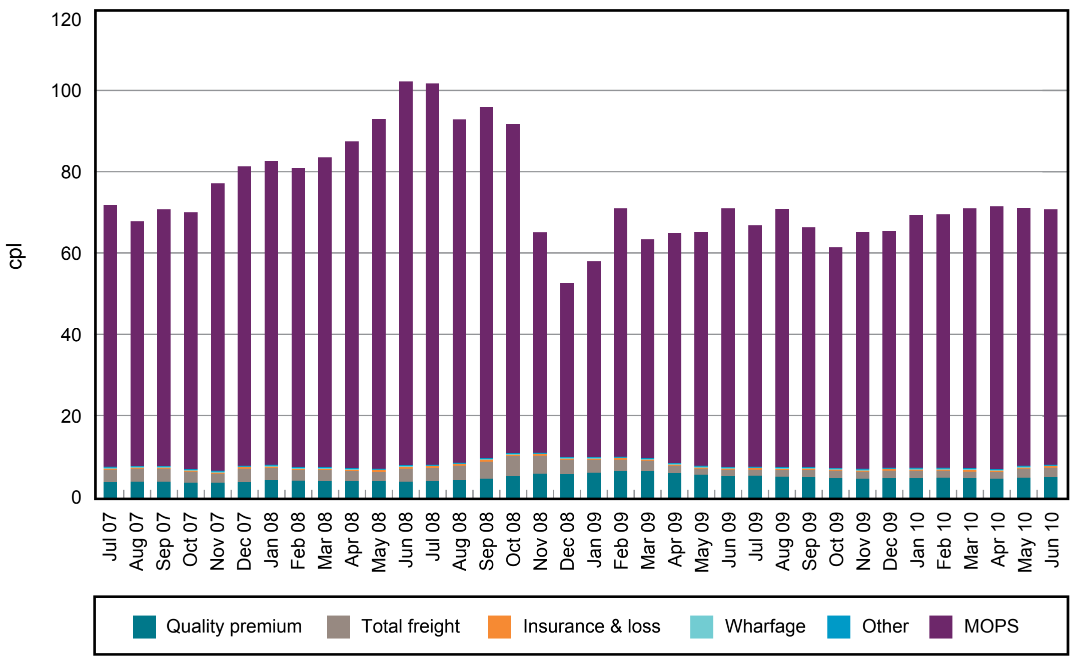
IPP (PULP) = Benchmark refinery price of refined PULP + Quality premium + Freight + Insurance and loss + Wharfage + Other Costs

All refiner-marketers determine an IPP for PULP 95 and one calculates an IPP for PULP 95 and for PULP 98. The international benchmark used for PULP 95 in Australia is generally MOPS 97. However, one refiner-marketer builds-up the IPP using the same price benchmark as for RULP, that is with MOPS 95, and then adds a 'PULP' margin to arrive at the IPP for PULP.

With the exception of the price benchmark for PULP and quality premium, all other components used to build-up the IPP for PULP are broadly the same as for RULP. The quality premium for PULP, notionally, is intended to reflect the difference between the benchmark price of fuel (MOPS 97) and the price of PULP refined to Australian standards. As this difference is greater for PULP than for RULP, the fuel quality premium for PULP is generally greater than for RULP. For a discussion of the concept of IPP in the context of RULP refer to section 8.3.1.

In chart 7.7 movements in the average monthly IPP for PULP and its components are shown since July 2007.

Chart 7.7 Components of monthly average IPP for PULP in the five largest cities: July 2007 to June 2010[133]



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

133 The data in chart 7.7 is not comparable with RULP IPP data due to the fact that one refiner-marketer calculates its PULP IPP differently from the others and the components in chart 7.7 have been adjusted to reflect that.

In 2009–10, MOPS continued to be the most important component in the IPP. The average contribution of MOPS to the overall IPP was lower in 2009–10 relative to 2007-08 and 2008-09 reflecting lower Mogas prices. The other cost components in the PULP IPP, freight, insurance and loss, wharfage and the quality premium remained relatively stable over the year. This is further shown in table 7.3

Table 7.3 Components of monthly average IPP for PULP in the five largest cities: July 2009 to June 2010[134]

	Exchange rate AUD1 = USD	Quality premium cpl	Freight cpl	Insurance and loss cpl	Wharfage cpl	Other cpl	MOPS cpl
Jul 09	$0.80	5.29	1.56	0.28	0.23	0.00	59.88
Aug 09	$0.83	5.09	1.59	0.29	0.23	0.00	64.01
Sep 09	$0.85	4.96	1.76	0.27	0.23	0.00	59.18
Oct 09	$0.90	4.71	1.84	0.25	0.23	0.00	54.43
Nov 09	$0.92	4.65	1.66	0.27	0.23	0.00	58.65
Dec 09	$0.91	4.71	1.91	0.27	0.23	0.00	58.31
Jan 10	$0.91	4.71	1.84	0.28	0.24	0.06	62.08
Feb 10	$0.89	4.84	1.72	0.28	0.24	0.11	61.95
Mar 10	$0.91	4.71	1.69	0.29	0.24	0.11	63.48
Apr 10	$0.92	4.60	1.64	0.29	0.24	0.11	64.21
May 10	$0.89	4.79	2.24	0.29	0.24	0.11	63.06
Jun 10	$0.85	5.01	2.33	0.29	0.24	0.11	62.64
Average 2009–10	$0.88	4.84	1.82	0.28	0.23	0.05	60.99

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

The average monthly contribution of MOPS in 2009–10 ranged from 54.43 cpl to 64.21 cpl and averaged 60.99 cpl. The quality premium and freight costs are other key components of the IPP. During 2009–10, the quality premium on average contributed 4.84 cpl and freight 1.82 cpl to the overall IPP.

7.5.2 Comparison of key components for IPP for PULP and RULP

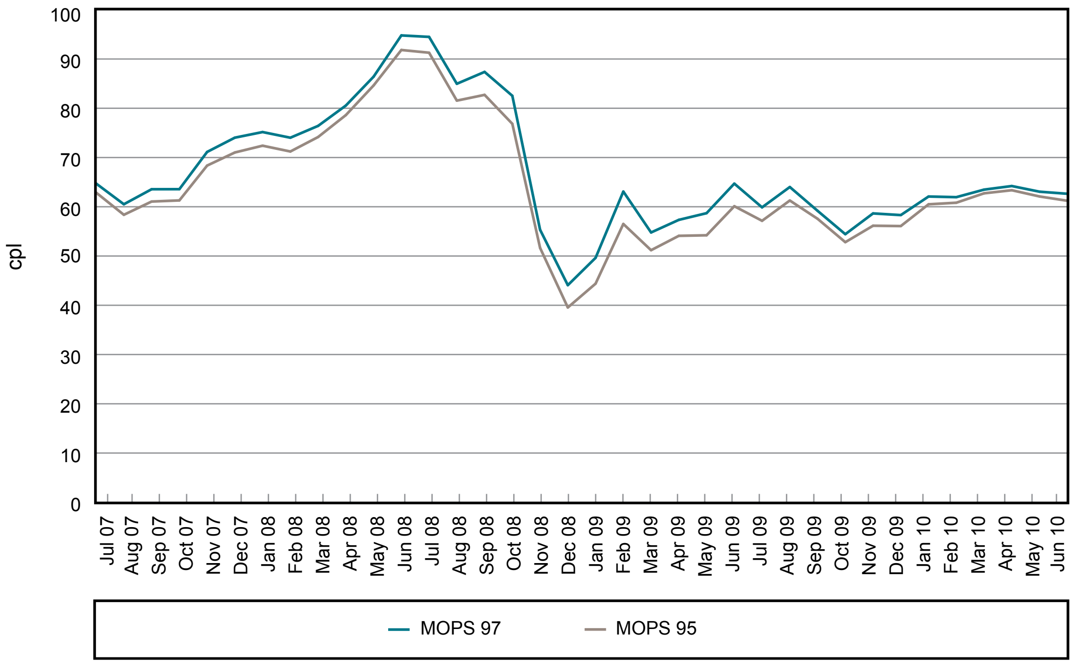
The ACCC has analysed the IPP and its key components, namely the MOPS benchmark prices and the quality premium, for both RULP and PULP.

As noted, the build-up of the IPP for PULP is the same as for RULP, with the exception of the components for the benchmark price for refined premium unleaded fuel and for quality premium. The IPP for the two types of fuel should, in principle, diverge to the extent that the price benchmarks, the MOPS 95 and MOPS 97, and the quality premiums differ.

134 The data in table 7.3 is not directly comparable with RULP IPP data due to the fact that one refiner-marketer calculates its PULP IPP differently from the others and the components in table 7.3 have been adjusted to reflect that.

On average, the international price benchmarks for RULP and PULP followed similar patterns in the three years to June 2010. Chart 7.8 shows average monthly prices for MOPS 95 and MOPS 97 for the refiner marketers.

Chart 7.8 Monthly average MOPS 95 and MOPS 97 prices: 1 July 2007 to 30 June 2010[135]



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

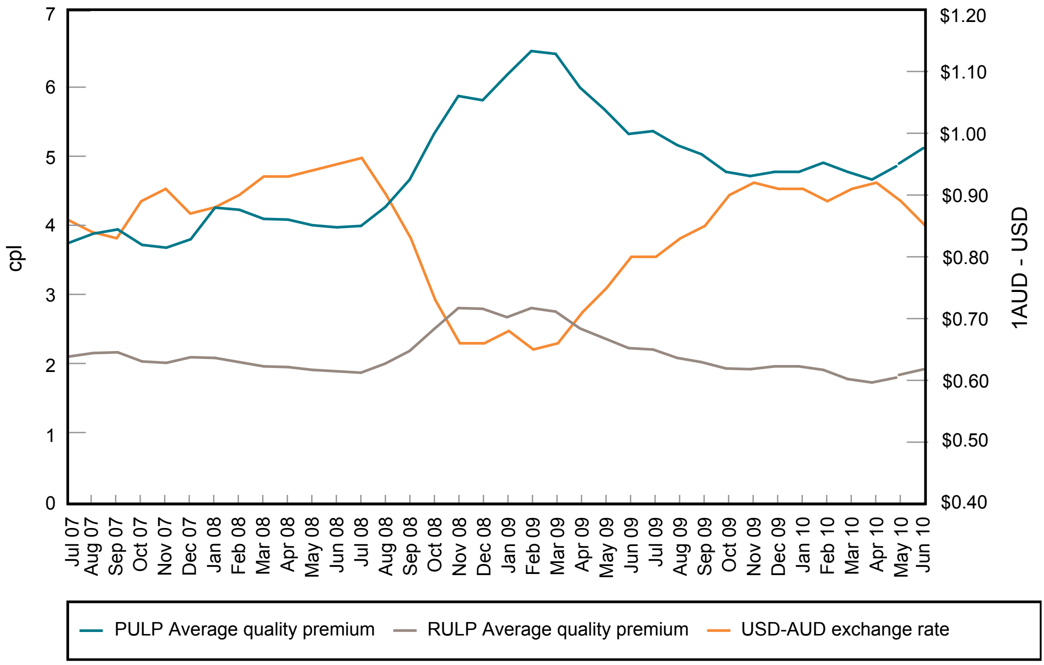
The average difference between MOPS 95 and MOPS 97 was 2.8 cents per litre from 1 July 2007 to 30 June 2010.

Theoretically, the quality premium reflects the difference in PULP fuel standards in Australia relative to the benchmark fuel used to build up the IPP. The quality premiums differ across capital cities, reflecting in part the different regulations covering standards in some states. However, as with RULP, the quality premium included in the PULP IPP is also affected by the relative bargaining positions of the buyers and sellers.

135 One refiner-marketer calculates its PULP IPP differently from the others and the MOPS data in chart 7.8 have been adjusted to reflect that.

Chart 7.9 shows trends for quality premiums for RULP and PULP for the refiner marketers across the five large capital cities since July 2007.

Chart 7.9 Monthly average PULP and RULP quality premium, and exchange rate, five-city average: 1 July 2007 to 30 June 2010[136]



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

From July 2007 to June 2010, the differential in the quality premiums reported to the ACCC by refiner-marketers averaged 2.61 cpl and increased from 1.62 cpl to 3.15 cpl.

As noted, the differential evident in chart 7.9 between the RULP and PULP quality premiums reflects the difference between the respective benchmark prices of fuel (MOPS 95 and MOPS 97) and the respective prices of RULP and PULP refined to Australian standards. It also includes a component reflecting relative bargaining strengths and market conditions.

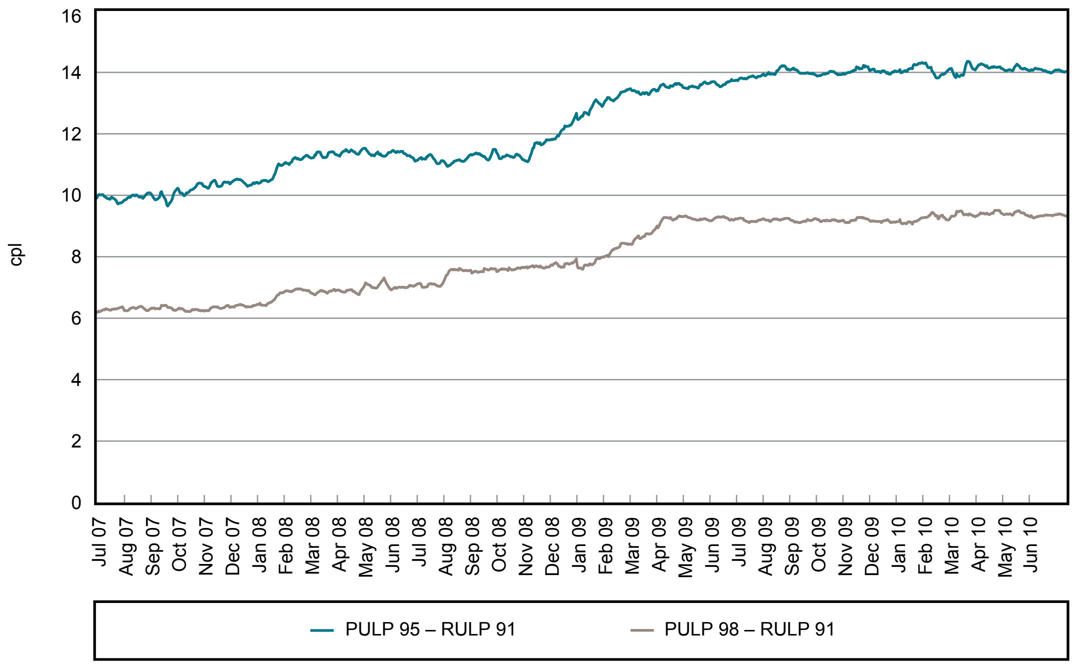
Chart 7.9 shows that movements in the quality premium for PULP and RULP seem to follow largely similar patterns. It also shows that as the quality premiums for both RULP and PULP are set in US dollars, movements in the exchange rate can affect the Australian dollar equivalents of the premiums.

136 One refiner-marketer calculates its PULP IPP differently from the others and the Quality Premium data in chart 7.9 have been adjusted to reflect that.

7.5.3 Retail and wholesale prices of PULP

Retail prices of PULP have been rising relative to RULP. Chart 7.10 shows trends in the differential between PULP (95 and 98) and RULP prices.

Chart 7.10 Differential between average daily PULP and RULP retail prices, five-city average, seven-day rolling averages: 1 July 2007 to 30 June 2010



Source: ACCC analysis based on Informed Sources data

It appears from chart 7.10 that the differentials between the retail prices of PULP 98 and RULP, and the prices of PULP 95 and RULP, have risen since July 2007. The difference in price between PULP 95 and RULP was 6.2 cents per litre in July 2007. By June 2010, this had increased to 9.5 cents per litre. The differential between PULP 98 and RULP increased by 4 cents per litre to 14.1 cents per litre in the three years to June 2010.

Table 7.4 compares annual average TGPs and IPPs in each of the five largest cities for 2009–10. The largest differential occurred in Perth and the lowest in Sydney.

Table 7.4 Annual average net TGPs and IPPs for PULP in the five largest cities: 2009–10

	TGP cpl	IPP cpl	Difference cpl
Sydney	77.92	69.69	8.23
Melbourne	78.63	69.55	9.08
Brisbane	79.14	69.72	9.42
Adelaide	79.81	69.94	9.87
Perth	80.21	69.00	11.21

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

Note: TGPs are expressed net of excise and GST

7.6 Concluding observations on PULP

The market for PULP has expanded considerably since commencement of formal monitoring in 2007–08.

Demand for PULP has grown in all states except Tasmania, and particularly in NSW where the ethanol mandates have had the effect of reducing supplies of RULP and forcing some consumers to switch to PULP. Consumption of PULP 98 appears to have grown relative to PULP 95.

As demand for PULP continues to grow, it is likely that imports will play an increasingly important role in bridging the gap between domestic production and consumption.

Further increases in demand for PULP may put pressure on PULP supplies and prices.

8 Wholesale prices

Key points:

- Over the past three years the ACCC has analysed more than three million wholesale transactions and has consistently found that on average wholesale prices move in line with the Import Parity Price (IPP) benchmark.
- The Mean of Platts Singapore (MOPS) benchmark price has continued to be the largest component of the IPP and the key driver of changes in the IPP, terminal gate prices and wholesale prices.
- Over the three-year period July 2007 to June 2010 the IPP appears to have generally moved in line with actual import costs.

8.1 Overview

This chapter focuses on petrol pricing in the wholesale sector over 2009–10. The aim of the chapter is to examine the prices set and paid in the wholesale sector with respect to their major components, including benchmark prices.

The chapter also looks at the role that buy–sell arrangements have in wholesale prices and compares the actual prices paid with wholesale pricing benchmarks.

8.2 The wholesale sector

The main function of the wholesale sector is to receive and store refined product from sources of supply such as domestic refineries and imports, and to distribute petrol to retailers.

Petrol is supplied to the wholesale sector through two primary methods:

- refining and importing operations by refiner-marketers, including buy–sell transactions
- importing operations by independent wholesalers.

The four refiner-marketers are the most significant sources of supply through both refining crude oil in their Australian refineries and directly importing refined product. Historically, independent wholesalers have imported comparatively small volumes of petrol. In 2009–10, however, independent wholesalers accounted for approximately 18 per cent of total petrol imports, compared with 6 per cent in 2008–09.

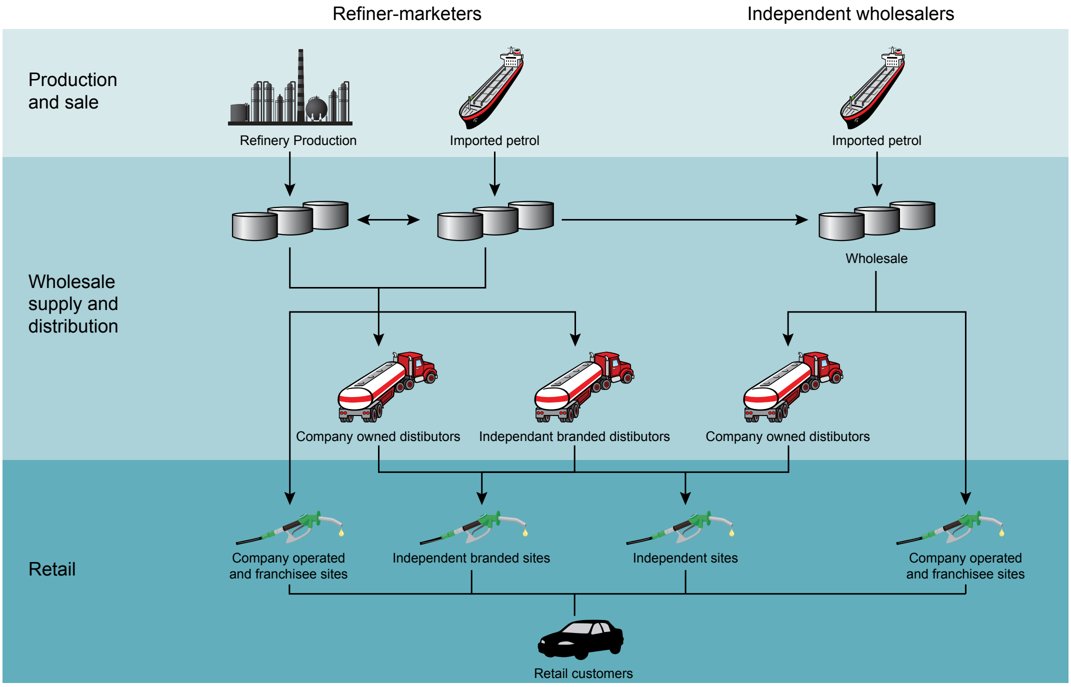
Once petrol has been refined or imported into Australia, a proportion is traded among wholesalers before being supplied to other distributors or to the retail sector. The major trading activities include:

- transactions among refiner-marketers (mostly through buy–sell agreements)
- large volume purchases by independent wholesalers from refiner-marketers.

Buy–sell agreements refer to the large volume contractual agreements between the refiner-marketers to purchase and sell petrol in Australia. Under these arrangements refiner-marketers typically purchase petrol from local refiners in locations where they do not operate a refinery. In locations where they do operate a refinery, they sell petrol to refiners who do not have a refining presence in that location or that are unable to competitively import petrol themselves.

Figure 8.1 shows the wholesale sector along with the other sectors of the Australian petroleum industry and illustrates major flows of refined product throughout the industry.

Figure 8.1 Sectors of the Australian petroleum industry and the flow of petrol



Source: ACCC

The various sources of supply to the wholesale sector are important in understanding the pricing arrangements that emerge and the prices that product is sold to the retail sector.

8.3 Determinants of wholesale prices

While petrol can either be refined domestically or imported into Australia, the common basis for all wholesale prices is the import parity price (IPP). As noted in Chapter 7 in the context of PULP, the IPP is a notional benchmark price that reflects the marginal cost of supply in Australia, or the notional cost to import petrol into Australia.

The refiner-marketers use the IPP as the primary building block to determine wholesale prices. This includes deriving prices for petrol traded under buy–sell agreements as well as prices for petrol sold to independent wholesalers and to the retail sector.

In addition to the IPP, wholesale prices contain a number of other components including:

- taxes
- wholesale margins
- other local costs.

Another benchmark used in wholesale pricing is the terminal gate prices (TGP). TGPs are prices at which petrol can be purchased from wholesalers in the spot market and must be published under the provisions of the Oilcode. Although few transactions are made at the TGP, these prices serve as a useful benchmark in analysing wholesale prices.

8.3.1 Import parity price

The rationale behind the IPP is that as Australia's refinery output is insufficient to meet the national demand for petrol, importing represents the best alternative source of supply. As imports are the marginal source of supply, prices in Australia must reflect international prices. If a wholesaler can import petrol, it would not purchase petrol from a domestic refiner at a price significantly above the cost of importing.

The IPP contains a number of components, including:

- the benchmark price of refined petrol in Singapore, the largest petrol-trading centre in the Asia-Pacific region
- a quality premium reflecting the difference between the benchmark price of petrol in Singapore as published by Platts and the price of petrol refined to Australian fuel standards
- transportation costs.

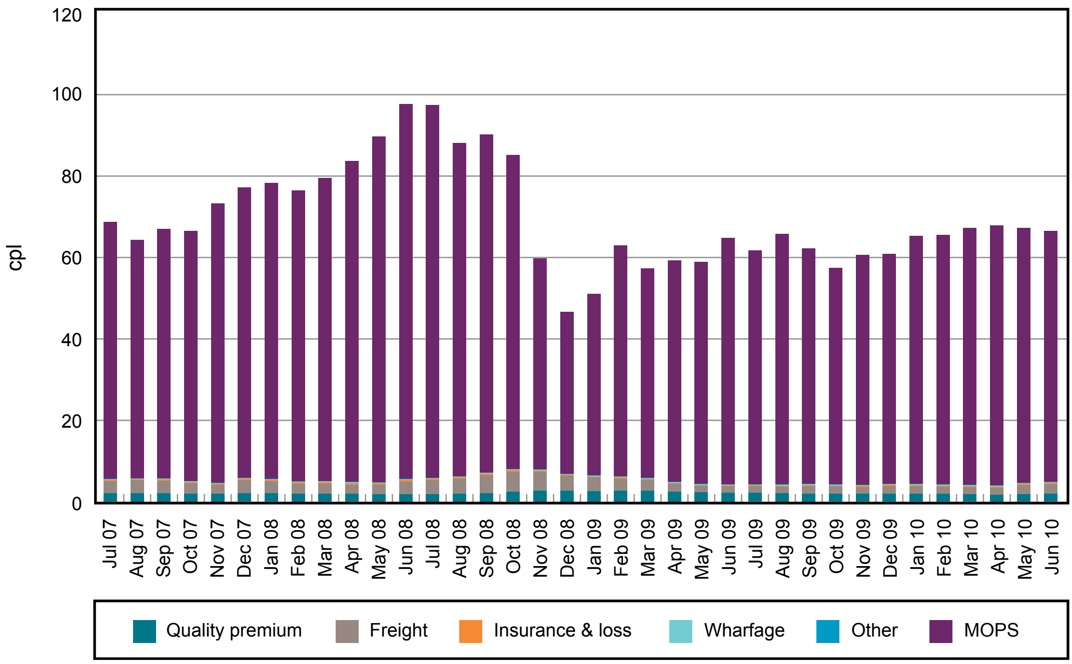
The benchmark price of refined petrol is the Platts Singapore quote for refined unleaded petrol of RON 95 and is commonly referred to as MOPS 95 (mean of Platts Singapore for Mogas 95).

The common formula used to calculate IPP can be shown as:

IPP = Benchmark price of refined petrol (MOPS 95) + Quality premium + Freight + Insurance and Loss + Wharfage

Data in chart 8.1 and table 8.1 show that the MOPS benchmark price has continued to be the largest component of the IPP. Although the IPP has remained relatively stable during 2009–10 the MOPS benchmark price remains the key driver of changes in the IPP.

Chart 8.1 Components of monthly average IPP for RULP in the five largest cities: July 2007 to June 2010



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

Table 8.1 Components of monthly average IPP for RULP in the five largest cities: July 2009 to June 2010

	Exchange rate AUS1=USD	MOPS 95 cpl	Quality premium cpl	Total freight cpl	Insurance and loss cpl	Wharfage cpl	Other cpl	IPP cpl
Jul 09	0.80	57.40	2.35	1.51	0.25	0.29	0.26	62.06
Aug 09	0.83	61.55	2.24	1.54	0.27	0.28	0.26	66.13
Sep 09	0.85	57.84	2.18	1.70	0.26	0.27	0.26	62.51
Oct 09	0.89	53.08	2.07	1.78	0.23	0.27	0.26	57.70
Nov 09	0.91	56.47	2.05	1.61	0.25	0.27	0.26	60.91
Dec 09	0.90	56.44	2.08	1.86	0.25	0.28	0.26	61.16
Jan 10	0.90	60.94	2.09	1.82	0.27	0.28	0.26	65.67
Feb 10	0.88	61.26	2.08	1.74	0.27	0.28	0.26	65.89
Mar 10	0.90	63.16	1.98	1.70	0.27	0.28	0.26	67.67
Apr 10	0.92	63.80	1.94	1.64	0.28	0.28	0.26	68.20
May 10	0.88	62.54	2.01	2.24	0.27	0.28	0.26	67.61
Jun 10	0.84	61.67	2.12	2.34	0.27	0.28	0.26	66.94
Average for 2009–10	0.88	59.68	2.10	1.79	0.26	0.28	0.26	64.37

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

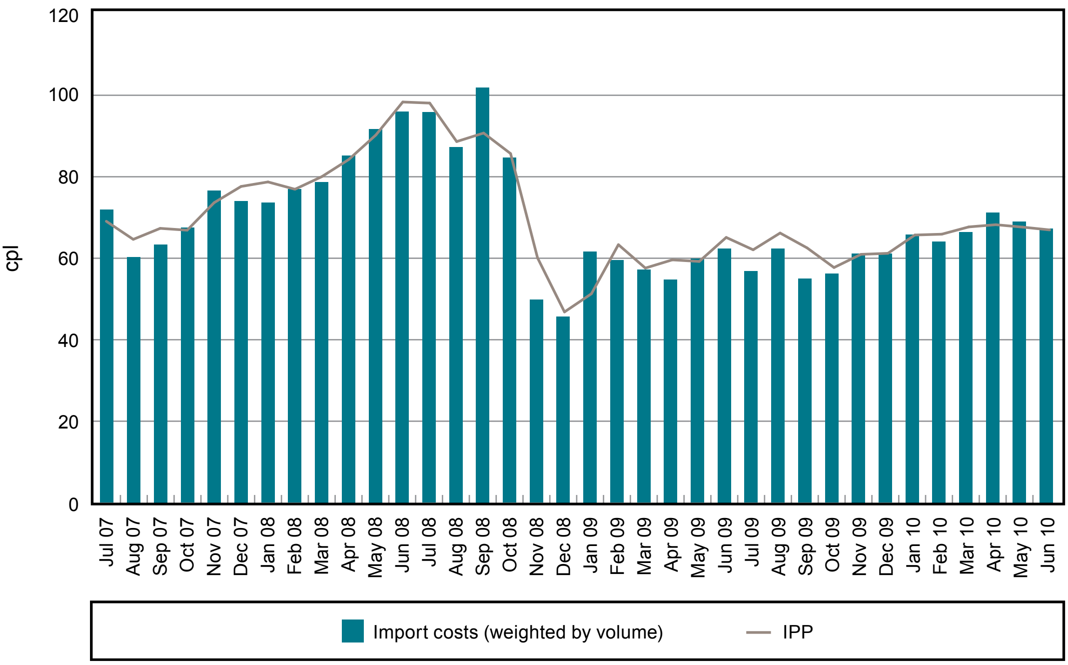
It can be observed from data in table 8.1 that the contribution of MOPS in 2009–10 ranged from 53.08 cpl to 63.80 cpl and averaged 59.68 cpl during 2009–10. The other two key components of the IPP, quality premium and freight, on average contributed 2.10 cpl and 1.79 cpl respectively to the overall IPP.

In 2009, the ACCC commissioned a consultant's report on the setting of IPPs. The consultant's report concluded that it was appropriate to continue using the Platts price-setting methodology and prices for IPP in Australia.[137]

Ultimately, the IPP should represent a reasonable benchmark price with respect to the actual import costs faced by petroleum companies.

Chart 8.2 tracks the IPP against actual import prices faced by refiner-marketers and independent wholesalers from July 2007 to June 2010.

Chart 8.2 Monthly average import costs and IPP for RULP in the five largest cities: July 2007 to June 2010



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

Over the three year period from July 2007 to June 2010 the IPP appears to have generally moved in line with actual import costs. As was the case in 2007–08 and 2008–09, import costs in 2009–10 have typically ranged within 5 cpl of the IPP. In fact in eight of the months in 2009–10 import costs deviated from IPP by less than 2 cpl.

137 ACCC, Monitoring of the Australian petroleum industry, December 2009, pp. 83 and 272.

8.3.2 Buy–sell arrangements and pricing

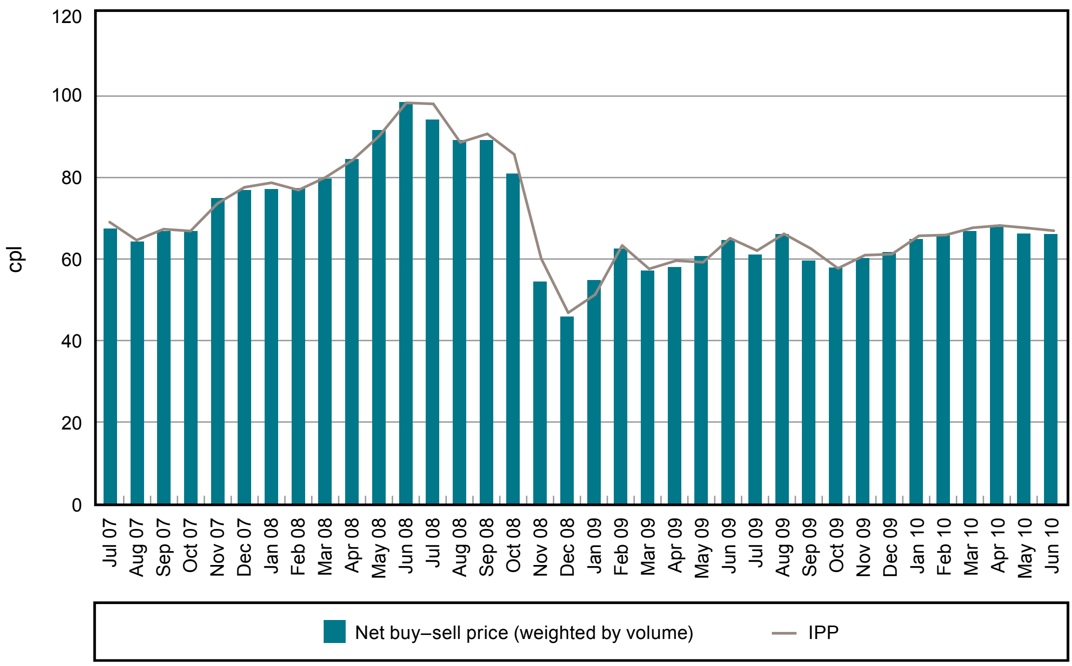
The buy–sell agreements between the refiner-marketers can also impact upon the setting of wholesale prices. In 2009–10, 48 per cent of wholesale sales of all unleaded products were obtained through buy–sell transactions.

Prices determined under buy–sell arrangements are largely based on the IPP and have tracked very closely with the IPP, and thus with actual import costs, over the past three years.

For a refiner without a local refinery, the best alternative to obtaining large volumes of petrol from a competitor's local refinery is to import. In principle, buy–sell prices are constrained by the cost of importing as a refiner would choose to import petrol rather than purchase it locally if domestic prices were uncompetitive.

Chart 8.3 shows net buy–sell[138] prices and IPP for RULP in the five largest cities for the three years to June 2010. In 2009–10 buy–sell prices have continued to track IPP very closely.

Chart 8.3 Monthly average net buy–sell prices and IPP for RULP in the five largest cities: July 2007 to June 2010



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

On average, net buy–sell prices were only 0.4 cpl lower than the IPP in 2009–10. This is in the range of previous years when net buy–sell prices were 0.3 cpl higher in 2007–08 and 0.8 cpl lower in 2008–09.

Over the three years to June 2010, the average difference between the IPP and buy–sell prices was 0.3 cpl.

138 Buy-sell prices exclude GST.

The ACCC's 2009 petrol monitoring report considered in detail the nature and operation of the buy–sell arrangements as well as the prices at which petrol is traded. The report found that while arrangements for the buying and selling of products between competitors had the potential to lessen competition in the wholesale market, there was insufficient evidence to support a conclusion that the arrangements contravened the Act. Further the report found that actual buy–sell prices and IPP prices appear sufficiently close to suggest that prices negotiated under buy–sell arrangements bear a reasonably close relationship to notional import costs.[139]

8.3.3 Terminal gate prices

Terminal gate prices (TGPs) are also based on IPP and are a useful benchmark when analysing wholesale prices.

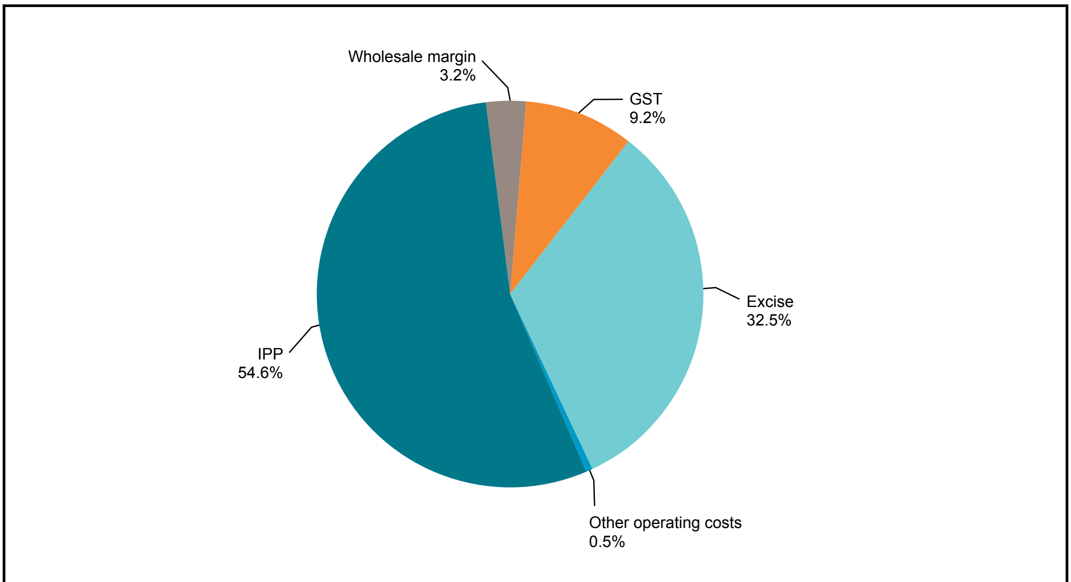
Although few spot transactions are actually made at the terminal gate (and at the precise terminal gate price) TGPs reflect the actual prices paid by wholesale customers because they include additional wholesale pricing components such as taxes, margins and other operating costs.

The common formula used to construct TGPs can be shown as:

TGP = IPP + Wholesale margin + Other operating costs + Excise + GST

Chart 8.4 shows the various components of TGPs and the proportion they contribute to the total TGP price. On average during 2009–10, approximately 96 per cent of the price of TGP was made up of the IPP plus taxes.

Chart 8.4 Components of the annual average TGP for RULP in the five largest cities: 2009–10

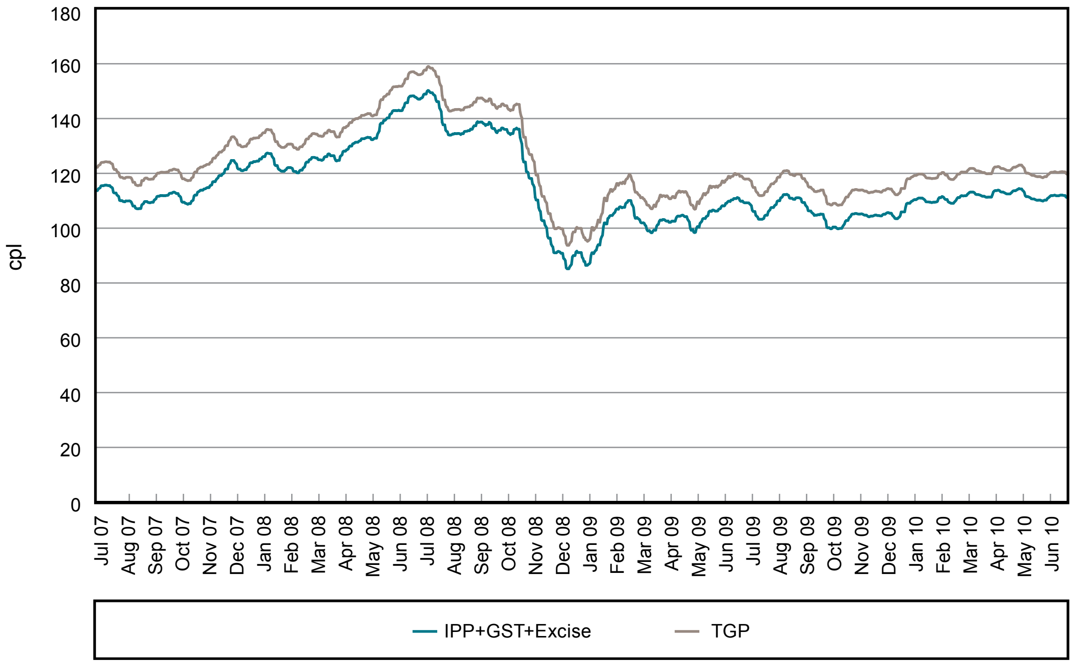


Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process

139 ACCC, *Monitoring of the Australian petroleum industry,* December 2009; pp. 96 and 101.

Chart 8.5 tracks the IPP (adjusted to include taxes) against TGPs over the three years to June 2010 and shows TGPs closely mirroring the IPP when adjusted for taxes.

Chart 8.5 Daily average adjusted IPP (including taxes) and TGPs for RULP in the five largest cities: July 2007 to June 2010



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

8.4 Wholesale prices and pricing benchmarks

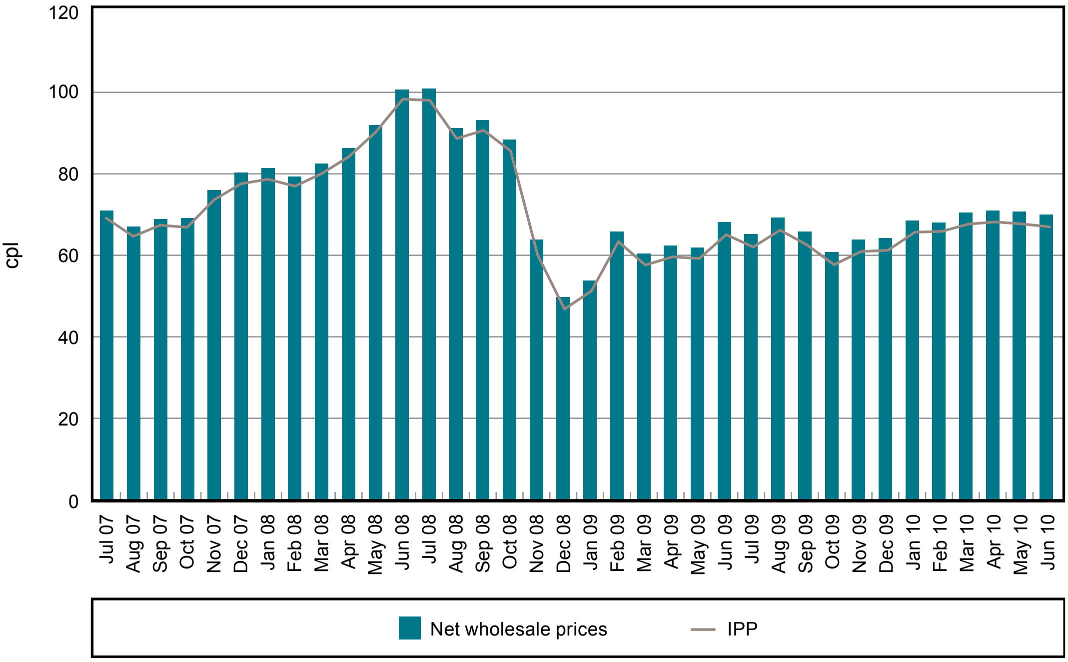
Over the course of its formal monitoring activities the ACCC has analysed more than three million wholesale transactions from the four refiner-marketers. These transactions span from July 2007 to June 2010 and detail the actual transactions between refiner-marketers and their customers: other wholesalers, independent distributors and resellers and their own and other retailers.

Given the prominent role of IPP in price-setting, and of TGP in the spot wholesale market, it is appropriate to consider the behaviour of actual wholesale prices alongside IPP and TGPs. The 2009 ACCC petrol monitoring report noted that in 2007–08 and 2008–09 data showed that average wholesale prices generally move in line with IPP and closely reflect TGPs.

8.4.1 Wholesale prices and IPP

In 2009–10 wholesale prices have continued to move in line with IPP. Chart 8.6 compares net wholesale prices (exclusive of taxes) against IPP, providing a clear indication of the relationship between wholesale prices and IPP.

Chart 8.6 Monthly average net wholesale prices and IPP for RULP in the five largest cities: July 2007 to June 2010



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

The small and consistent difference between net wholesale prices and IPP is not a measure of profits earned by wholesalers. This differential is a combination of a wholesale margin and other operating costs (local costs such as storage and transport costs) that need to be recovered when selling petrol in the wholesale market.

Table 8.2 takes a closer look at the differential between annual net wholesale prices and IPP in each of the five largest cities in 2009–10. Similar to 2008–09, the differential in 2009–10 is highest in Brisbane and lowest in Perth and Adelaide.

Table 8.2 Annual average net wholesale prices and IPP for RULP in the five largest cities: 2009–10

	Net wholesale price cpl	IPP cpl	Difference cpl
Sydney	67.3	64.3	3.0
Melbourne	67.4	64.1	3.3
Brisbane	67.4	63.9	3.5
Adelaide	67.0	64.3	2.7
Perth	66.1	63.6	2.5

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

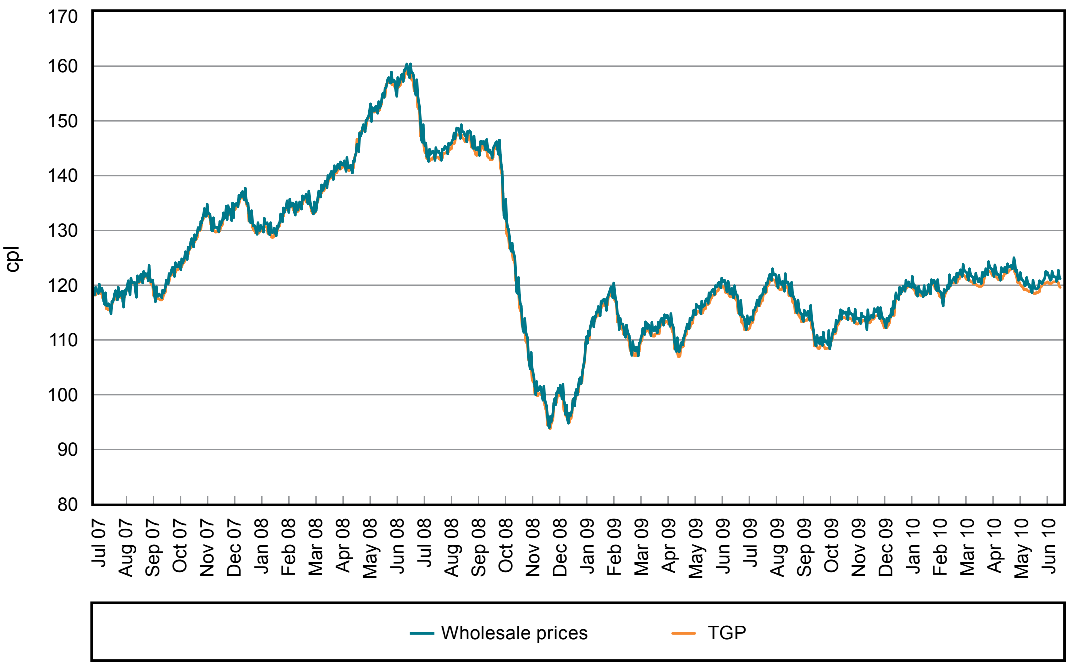
8.4.2 Wholesale prices and TGP

While few transactions are made at the specific terminal gate price, TGPs provide a general indication of the level of wholesale prices at any given time. Chart 8.7 shows TGPs alongside actual wholesale prices paid for RULP over the three years to June 2010 in the five largest cities.

On average wholesale prices have tracked TGPs relatively closely over time, although most wholesale transactions occur at levels slightly above or below TGPs. Many wholesale transactions occur as packages that include petrol as well as additional services such as branding and delivery. As a result these transactions are generally at the higher end of the scale and slightly above TGP.

Wholesale transactions that include only petrol (and no associated services) may be at a price level below TGP depending on how parties negotiate the purchase. Transactions for very large volumes of petrol, for example, would normally be negotiated for a lower per unit price.

Chart 8.7 Daily average wholesale prices and TGPs for RULP in the five largest cities: July 2007 to June 2010



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

Table 8.3 compares annual average gross wholesale prices against TGPs in each of the five largest cities in 2009–10. The largest differential occurred in Sydney and the lowest in Perth.

Table 8.3 Annual average gross wholesale prices and TGPs for RULP in the five largest cities: 2009–10

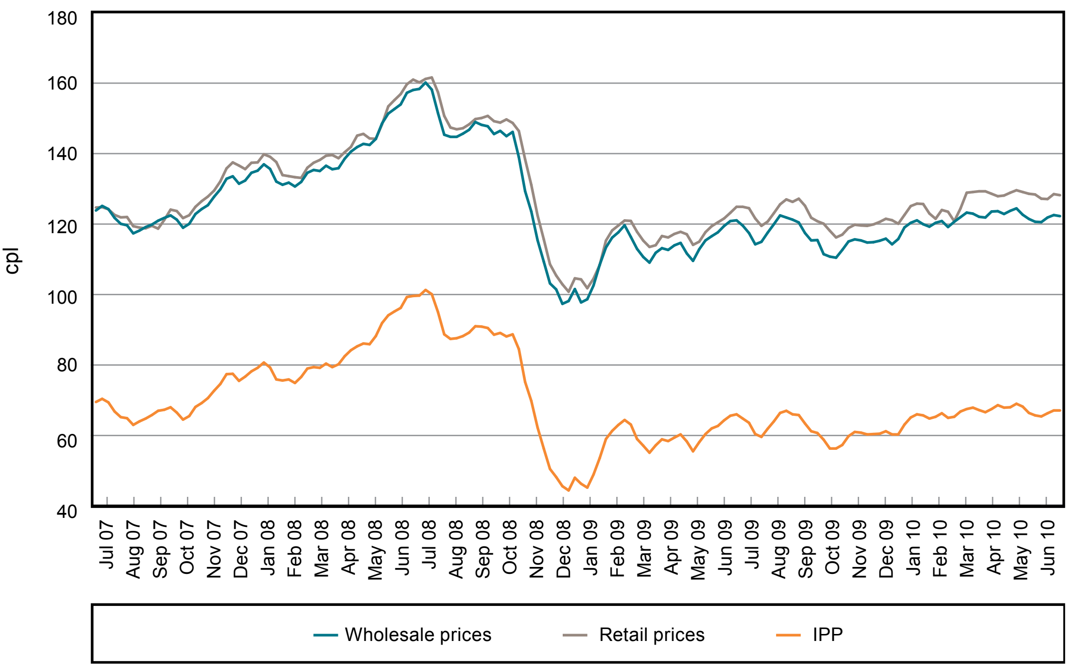
	Gross wholesale price cpl	TGP cpl	Difference cpl
Sydney	118.4	117.0	1.4
Melbourne	118.0	116.7	1.3
Brisbane	118.0	116.8	1.2
Adelaide	117.1	117.4	–0.3
Perth	117.3	118.2	–0.9

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

8.4.3 Wholesale and retail prices

The underlying IPP and wholesale prices also form the basis for retail prices. Chart 8.8 tracks weekly average wholesale and retail prices for RULP in the five largest cities over the three years to June 2010.

Chart 8.8 Weekly average IPP, gross wholesale prices and retail prices for RULP in the five largest cities: July 2007 to June 2010



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

It is evident that wholesale prices (and retail prices) have continued to track changes in IPP closely in 2009–10. It also appears from chart 8.8 that the gap between retail prices and wholesale prices widened slightly in 2009–10. This gap is not a measure of margins earned by retailers but of the difference between the average wholesale cost of petrol supplies and the average price received for retail petrol sales. That is, it does not take into account non-fuel costs incurred by retailers. These are considered in chapter 14.

8.5 Conclusions on wholesale prices

Overall wholesale prices have moved in line with pricing benchmarks both in 2009–10 and over the three years to June 2010.

The notional building block for determining wholesale prices, IPP, appears to closely reflect actual import costs faced by wholesalers as well as prices traded under buy–sell arrangements.

9 Retail prices

Key points:

- In the long term, changes in the retail price of petrol are overwhelmingly due to changes in the international Mogas 95 refined petrol benchmark (which itself is driven by the price of crude oil) and the exchange rate.
- Retail prices of petrol, diesel and automotive LPG in Australia are among the lowest in the OECD.
- Compared to recent history, retail RULP prices in 2009–10 were relatively stable. Prices in the five largest cities ranged from a seven day rolling average of 116 cpl in October 2009 to a high of 130 cpl in May 2010.
- Notional retail and wholesale margins and other costs were not a major component of retail prices and have not had a significant impact on the level of and movements in the retail price of petrol.

9.1 Overview

This chapter provides information on the retail prices of all major automotive fuels, regular unleaded petrol (RULP), premium unleaded petrol (PULP), automotive liquefied petroleum gas (LPG), diesel and E10. The analysis is focused on average retail prices in the five largest cities (Sydney, Melbourne, Brisbane, Adelaide and Perth), although the three smaller capital cities (Canberra, Hobart and Darwin) are also considered. Prices of automotive fuel in regional centres and country towns are considered in chapter 10.

The ACCC has considered the influence of international benchmark prices on retail prices. In the long term, international prices are the most important source of changes in retail prices. In the short term, other factors such as retail price cycles, the location of retail sites and the level of local competition can also affect retail prices.

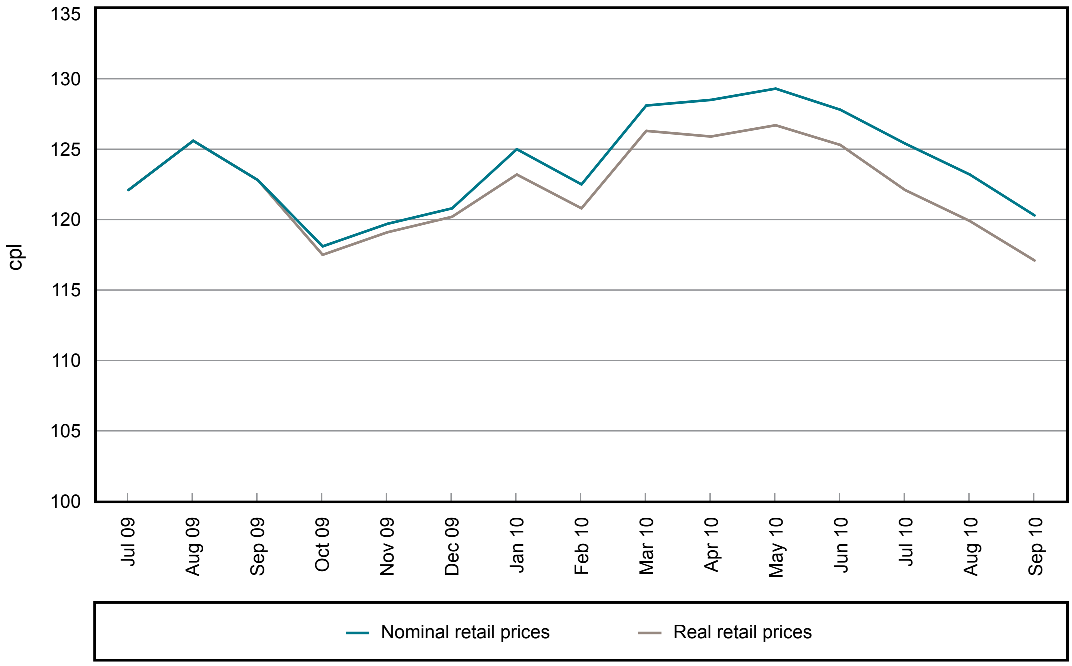
9.2 Nominal and real retail RULP prices

Chart 9.1 shows monthly real (that is adjusted for inflation) and nominal prices of RULP in the five largest cities for the period July 2009 to September 2010.[140]

Observations from chart 9.1 include:

- Nominal prices were less volatile than in recent years.
- In real terms, retail prices fell slightly.

Chart 9.1 Average monthly real and nominal RULP prices in the five largest cities: July 2009 to September 2010



Source: ACCC calculations based on Informed Sources and ABS data

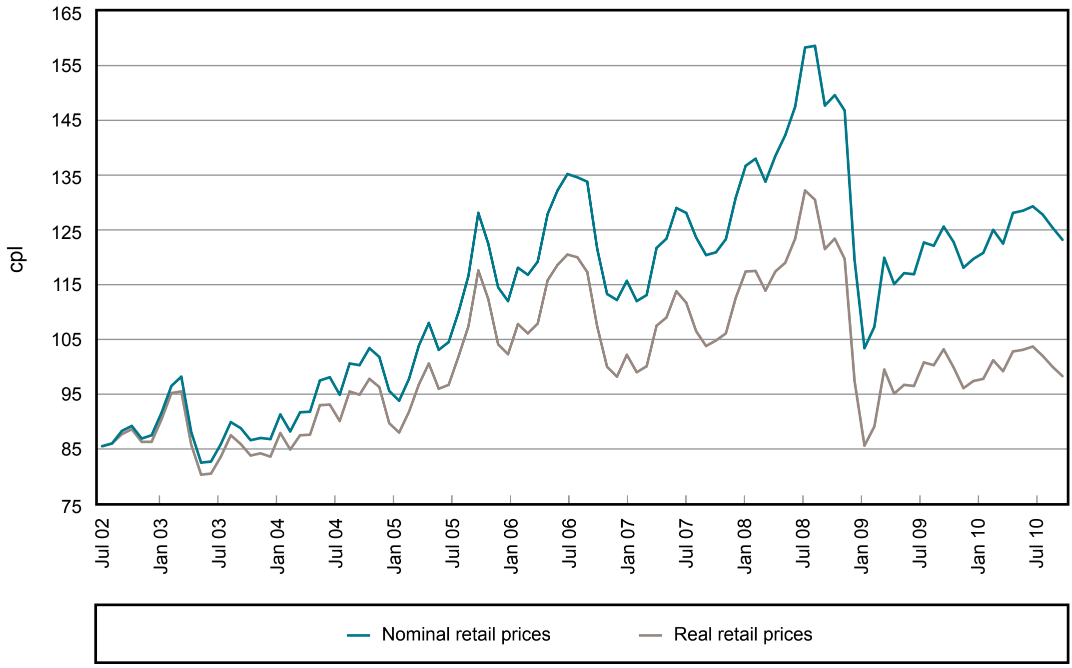
140 Real prices have been obtained by adjusting nominal prices for changes in the Consumer Price Index published by the Australian Bureau of Statistics (ABS), with the CPI September quarter 2009 = 100. See ABS, Catalogue No. 6401.0 at: http://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/6401.0?opendocument#from-banner=LN.

Chart 9.2 shows monthly real and nominal retail RULP prices of regular unleaded petrol in the five largest cities for the period July 2002 to September 2010.

Observations from chart 9.2 include:

- In real terms, RULP prices have fluctuated in an upward trend. Overall, prices have risen by approximately 15 cpl or, on average, 2.4 per cent per annum.
- Following the Global Financial Crisis (GFC), real petrol prices fell substantially in the second half of 2008. Prices rebounded during January and February 2009.
- Since February 2009, real prices have fluctuated within a relatively narrow band.
- Petrol prices have exhibited volatility and apart from the significant fall in prices as a result of the effects of the GFC, prices have generally moved in an upward trend.

Chart 9.2 Average monthly real and nominal RULP prices in the five largest cities: July 2002 to September 2010[141]



Source: ACCC calculations based on Informed Sources and the ABS data

141 Real number based on June quarter 2002.

9.3 Global factors

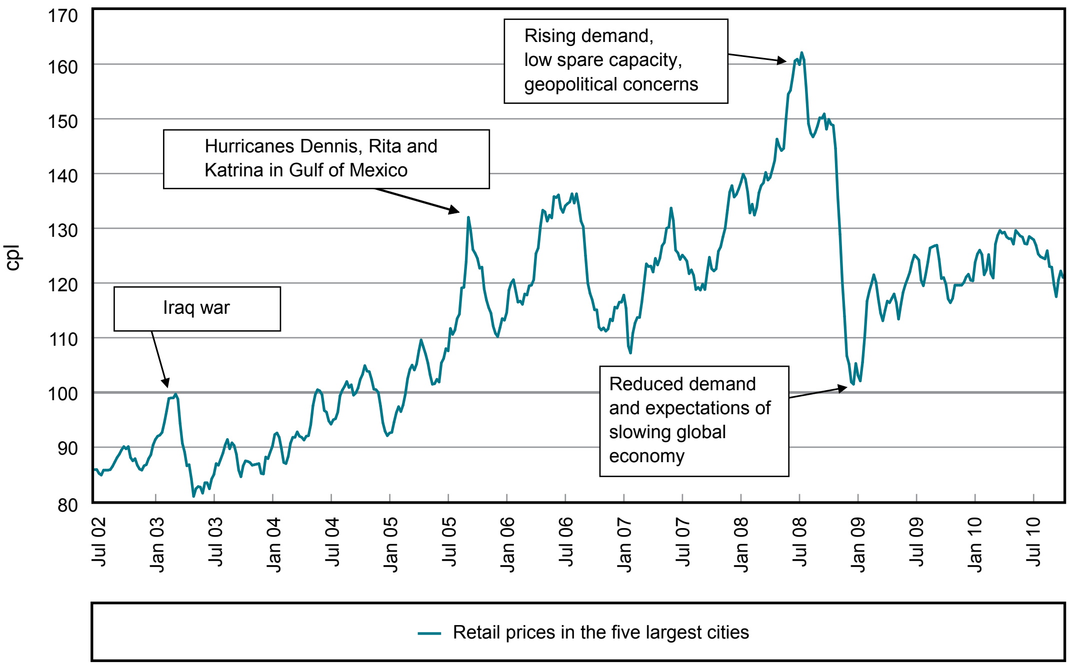
9.3.1 International influences on retail prices

Prices of refined fuel in Australia are set with reference to international benchmark prices. The relevant international price for RULP in Australia is the price for refined petrol in the Asia-Pacific region, the Singapore Mogas 95 unleaded price. As outlined in chapter 8, movements in this benchmark are a key influence on domestic retail RULP price movements.

Like the prices of any other internationally traded commodity, the Singapore Mogas 95 benchmark price is subject to a range of influences. However primarily the price of Mogas 95 moves in line with changes in the price of crude oil and changes in global supply and demand conditions for refined petrol.

Chart 9.3 tracks the average price of RULP across the five largest capital cities since 2002 against the background of significant global events.

Chart 9.3 Global events and average weekly RULP prices in the five largest cities: July 2002 to September 2010



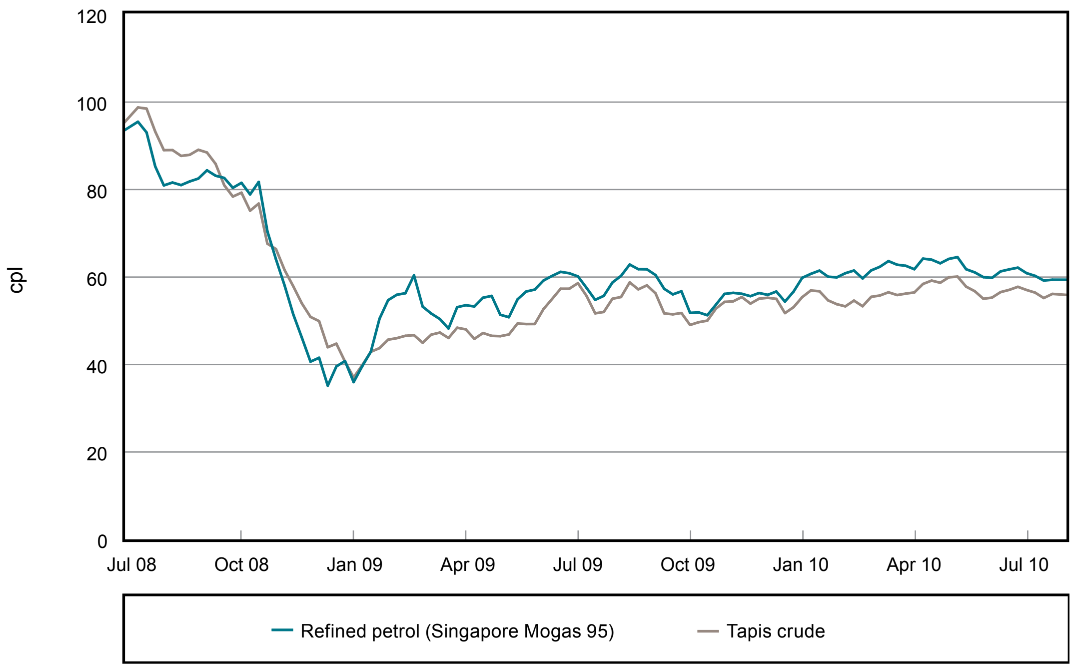
Source: ACCC calculations based on Informed Sources data

While crude oil prices influence international benchmark prices of refined petrol, other factors such as regional refining margins will also impact on the price. The Mogas benchmark price in turn is one of the components of domestic wholesale and retail prices. That said it is possible in the short run for domestic prices to move independently of international crude oil or even refined petrol prices.

The most significant long-term influences on retail prices are movements in international benchmark prices of crude oil and refined petrol.

The close link between the price of Tapis crude oil and the price of refined petrol (Singapore Mogas 95) is evident in chart 9.4.

Chart 9.4 Weekly movements in international benchmark prices of refined petrol (Mogas 95) and crude oil (Tapis): 1 July 2008 to 30 September 2010

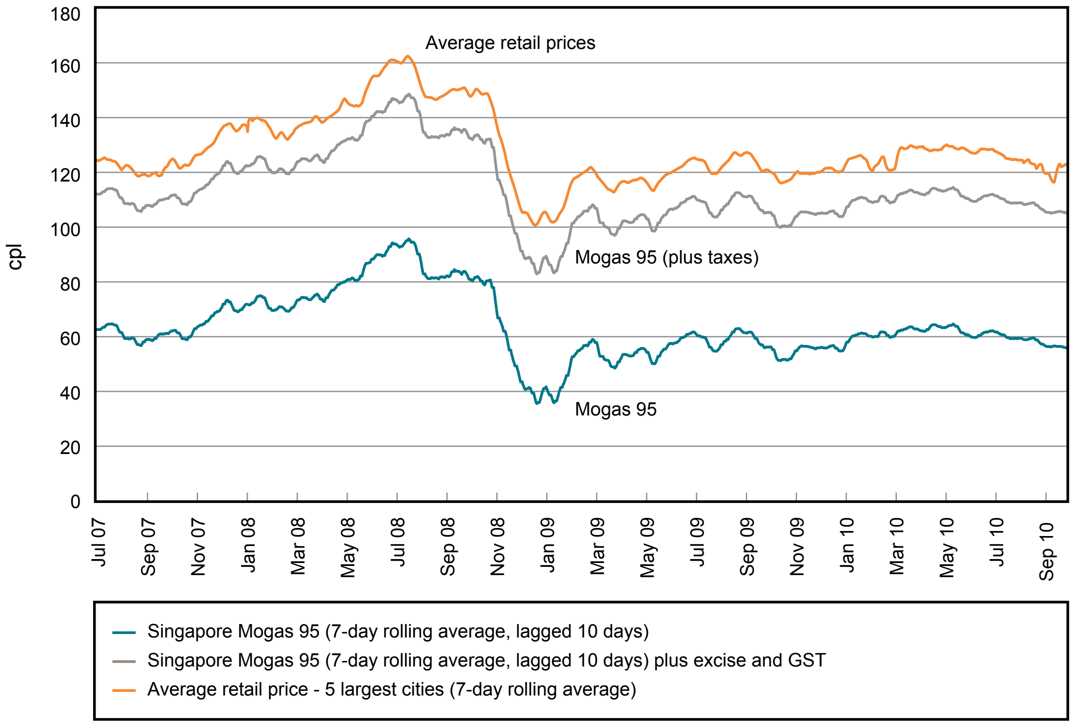


Source: ACCC calculations based on Platts and RBA data

Chart 9.5 shows movements in the seven day rolling average retail price of RULP in Australia's five largest cities, and Singapore Mogas 95 (lagged 10 days). For comparison purposes also included is a calculation with equivalent excise and GST added to Singapore Mogas 95 prices.

From this chart it can be seen that while it is possible in the short run for domestic prices to move independently of international crude oil or even refined petrol prices, in the long run Australian retail prices have generally followed the international benchmarks very closely.

Chart 9.5 Weekly movements in retail petrol prices and Singapore Mogas 95 prices: 1 July 2007 to 30 September 2010

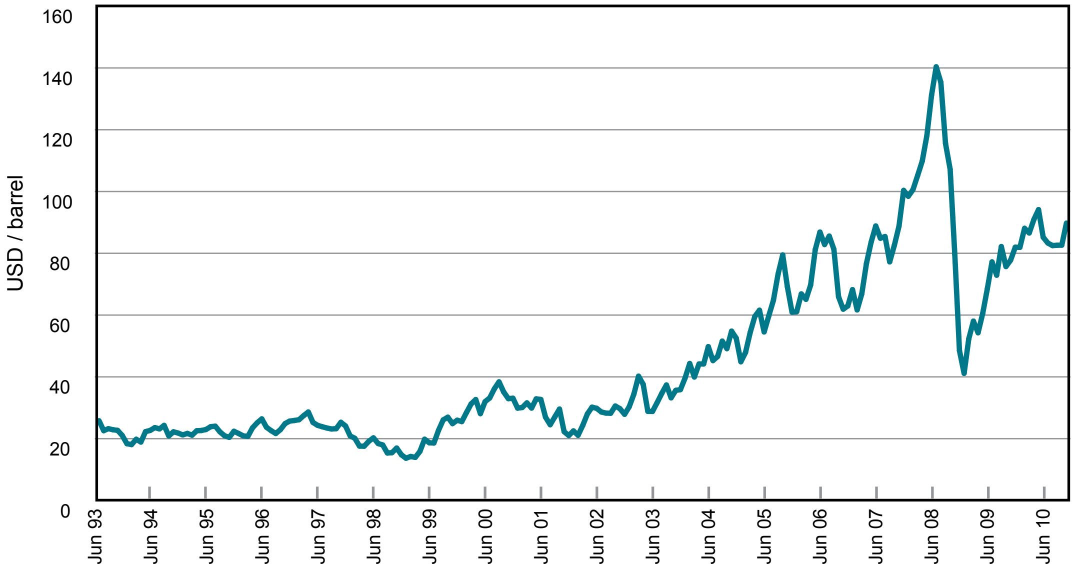


Source: ACCC calculations based on Platts, RBA and Informed Sources data

Historical movements in the Singapore Mogas 95 refined petrol benchmark

The price of Mogas 95 fluctuated within a comparatively narrow band up until 2003, after which it escalated to record heights and continued to rise until mid 2008 (see chart 9.6). With the onset of the GFC the Mogas 95 price fell in response to weaker demand in most developed countries. The Mogas 95 price recovered somewhat in the immediate aftermath of the GFC, but since mid-2009 it has again fluctuated in a comparatively narrow band of USD 80bbl to USD90bbl.

Chart 9.6 Monthly movements in Singapore Mogas 95: June 1993 to October 2010



Source: ACCC calculations based on Platts and RBA data

Short-term comparisons of retail petrol prices with international benchmarks can be misleading

While retail prices in Australia closely follow international benchmarks, the existence of retail price cycles, local price discounts and other factors mean that on a day to day basis or even over a few weeks, retail prices can diverge from their long-term relationship with the international benchmark prices.

The need to take a longer-term perspective

The level of retail prices in the larger cities on any particular day will be influenced by the stage in the retail price cycle that the retail market is at on that day.

Therefore comparisons of daily prices can be misleading. For example, the difference in retail prices between a country town and a capital city on a particular day will be smaller or larger depending upon whether the capital city's prices are at a peak or trough in the regular weekly retail price cycle.

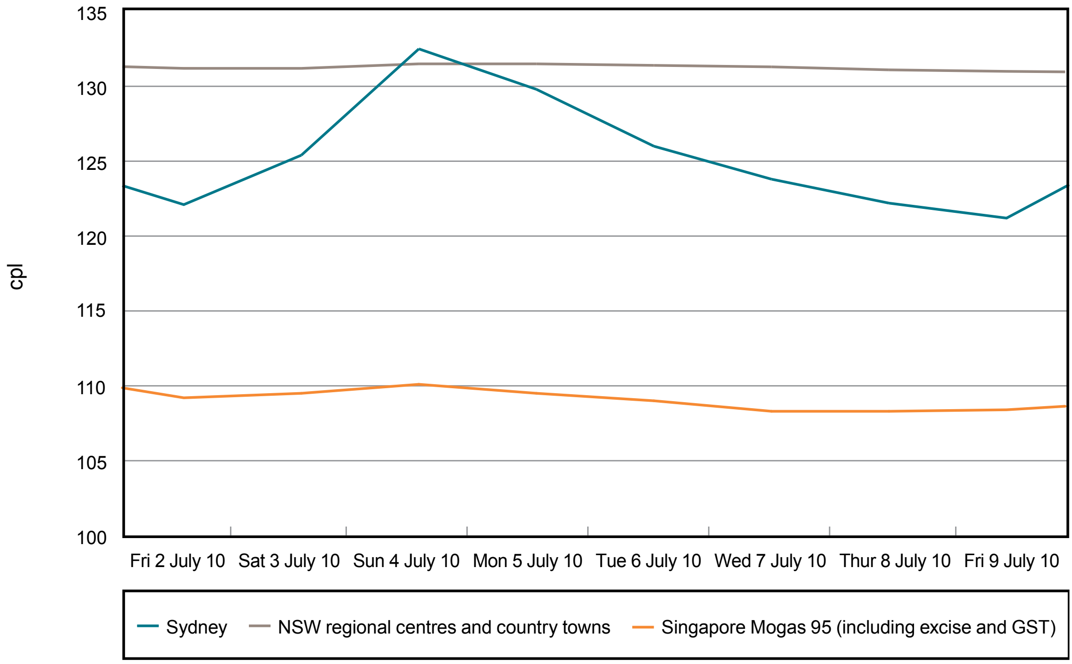
The lags between changes in international benchmark prices and changes in retail prices will also impact on short term differentials between international and domestic prices. Short term fluctuations in exchange rates can also impact on the Australian dollar value of international benchmarks from day to day.

Therefore no significant conclusions regarding relative prices or margins can be drawn from prices observed on any particular day or even over a few days. For any meaningful results, comparisons between International benchmarks and local prices — or price differences between cities and towns should — be viewed over longer periods of time.

The price cycle is a characteristic of retail markets and so does not affect the international Mogas 95 benchmark price. Thus, for example, the difference between Sydney prices and the international benchmark price on any particular day will vary with the price cycle. Lags in the flow-through of changes in benchmarks and the exchange rate also affect comparisons. Thus it is important when considering prices between locations, or comparing retail prices with benchmark prices not to concentrate on short-term comparisons but to look at trends over longer periods of time.

As can be seen in chart 9.7, the differential between Sydney retail prices and those in regional centres and country towns varies by the day depending where Sydney's prices are in the regular weekly price cycles. At the peak of the price cycle Sydney prices may be even higher than in many country towns.

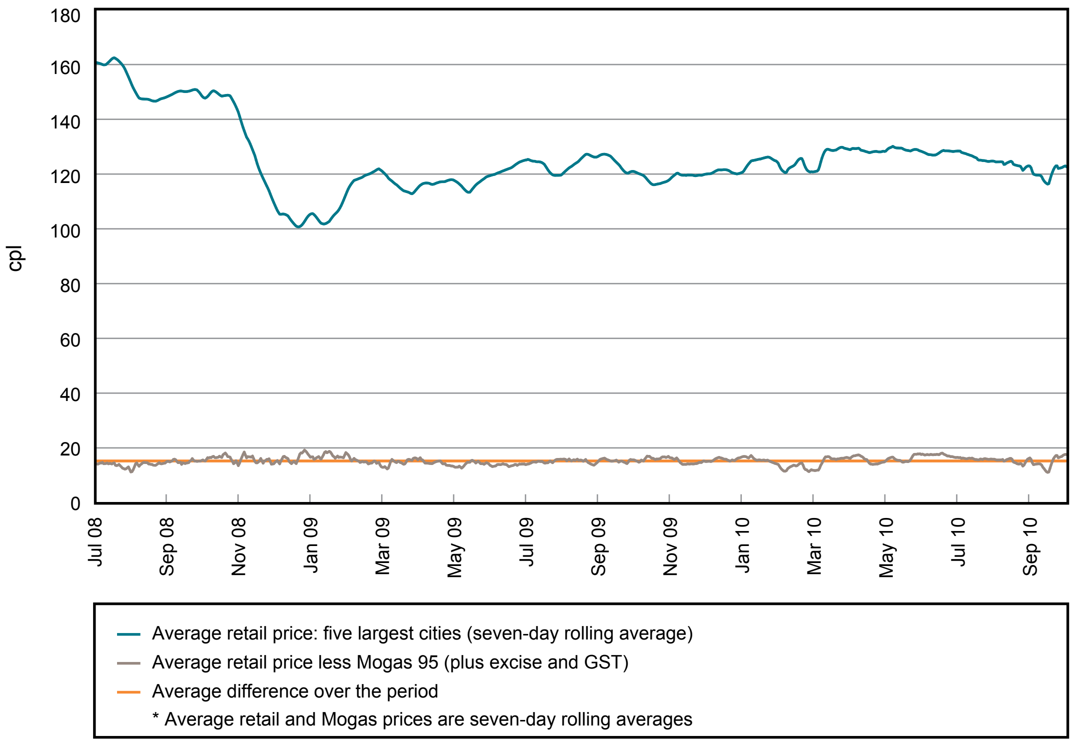
Chart 9.7 Daily retail prices in Sydney, NSW regional centres and country towns and Singapore Mogas 95 (including excise and GST): 2 July 2010 to 9 July 2010



Source: ACCC calculations based on Platts, RBA and Informed Sources data

Chart 9.8 shows average retail petrol prices for the five largest cities (on a seven day rolling average basis), and the daily difference between those prices and Mogas 95 prices (on a seven day rolling average basis lagged by 10 days) plus excise and GST.

Chart 9.8 Average retail prices in the five largest cities and the differential with Mogas 95 price (including excise and GST), 1 July 2008 to 30 September 2010



Source: ACCC calculations based on Platts, RBA and Informed Sources data

Chart 9.8 shows that the differential between Australian retail prices and the Mogas 95 benchmark price varies from day to day around the longer-term average. The chart also shows that there is no significant relationship between this differential and the overall level of retail prices.

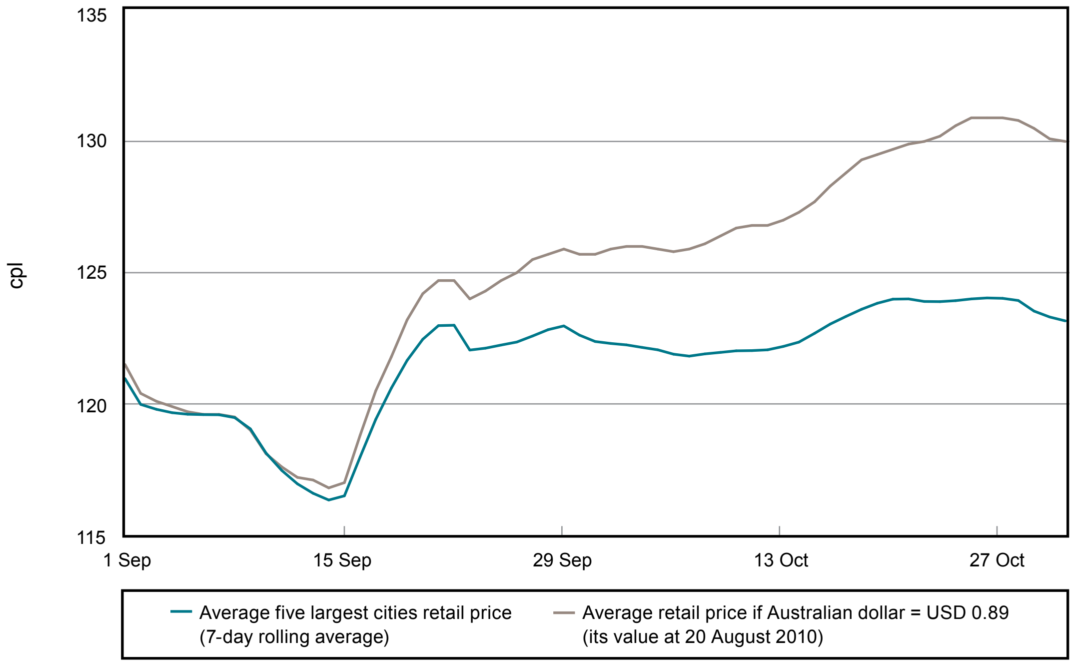
Thus, no reliable conclusions can be drawn about this relationship on any particular day or even over a week or two. For any meaningful results, comparisons between international benchmark prices and local prices should be viewed over longer periods of time.

Influence of the exchange rate

As the international benchmark prices of crude oil and refined fuel are established in USD, the AUD–USD exchange rate has an important influence on domestic retail prices.

In order to gauge the effects of the exchange rate on domestic prices the ACCC has considered domestic retail price levels under the assumption of a constant AUD–USD exchange rate. To do this, average retail prices for the five largest cities during September–October 2010 have been compared with prices calculated with the exchange rate as at 20 August 2010, that is, 1AUD=USD 0.89 (Chart 9.9).

Chart 9.9 Comparison of Australian average retail petrol prices with actual and constant exchange rate: 1 September to 31 October 2010.

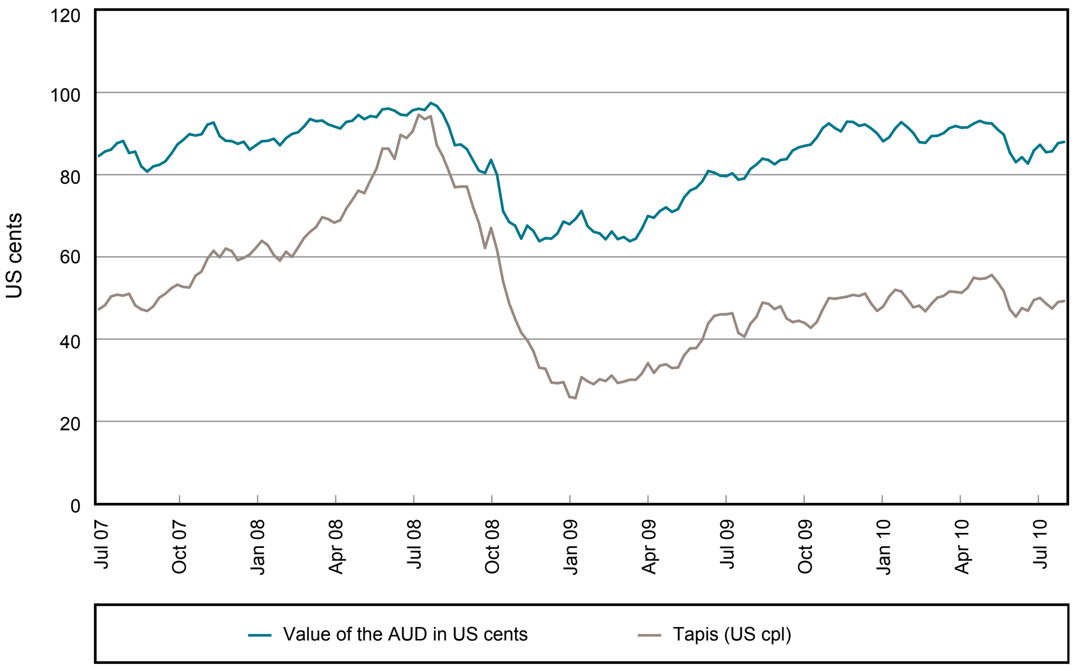


Source: ACCC calculations based on Platts, RBA and Informed Sources data

As the USD–denominated international price of oil and Mogas 95 rose in September–October 2010, the appreciation of the Australian dollar during this period protected Australian motorists. If the exchange rate had remained at the level of 0.89 during September–October 2010, retail prices would have reached a high of 130.9 cpl in the last week of October 2010. In reality the Australian dollar rose to above parity with the USD and the actual seven-day rolling average price for the five largest cities was 124.0 cpl.

Chart 9.10 compares trends in the AUD–USD exchange rate with Tapis prices. In the three years to July 2010, the AUD–USD exchange rate has broadly moved in a similar direction to Tapis prices.

Chart 9.10 Weekly Australian/USD exchange rate and TAPIS (US cpl): July 2007 to July 2010



Source: ACCC calculations based on Platts and RBA data

Given that the AUD–USD exchange rate has recently tended to move in the same direction as international crude oil (and thus petrol) prices, Australian domestic consumers have to some degree been protected from the full effects of increases in international prices. Conversely, when international prices fell, falls in the exchange rate also limited the extent to which domestic prices fell.

9.3.2 Comparisons of domestic and international petrol, diesel and automotive LPG prices

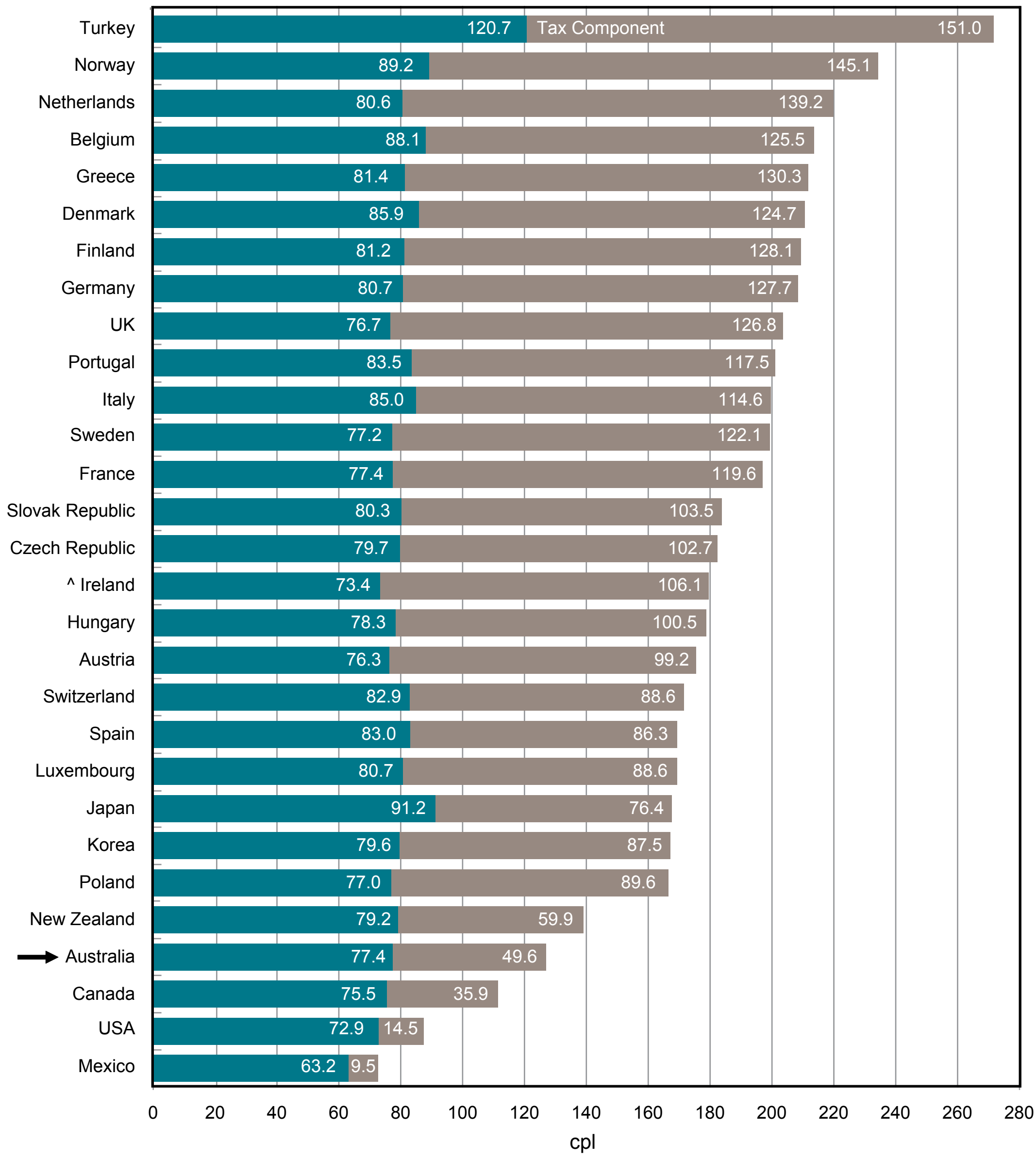
The Department of Resources, Energy and Tourism (RET) publishes a ranking of Australia's retail prices for petrol, diesel and automotive LPG relative to prices of other countries in the Organisation for Economic Co-operation and Development (OECD).[142]

Charts 9.11, 9.12 and 9.13 reproduce the data from the RET OECD rankings.

It is evident from these charts that retail fuel prices in Australia are among the lowest in the OECD. Australia has the fourth lowest petrol prices, fifth lowest diesel prices and the lowest automotive LPG prices in the OECD. Australia's relatively low prices are largely due to its lower than average taxation on fuels.

142 The ACCC has previously commented on its methodological concerns about the usefulness of international price comparisons using OECD data. These include that petrol quality varies from country to country; data is based on metropolitan prices only; different sources are used for exchange rates; and government subsidy programs in some countries—and how they may affect the tax rate—are not considered. These issues were outlined in appendix J of the ACCC's 2001 report *Reducing fuel price variability*. In addition, it must be noted that fuel types may also vary from country to country. Notwithstanding these issues, the data provides a reference by which Australian retail prices can be compared with other developed countries. Furthermore, it enables Australia's retail prices relative to other countries to be examined over time.

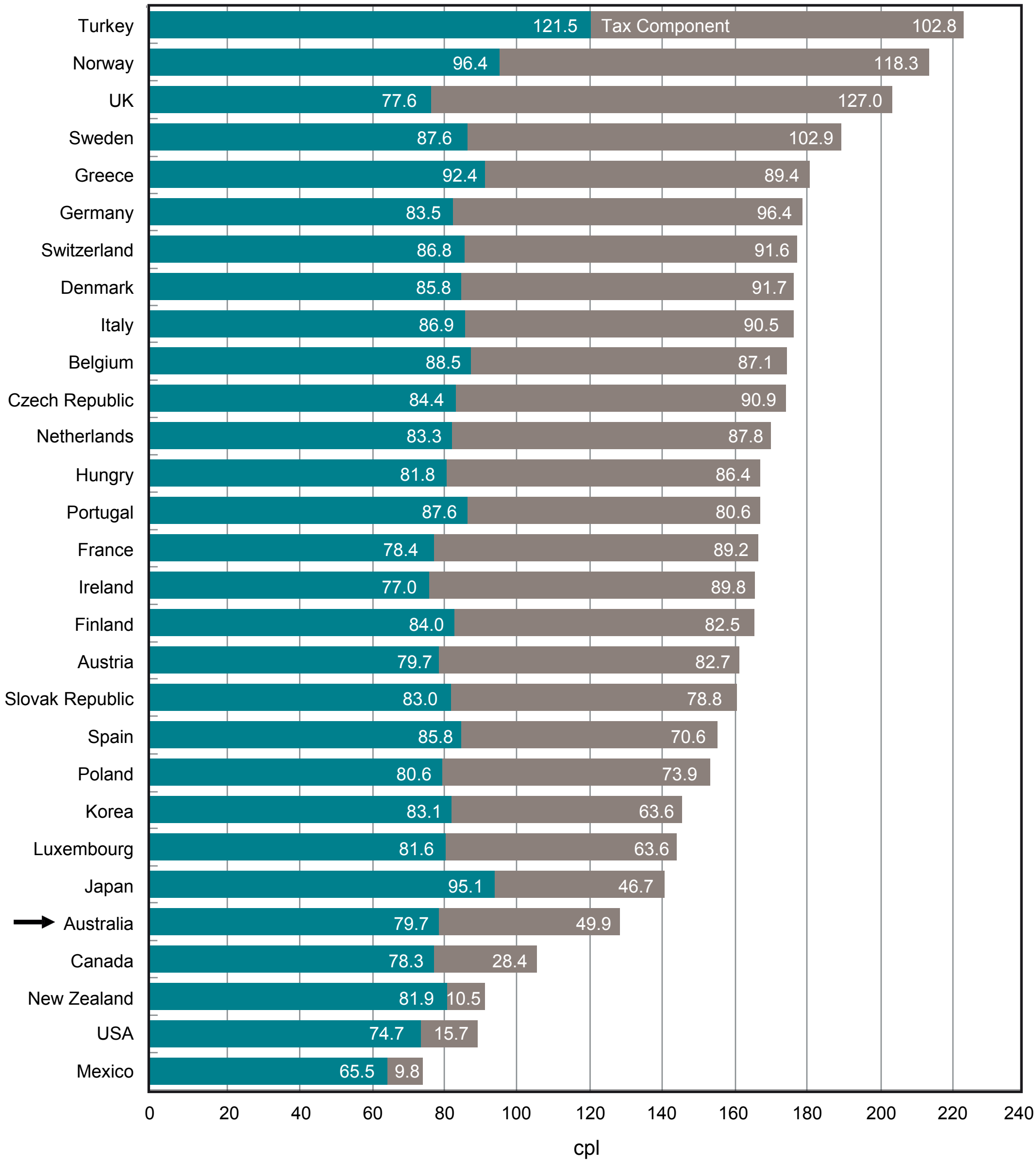
Chart 9.11 Petrol prices and taxes in OECD countries: June 2010 quarter



Source: *Australian Petroleum Statistics,* issue 170 (September 2010)

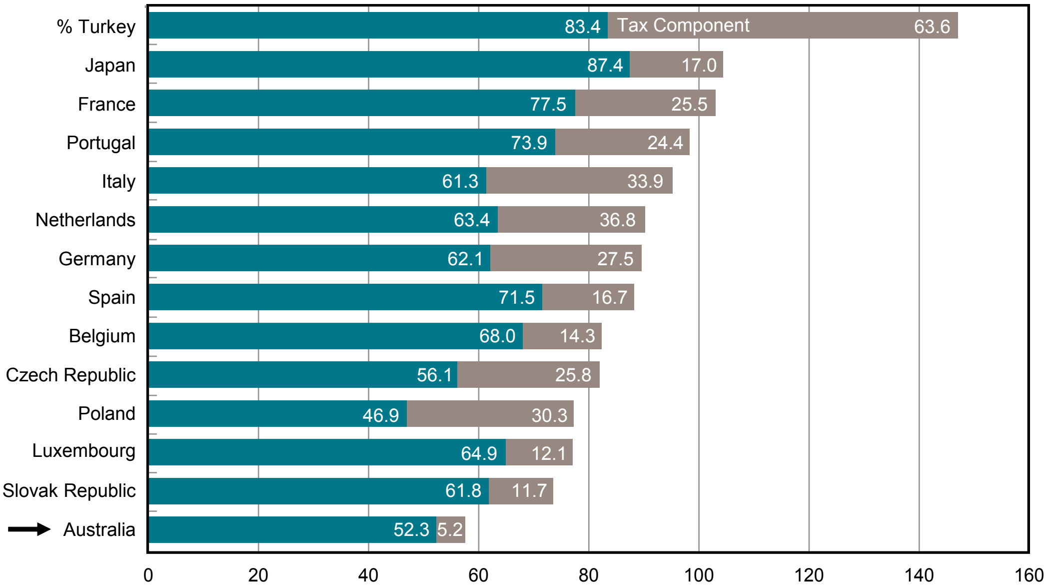
Notes: ^ previous quarter data

Chart 9.12 Automotive diesel oil prices in OECD countries: June 2010 quarter



Source: *Australian Petroleum Statistics,* issue 170 (September 2010)

Chart 9.13 Automotive LPG prices in the OECD countries: June 2010 quarter



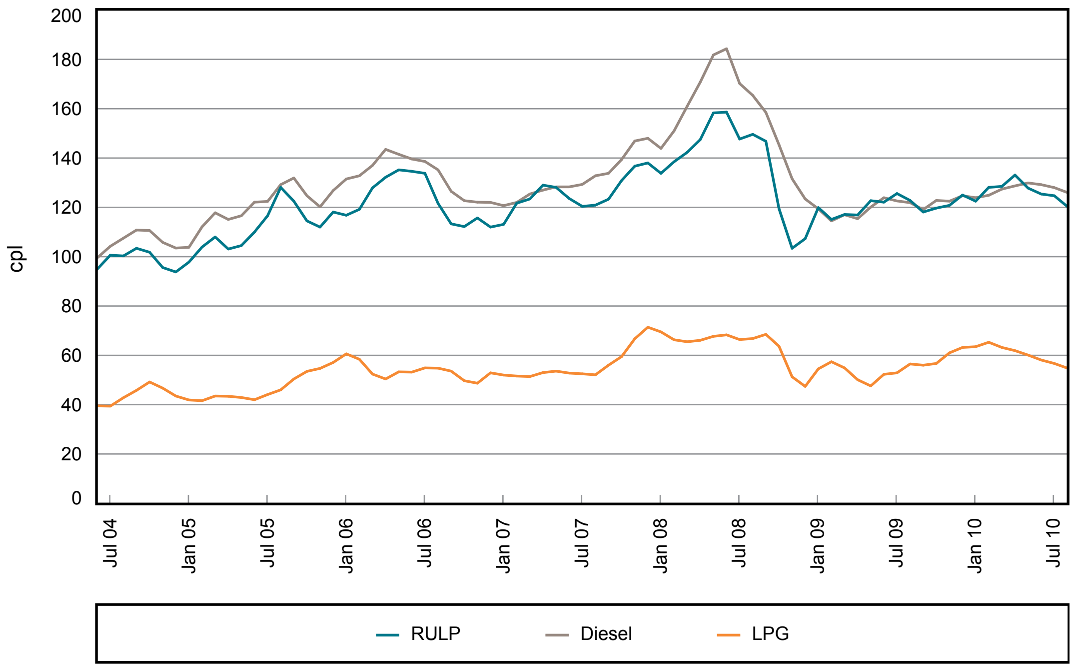
Source: *Australian Petroleum Statistics,* issue 170 (September 2010)

Notes: % price and tax for commercial purpose (data on non-commercial use are not available)

9.4 Comparison of retail prices for RULP, diesel and automotive LPG

Retail prices of RULP, diesel and automotive LPG generally move in line with their respective international price benchmarks. Chart 9.14 shows trends in retail RULP, diesel and automotive LPG prices since July 2004.

Chart 9.14 Average monthly retail prices of RULP, diesel and automotive LPG in the five largest cities: July 2004 to September 2010



Source: ACCC calculations based on Informed Sources data

Note: Automotive LPG benchmark prices are based on international LPG benchmark prices (which may diverge from crude oil movements over short periods). Excise (of 38.14 cpl) is applied to petrol and diesel but not to automotive LPG.

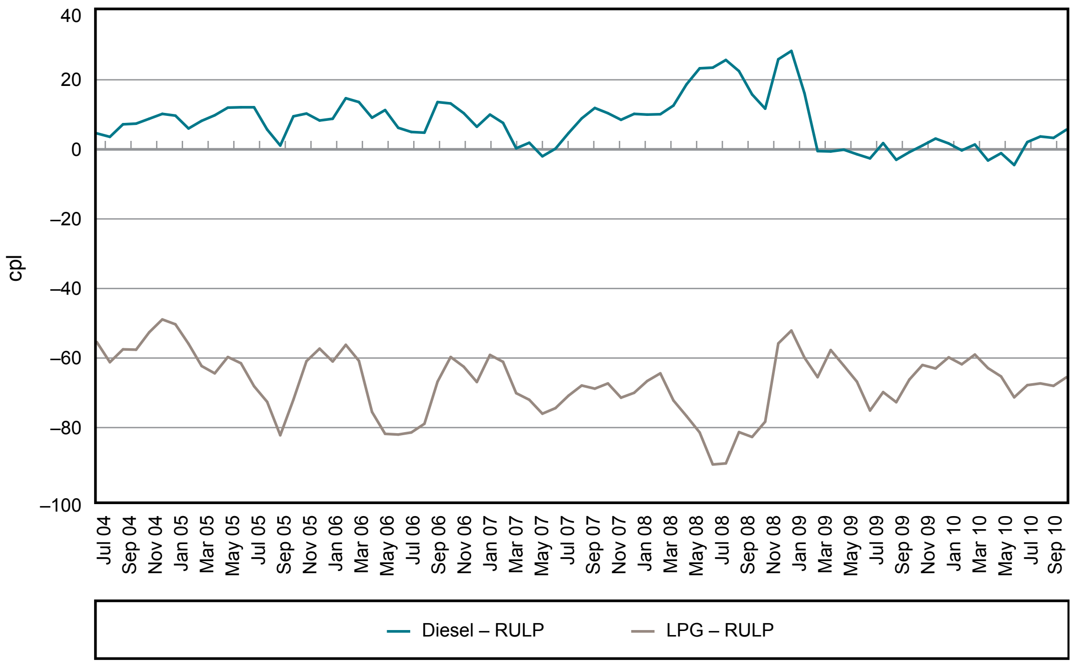
Observations from chart 9.14 include:

- Over the period from July 2004 to September 2010, movements in diesel and RULP prices appear to be correlated, largely moving in line with changes in the price of crude oil.
- The correlation between diesel and RULP seems to have become stronger since March 2009.
- Automotive LPG prices appear somewhat less correlated with the prices of other fuels but have generally been moving in line with petrol and diesel.
- Since July 2009, RULP, diesel and LPG prices have been relatively stable.

Chart 9.15 shows monthly retail price differentials over the past six years between diesel and RULP, and automotive LPG and RULP. Observations from chart 9.15 include:

- From July 2004 to January 2009, diesel prices were generally higher than RULP prices.
- In December 2008, diesel prices were considerably higher than RULP prices, with the difference reaching 28.3 cpl. However the GFC resulted in a reduction in demand for diesel (which is used for power generation and industrial uses as well as for automotive fuel) relative to petrol. This led to diesel prices falling substantially, both in absolute terms and relative to RULP.
- Automotive LPG prices are significantly lower than RULP prices; this is due in part to the fact that automotive LPG does not attract excise (of 38.14 cpl). It also reflects automotive LPG's lower energy density (that is more litres of automotive LPG are required than RULP to travel a given distance).
- Price differentials between automotive LPG and RULP were as high as 90 cpl in June 2008 when crude oil prices reached their peak, but fell to 52 cpl during January 2009. The variability in the difference between automotive LPG and RULP prices is in part due to automotive LPG prices being based on an international benchmark price the Saudi Aramco Contract Price for propane and butane (Saudi CP), which is less closely correlated with crude oil prices than the Mogas 95 benchmark price for RULP.

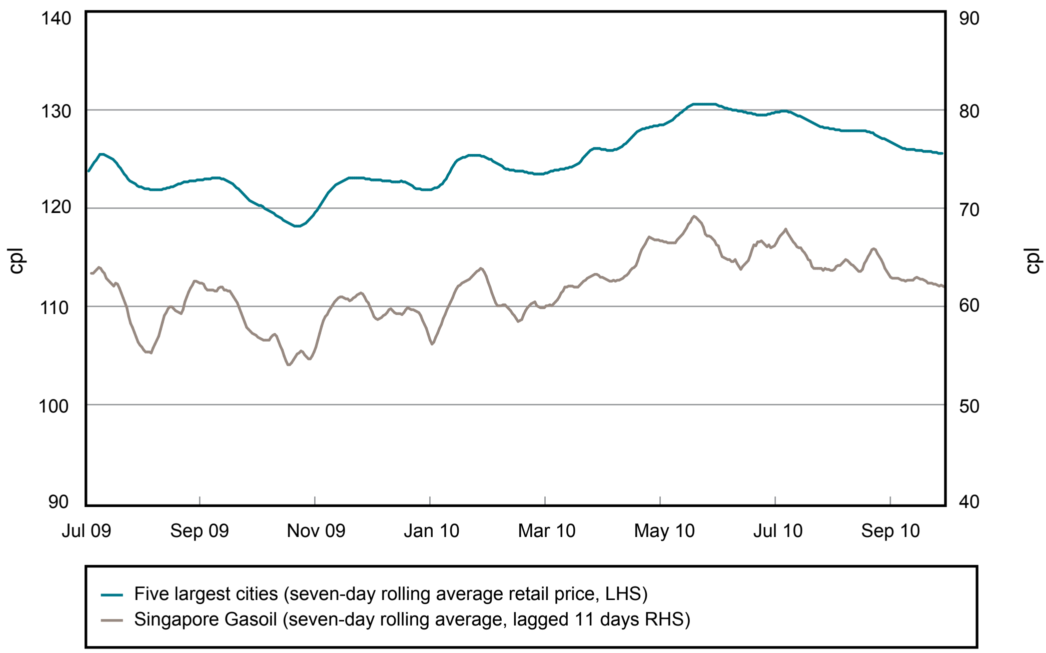
Chart 9.15 Price differentials between monthly retail diesel and RULP, automotive LPG and RULP in the five largest cities: July 2004 to September 2010



Source: ACCC calculations based on Informed Sources data

The ACCC monitors the movement of retail diesel prices against the rolling average of the spot price of Singapore Gasoil with 10 parts per million (ppm) sulphur content, lagged 11 days. Chart 9.16 illustrates that diesel retail prices in the five largest cities broadly tracked movements in the international benchmark price.

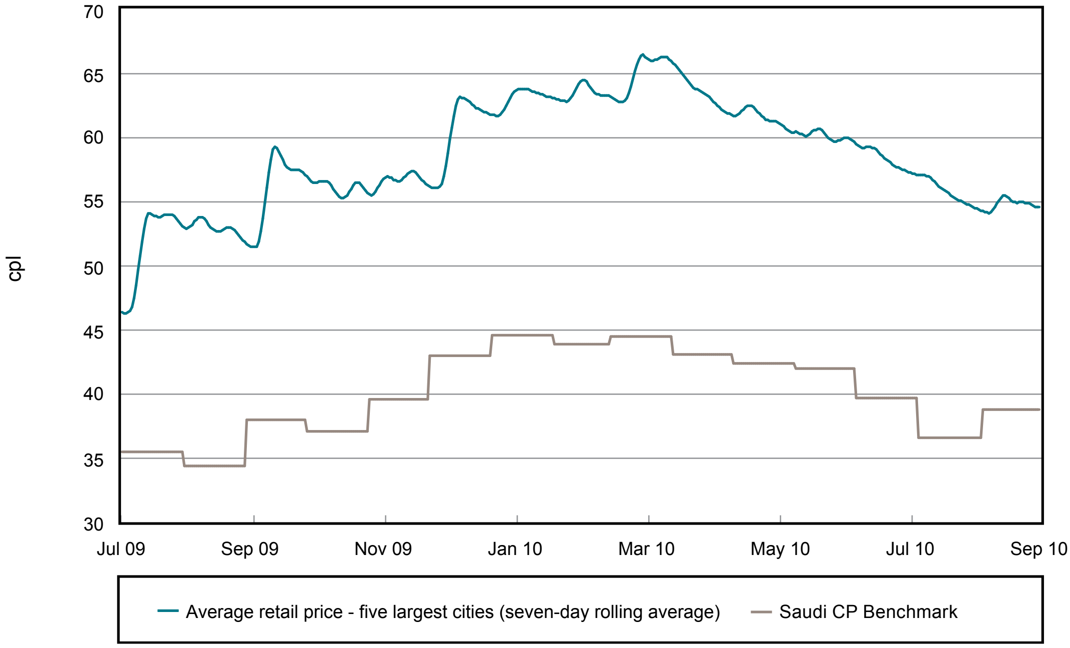
Chart 9.16 Movements in daily average retail diesel prices in five largest cities and Singapore Gasoil (10ppm sulphur) prices: 1 July 2009 to 30 September 2010



Source: ACCC calculations based on Platts, RBA and Informed Sources data

The ACCC also monitors the movement of retail automotive LPG prices against the average price of Saudi CP, which is issued on the first day of each month. Chart 9.17 illustrates that automotive LPG retail prices broadly tracked movements in the international benchmark price.

Chart 9.17 Movements in daily average retail automotive LPG prices in the five largest cities and Saudi CP prices: 1 July 2009 to 30 September 2010



Source: ACCC calculations based on LPG Australia, RBA and Informed Sources data

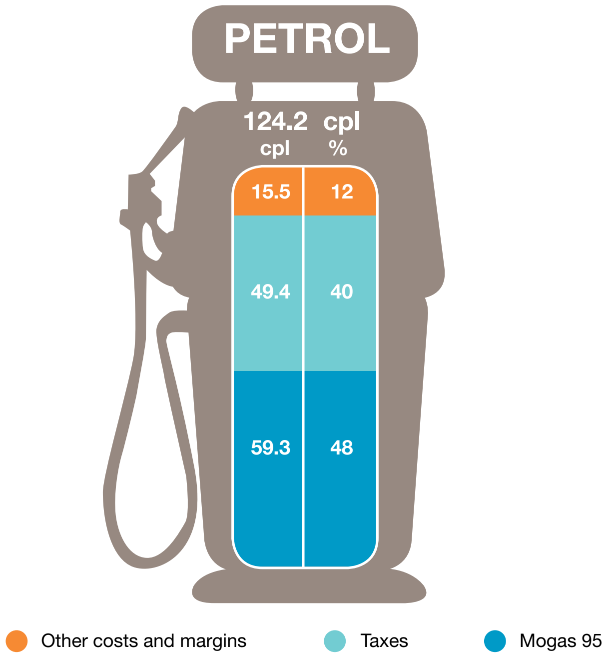
9.5 Components of retail RULP, diesel and automotive LPG prices

The major components of the retail prices of RULP, diesel and automotive LPG are their international benchmark prices, Australian taxes (GST and excise) other costs and the wholesale and retail gross margins. For RULP and diesel, the largest components are their respective international benchmark prices followed by excise and GST.

In the case of automotive LPG, taxes are a smaller component of the retail price than for RULP and diesel because automotive LPG does not attract excise (which is set at the rate of 38.14 cpl for petrol and diesel).

Charts 9.18, 9.19 and 9.20 show the components of average Australian retail prices across the five largest capital cities for 2009–10.

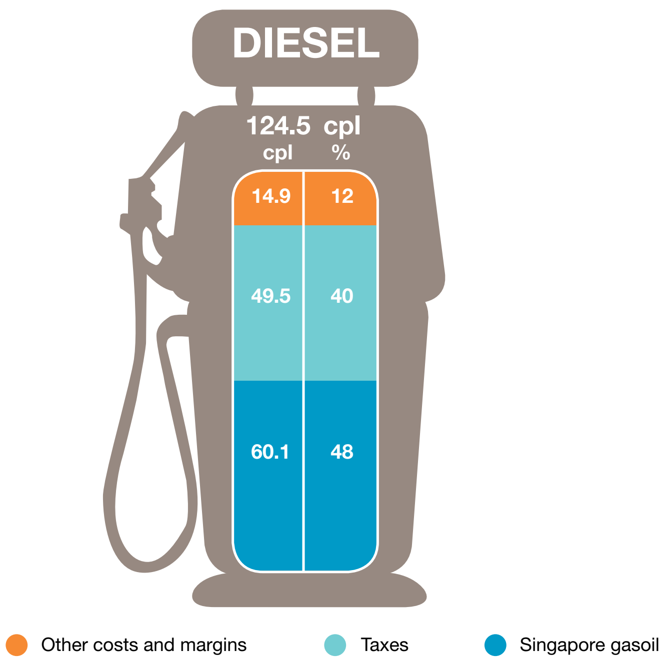
Chart 9.18 Components of average retail RULP prices in the five largest cities: 2009–10



Source: ACCC calculations based on Platts, RBA, Informed Sources data and information provided by monitored companies

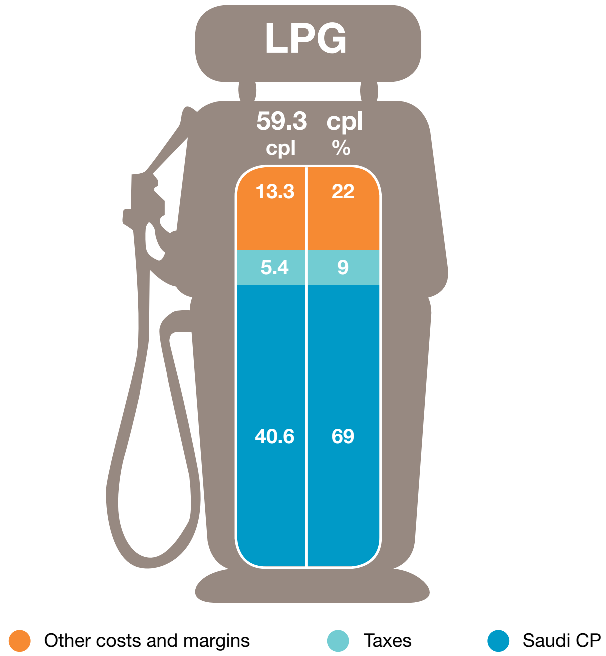
Note: Of the 15.5 cpl in "other costs and margins", 2.9 cpl is the net aggregated profit per litre across the supply, wholesale and retail sectors of the Australian downstream petroleum industry. See chapter 12 for further details and analysis.

Chart 9.19 Components of average retail diesel prices in the five largest cities: 2009–10



Source: ACCC calculations based on Platts, RBA, AIP and Informed Sources data

Chart 9.20 Components of average retail automotive LPG prices in the five largest cities: 2009–10



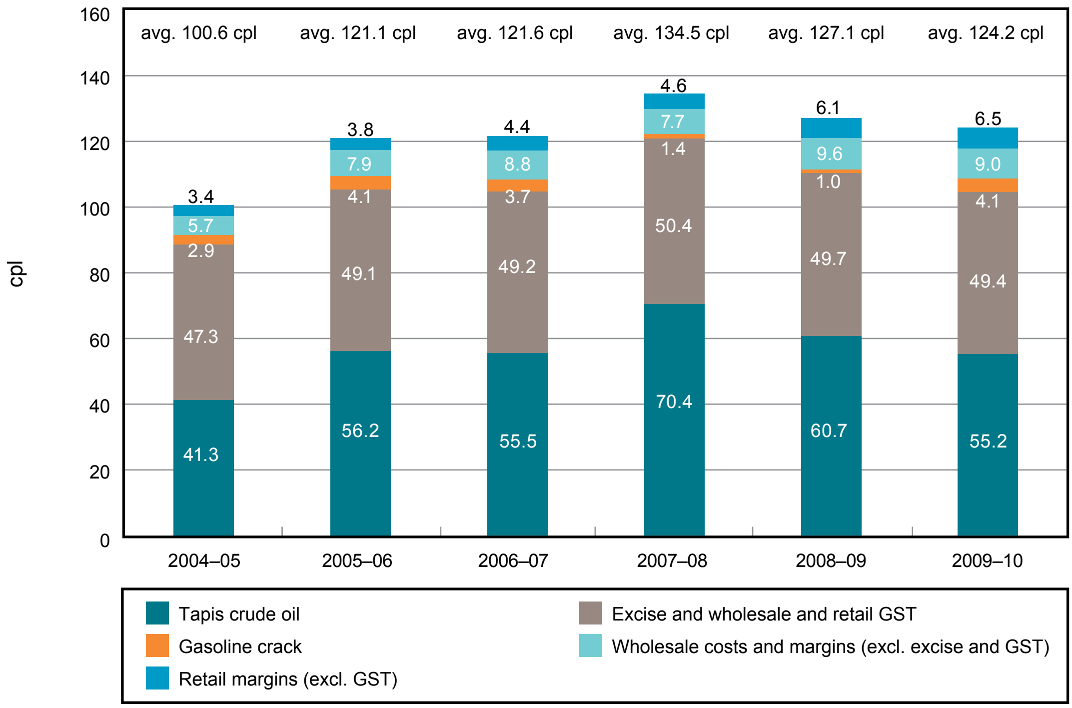
Source: ACCC calculations based on LPG Australia, RBA and Informed Sources data

The components of average retail prices of RULP, diesel and automotive LPG for each year from 2004–05 to 2009–10 are shown in charts 9.21, 9.22 and 9.23.

Each bar represents the average annual retail price in the five largest cities, disaggregated into the following:

- In the case of RULP and diesel, Tapis, which is used as the benchmark for crude oil prices in the Asia-Pacific region, including Australia.
- In the case of automotive LPG, Saudi CP is used in automotive LPG markets for propane and butane: the price is issued on the first day of the month.
- Gasoline/Gasoil crack, which is the difference between the price of refined petrol and diesel, respectively, and the price of crude oil.
- Wholesale costs and margins (excluding excise and GST).
- Retail margins and other costs (excluding and excise GST).
- Excise and GST, where applicable.

Chart 9.21 Components of retail RULP prices in the five largest cities: 2004–05 to 2009–10



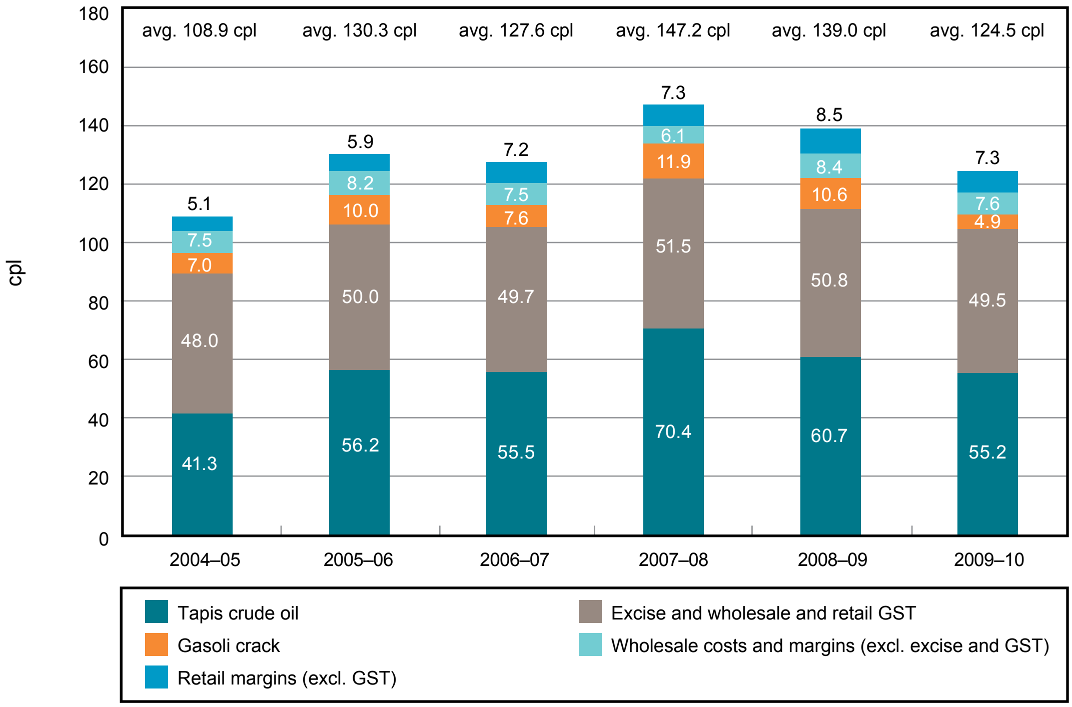
Source: ACCC calculations based on Informed Sources, Platts RBA, WA Fuelwatch data, and information provided by monitored companies

From chart 9.21, it can be concluded:

- Since 2004–05, the crude oil price (Tapis) has been the largest component in the retail price of RULP.
- Changes in the retail price of petrol are overwhelmingly due to changes in the international benchmark price of crude oil (and thus in the Mogas 95 benchmark price).
- Notional retail and wholesale margins and other costs have not had a major impact on the level of, and movements in, the final retail price of petrol.

Chart 9.22 shows the major components of the retail diesel prices for each year from 2004–05.

Chart 9.22 Components of retail diesel prices in the five largest cities: 2004–05 to 2009–10



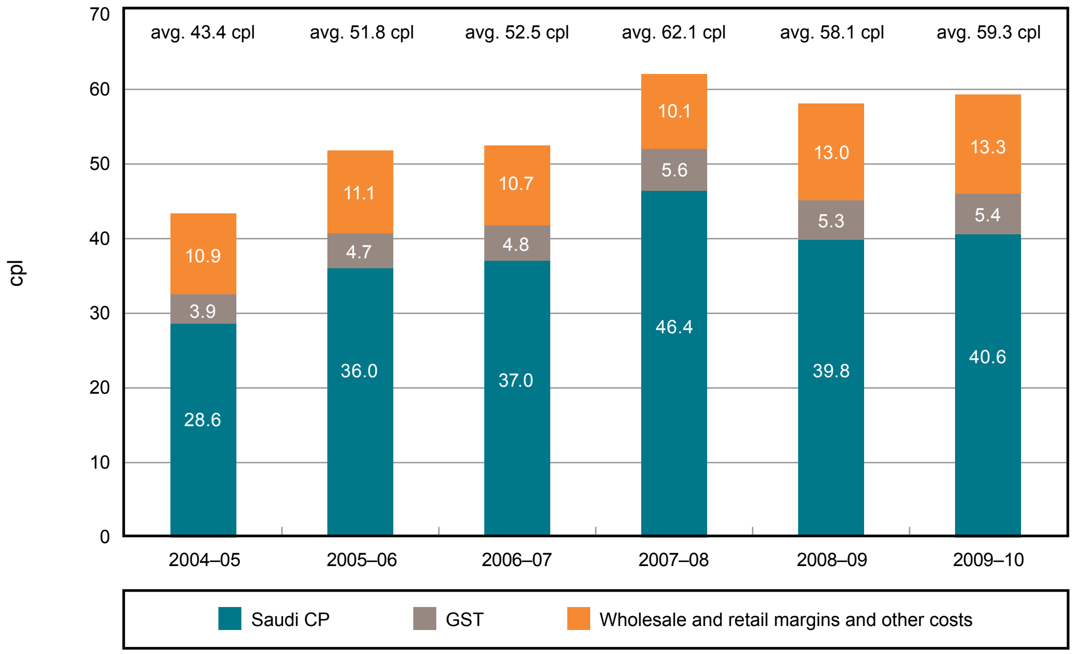
Source: ACCC calculations based on Informed Sources, RBA, AIP, and Platts data

Chart 9.22 indicates that:

- Since 2005–06, Singapore Gasoil has been the largest component in the retail price of diesel.
- Changes in the price of Singapore Gasoil have been the major influence on changes to the retail price of diesel in Australia.
- While notional retail and wholesale margins and other costs have fluctuated, they have not had a major impact on the final retail diesel price when compared with movements in the price of crude oil and the international gasoil benchmark.
- The excise and GST component of prices has remained relatively constant throughout this period.
- The gasoil crack reflects the notional refined margin for diesel. In 2009–10 it was significantly lower than in the previous two financial years, largely due to the reduced demand for diesel in the Asia-Pacific region following the GFC.

Chart 9.23 shows the major components of the retail automotive LPG price for each year from 2004–05.

Chart 9.23 Components of retail automotive LPG prices in the five largest cities: 2004–05 to 2009–10



Source: ACCC calculations based on Informed Sources, RBA and LPG Australia

Chart 9.23 indicates that:

- Changes in the price of the Saudi CP have been the major influence on changes to the retail price of automotive LPG in Australia.
- While notional retail and wholesale margins have fluctuated, they have not had a major impact on the final retail automotive LPG price compared with movements in the Saudi CP.

9.6 Gross indicative retail margins

Gross indicative retail margins are calculated by subtracting Terminal Gate Prices (TGPs) from retail prices.[143] TGPs are a "petrol only" price and exclude other retail operating costs (such as branding, transportation, labour etc). As such, these margins are a gross measure of retail margins. They are seen as a useful indicative benchmark when considering retail margins but should not be confused with actual retail profits. Table 9.1 shows gross indicative retail margins in the five largest cities in both nominal and real terms.[144]

Table 9.1 Average annual retail prices, TGPs and gross indicative retail margins for the five largest cities: 2003–04 to 2009–10

	Average retail price cpl	Average TGP cpl	Gross indicative retail margin (Nominal) cpl	Gross indicative retail margin (real) cpl
2003–04	90.3	86.1	4.2	4.1
2004–05	100.6	96.9	3.7	3.5
2005–06	121.1	117.0	4.1	3.8
2006–07	121.6	116.8	4.8	4.3
2007–08	134.5	129.4	5.1	4.4
2008–09	127.1	120.4	6.7	5.6
2009–10	124.2	117.1	7.1	5.8

Source: ACCC calculations based on Informed Sources, Trafigura and WA FuelWatch data and information provided by monitored companies. ABS data

Table 9.1 shows that:

- Gross indicative retail margins increased by 0.4 cpl in 2009–10 (or 0.2 cpl in real terms). This increase is significantly smaller than the increase in 2008–09.
- In both nominal and real terms, gross indicative retail margins have been increasing every year since 2004–05.

143 Note that prior to July 2009, the Queensland Government provided a state subsidy at the retail level of 8.4 cpl (around 9.2 cpl when GST is included). Therefore, TGPs prior to July 2009 in Brisbane have been reduced by 9.2 cpl to put the wholesale and retail prices on a consistent basis. Appendix E provides information on gross indicative retail margins for petrol and diesel for the five capital cities individually on an annual basis and a monthly basis for 2009–10.

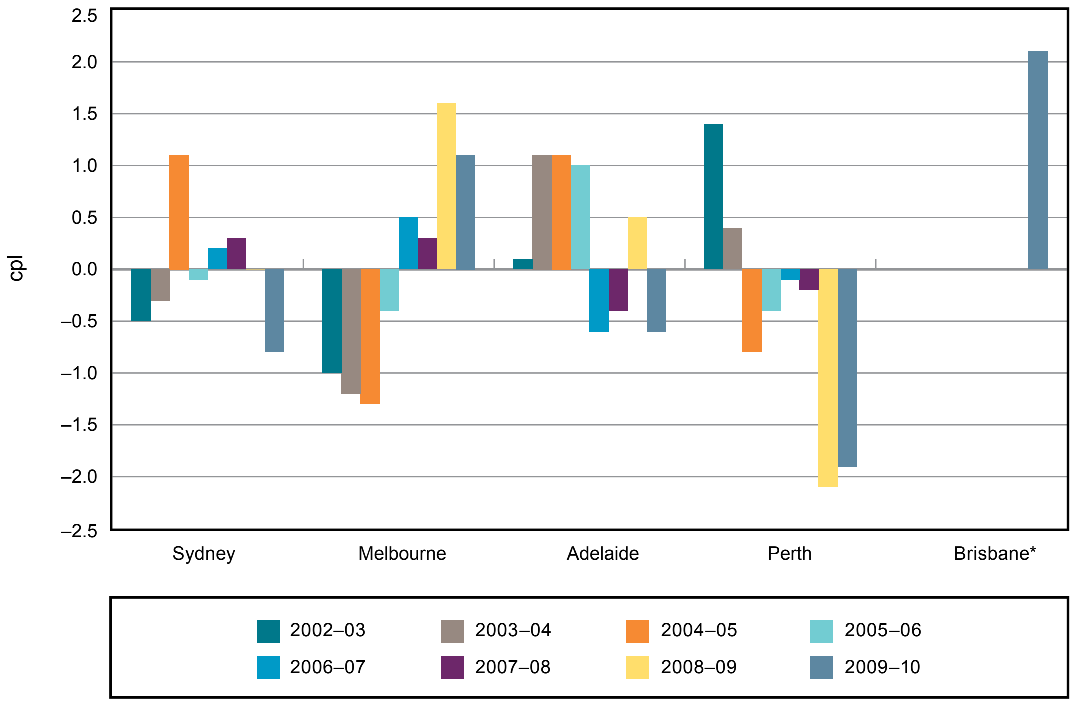
144 The ABS All Groups Consumer Price Index for the five cities, Sydney, Melbourne, Brisbane, Adelaide and Perth, was used to deflate the retail margins to 2002–03 prices.

9.7 Retail price movements in the five largest cities

Local factors play an important role in the operation of competition in the petrol industry. Levels of prices and movements in prices are not uniform across capital cities. This is evident when, for example, prices in each capital city are compared with average prices.

Chart 9.24 provides a comparison of retail prices in Sydney, Melbourne, Brisbane, Perth and Adelaide relative to the average of the prices in these cities.

Chart 9.24 Average retail RULP prices in Sydney, Melbourne, Adelaide, Brisbane and Perth relative to the average price of petrol across four* cities: 2002–03 to 2009–10



Source: ACCC calculations based on Informed Sources data

Note: * Brisbane was not included in this graph for the years 2002–03 to 2008–09 because the comparison with other capital cities was distorted by a subsidy that the Queensland Government provided at the retail level of 8.4 cpl (or 9.2 cpl taking into account the effect of GST). Therefore the years 2002–03 are a four city average and 2009–10 are a five-city average.

Observations about 2009–10 from this chart include:

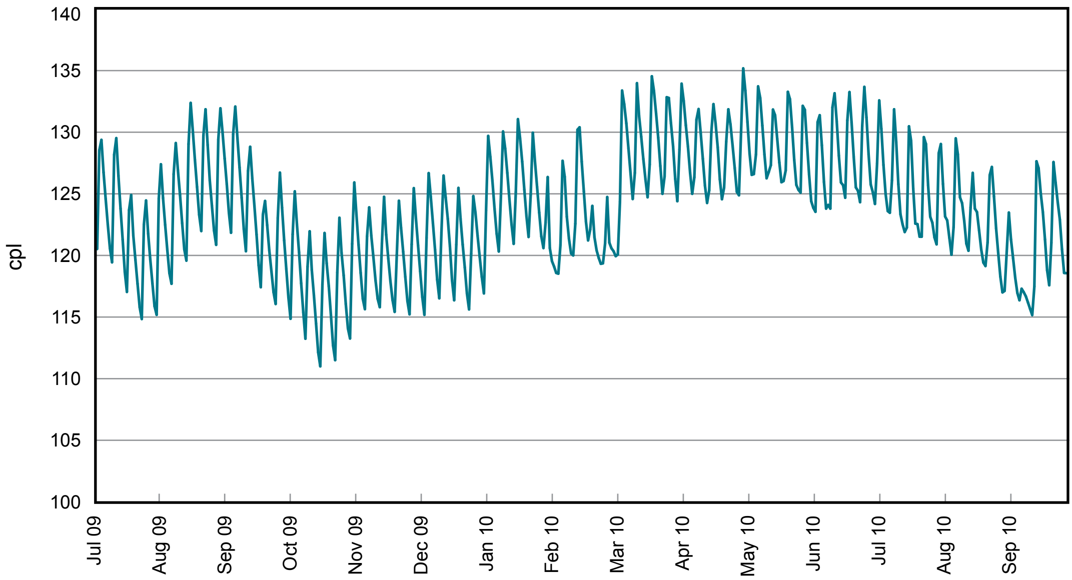
- Price differentials between capital cities continued to be volatile.
- Perth has continued to have lower prices than the other cities.
- Prices in Sydney and Adelaide were below average while Melbourne continued having higher than average prices.
- Since Queensland abolished the state subsidy, Brisbane RULP prices have been higher than the average retail price across the five cities.

9.8 Price cycles

One of the most distinctive features of petrol prices in the five largest cities is the presence of regular price cycles.

Chart 9.25 shows the price cycle from July 2009 to September 2010 for average retail prices of RULP in the five largest cities.

Chart 9.25 Daily average retail RULP prices across the five largest cities: July 2009 to September 2010



Source: ACCC calculations based on Informed Sources data

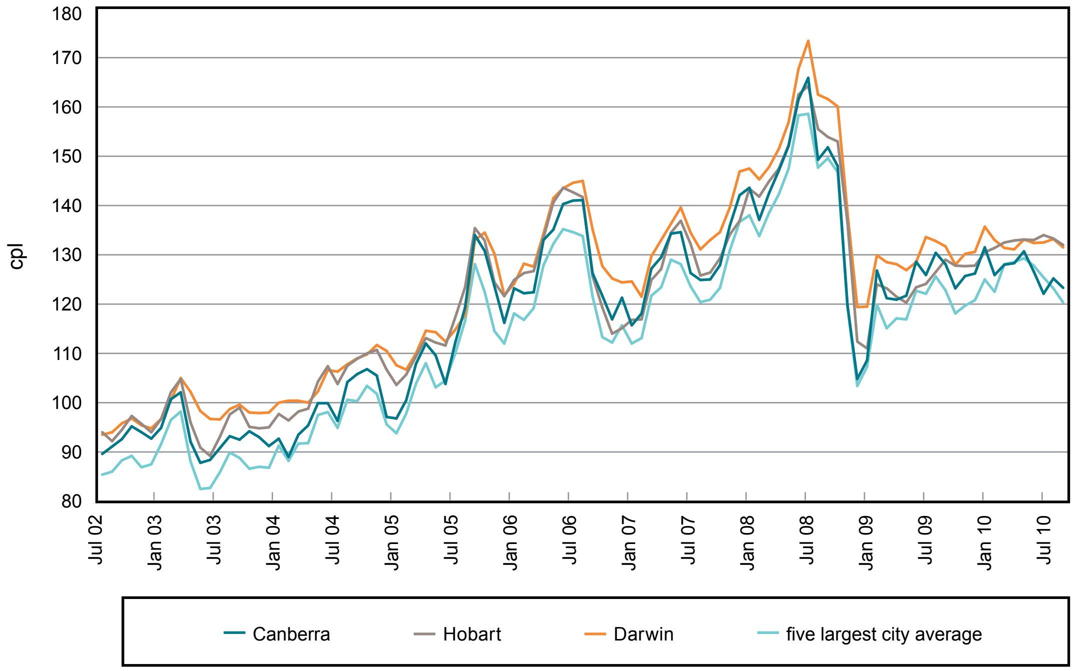
The regular nature of the weekly price cycles is clearly evident in chart 9.25.

For a more comprehensive analysis of price cycles, see chapter 11.

9.9 Retail price movements in the five largest cities and the three smaller capital cities

Chart 9.26 shows average monthly RULP prices in the three smaller capital cities over the period of July 2002 to September 2010, compared with the average monthly price for the five largest cities.

Chart 9.26 Average retail monthly prices of RULP in the three smaller capital and the five largest cities: July 2002 to September 2010



Source: ACCC calculations based on Informed Sources data

Observations on average price movements since July 2002 include:

- Prices in the smaller capital cities tend to follow similar trends to those in the five largest cities.
- Price relativities between the smaller capital cities and the five largest cities vary over time.
- Prices in the five largest cities were on average lower than in the three smaller capital cities.

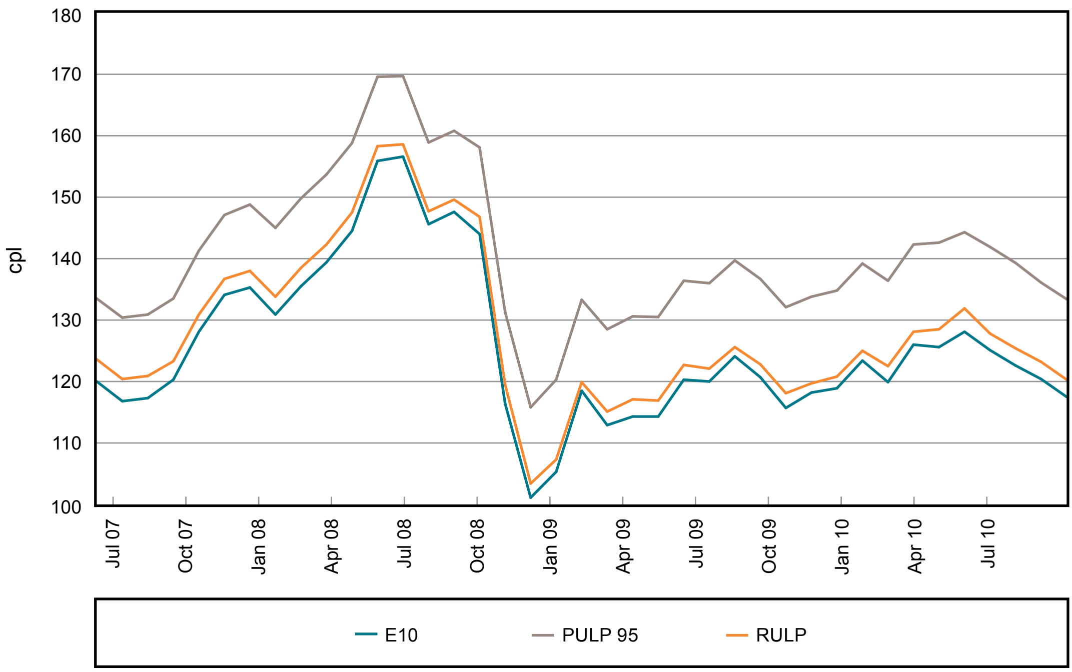
Further analysis of retail prices in regional centres and country towns is presented in chapter 10.

9.10 Other petrol grades

Retail prices of all types of unleaded petrol, RULP, PULP and E10, tend to move in similar patterns.

Chart 9.27 shows average monthly retail prices for PULP 95, RULP and E10 in the five largest cities since July 2007.

Chart 9.27 Average monthly retail prices of RULP, PULP 95 and E10 in the five largest cities: July 2007 to September 2010



Source: ACCC calculations based on Informed Sources data

Note: E10 is not available in Perth.

The price differentials between each type of petrol vary over time. Compared with earlier years, the differential between average PULP 95 prices and average RULP and E10 prices, appears to have widened in the past two years.

That said, it is evident that prices for RULP, PULP 95 and E10 are closely correlated. This is not surprising given that prices for the three products are set according to international benchmarks that move with prices of crude.

For a discussion of the markets for E10 and PULP, including movements in average prices, see chapters 6 and 7 respectively.

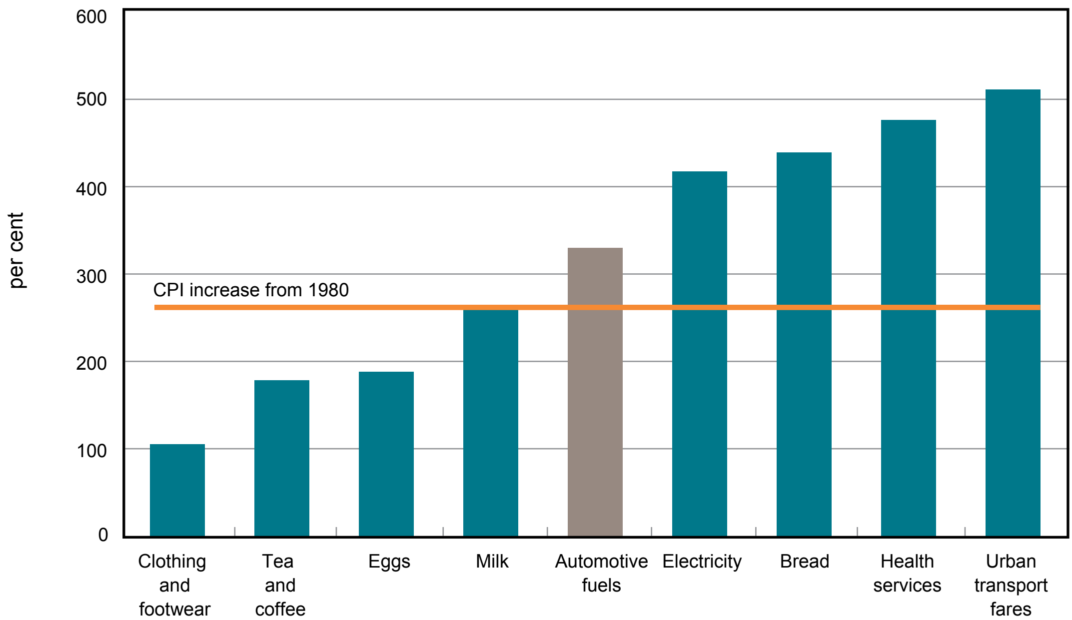
9.11 Comparison of retail automotive fuels prices with other goods

Fuel costs are a large component of the cost of operating a motor vehicle. Higher automotive fuel prices have a profound impact on Australian household expenditures.

The ACCC has compared movements in average retail prices of a range of household products and services, including automotive fuels, to gauge the relative burden of petrol price movements over time.

Chart 9.28 shows a comparison of price movements for the past 30 years for a basket of commonly used household goods and services, including automotive fuel.

Chart 9.28 Comparative changes in the retail prices of automotive fuels and other consumer items: 1980 to June 2010



Source: Based on ABS data

Note: 'Automotive fuels' includes petrol, diesel fuel, automotive LPG and other gas fuels, oils, lubricants and additives.

It can be seen that the total increase in automotive fuel costs since 1980 has been higher than changes in the CPI, although lower than price increases for other energy sources such as electricity and lower than the increase in urban transport fares.

10 Retail prices in regional centres and country towns

Key points:

- Retail prices in regional centres and country towns are largely driven by international benchmark prices and the exchange rate though prices tend to be more stable than in the largest capital cities and price changes, both up and down, tend to lag the largest capital cities.
- Prices in regional centres and country towns tend to be somewhat higher than in the largest cities for a number of reasons including:
  - lower volumes of fuel sold; this can lead to higher costs per litre of fuel sold.
  - distance/location factors; for example, there may be greater freight charges for delivery of fuel and other storage costs, especially for more isolated country towns.
  - number of service stations; this can affect the degree of local competition.
  - lower convenience store sales; these may be important for some retailers in achieving adequate returns.
- These factors may also explain differences in fuel prices between retail sites in different regional centres and country towns.

10.1 Overview

This chapter considers the issue of RULP prices in regional centres and country towns and the city-country differential.[145] During 2009–10 the ACCC significantly increased its focus on regional centres and country towns. The geographical coverage of regional centres and country towns included in the price monitoring analysis increased from approximately 110 towns to approximately 150 towns.

145 The city–country differentials for each state is the difference between the arithmetic average of average annual prices in each country town in the state and the average annual capital city price.
The five-city city–country differential is the difference between the arithmetic country price for the seven states and territories monitored (there are no prices available for the Australian Capital Territory, other than Canberra) and the arithmetic average price for the five largest cities.
The eight-city city–country differential is the difference between the arithmetic average country price for the seven states and territories monitored and the arithmetic average price for the eight capital cities. Since the eight-city differential includes in the city price the smaller capital cities, which tend to have higher prices than the five largest cities, the eight-city city–country differential produces larger numbers than the five-city city–country difference.

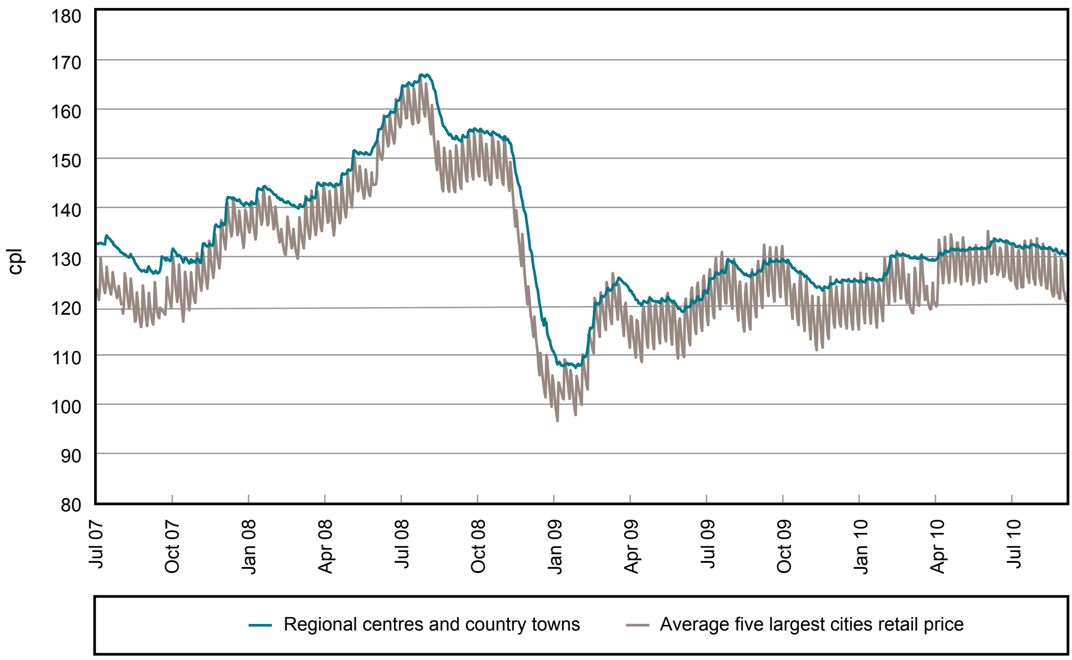
10.2 Petrol prices in regional centres and country towns

Generally, retail prices in regional centres and country towns in Australia tend to be higher than prices in capital cities but typically follow the same overall price trends.[146]

Chart 10.1 compares average retail prices in regional centres and country towns with the average for the five largest capital cities. It is evident that prices have tended to follow a similar path to prices in the capital cities. From chart 10.1 it can also be observed that:

- Prices rose rapidly from the second half of 2007 until July 2008 but then fell dramatically in response to the Global Financial Crisis (GFC) till January 2009.
- From January 2009 to May 2010, petrol prices have generally followed a slight upward trend, reflecting the increase in global oil prices following the recovery from the GFC.
- From May to September 2010 prices decreased slightly, in part due to the effects of a stronger AUD.
- Regional centres and country towns do not generally have the weekly retail price cycles that are evident in the largest capital cities.

Chart 10.1 Average daily retail prices in the five largest cities and the regional centres and country towns monitored by the ACCC compared to the five largest cities: 1 July 2007 to 30 September 2010



Source: ACCC calculations based on Informed Sources data

146 Note that prices in regional centres and country towns are also influenced by state government subsidies - see appendix F

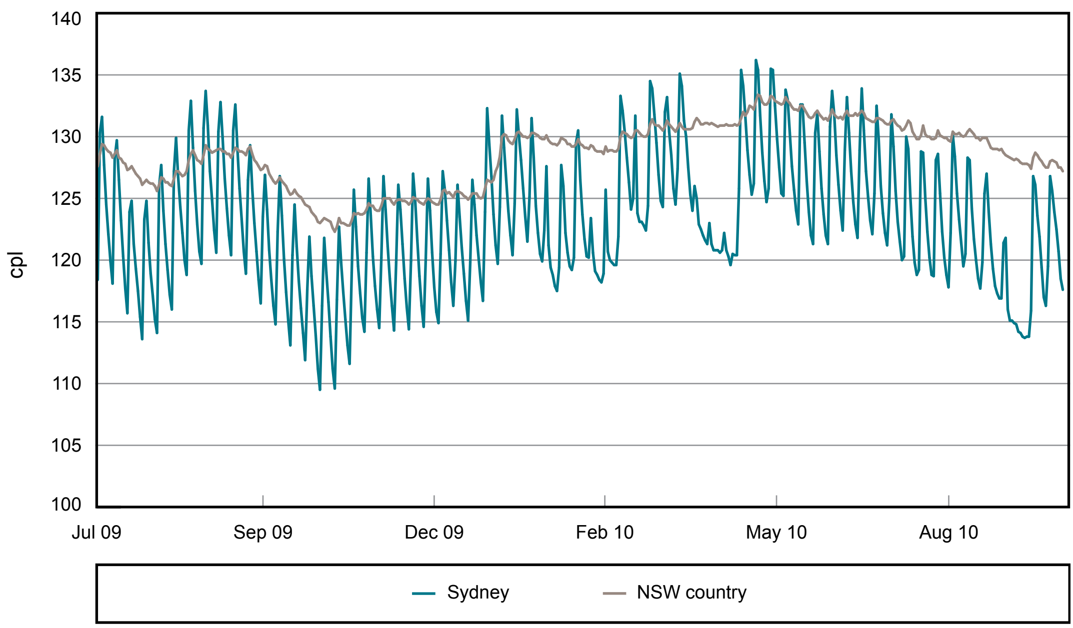
Charts 10.2 to 10.8 show average daily RULP prices for the monitored regional centres and country towns in each state and the Northern Territory compared to the capital city from July 2009 to September 2010.

The specific locations monitored in each state and the Northern Territory along with the average annual prices of RULP, diesel and automotive LPG in 2009–10 are provided in Appendix G.

Key observations from charts 10.2 to 10.8 include:

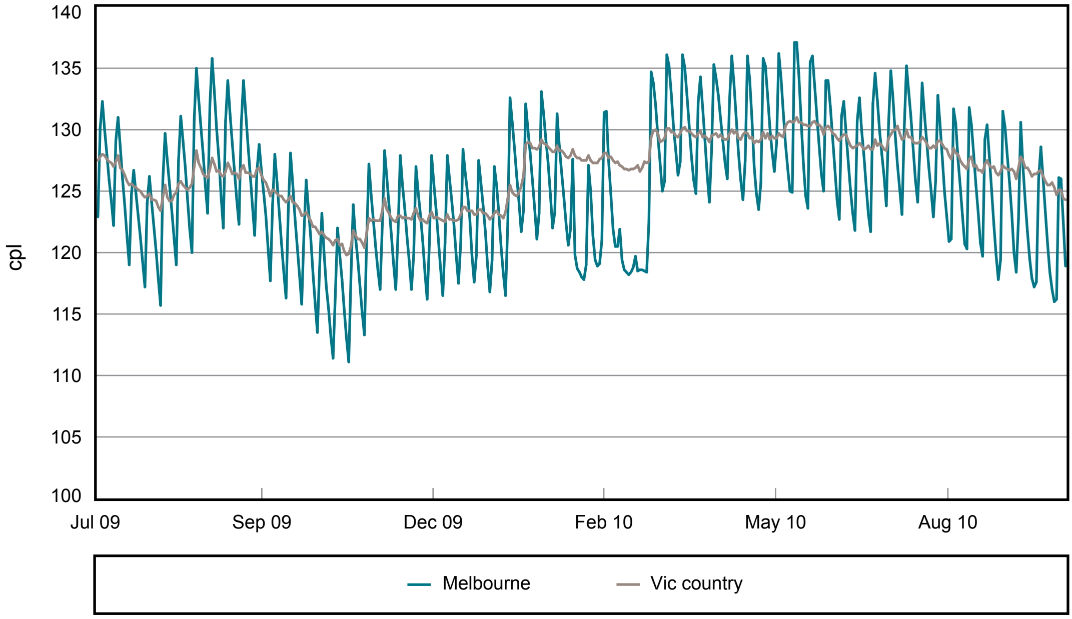
- Apart from the fluctuations associated with weekly price cycles in capital cities, average prices in regional centres and country towns have generally followed similar patterns to the capital cities.
- There are isolated incidences of temporary larger city–country differentials. These were generally evident when price cycle increases did not occur in capital cities, leaving prices temporarily lower than they would have been if there had been a regular price cycle.
- Tasmania's regional centres and country towns had lower average prices than Hobart from September 2009 to January 2010. This appears to have been due to lower prices during this period in regional centres including Devonport, Burnie, Ulverstone and Sorell. This is consistent with data observations in table 9.2, showing a slightly negative city–country differential for 2009–10.
- Movements in prices in regional centres and country towns generally lag behind capital cities. This is due in part to smaller volumes of sales in country areas slower fuel turnover rates mean that changes in international price benchmarks take longer to flow through to retail prices.

Chart 10.2 Sydney and New South Wales regional centres and country towns, average daily RULP prices: July 2009 to September 2010



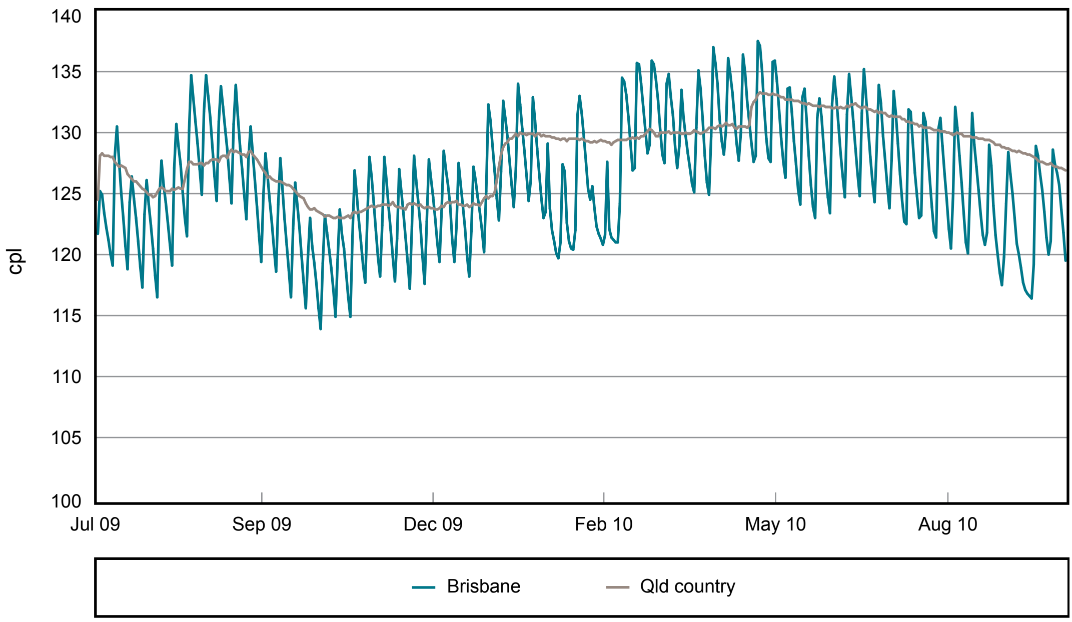
Source: ACCC calculations based on Informed Sources data

Chart 10.3 Melbourne and Victorian regional centres and country towns, average daily RULP prices: July 2009 to September 2010



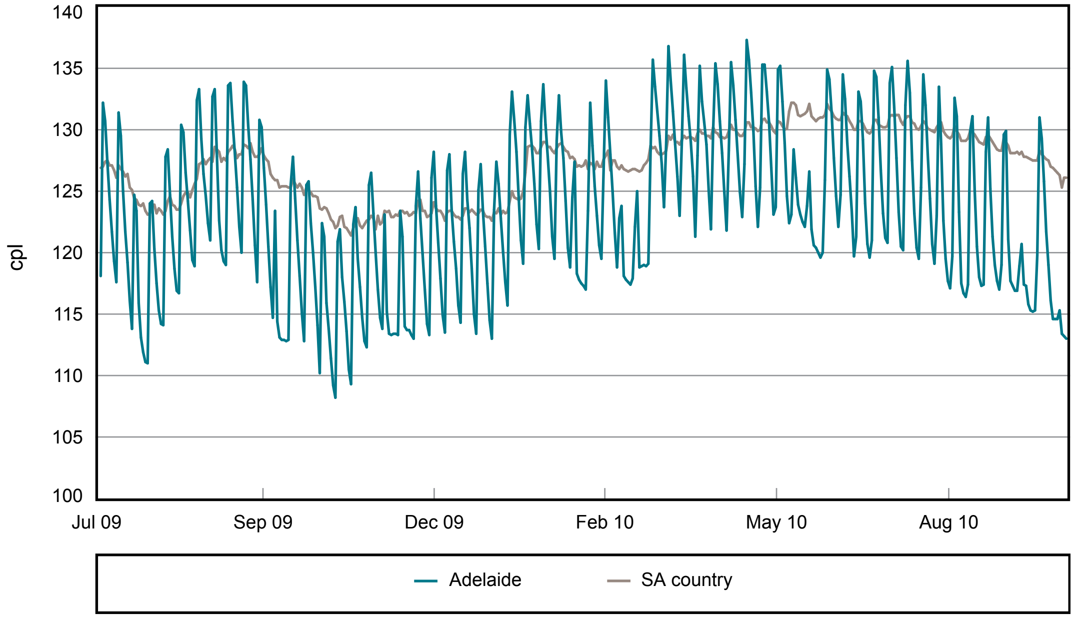
Source: ACCC calculations based on Informed Sources data

Chart 10.4 Brisbane and Queensland regional centres and country towns, average daily RULP prices: July 2009 to September 2010



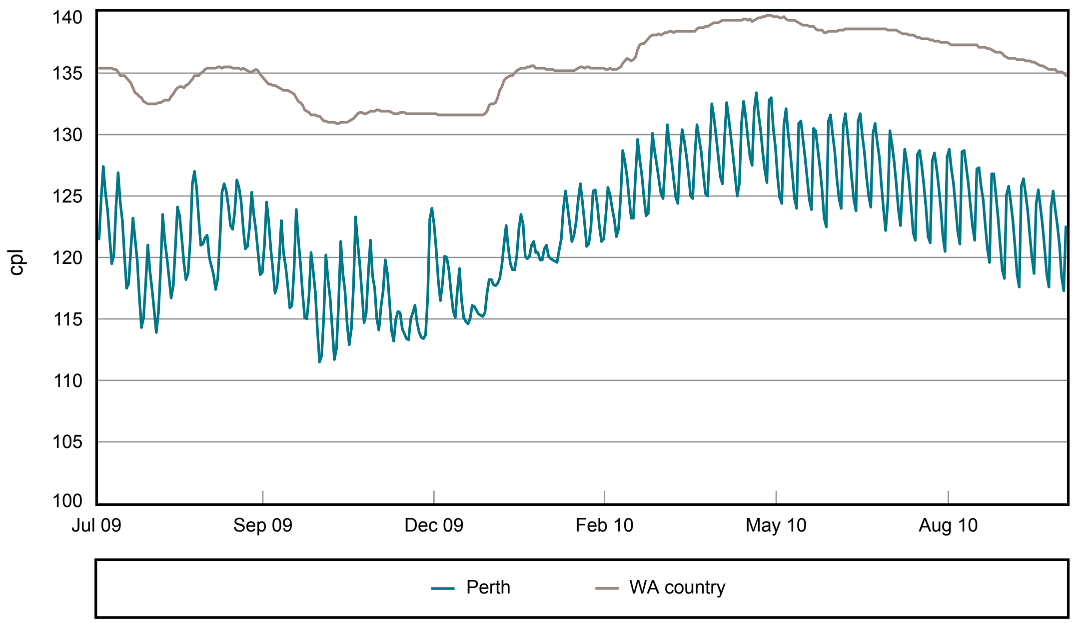
Source: ACCC calculations based on Informed Sources data

Chart 10.5 Adelaide and South Australian regional centres and country towns, average daily RULP prices: July 2009 to September 2010



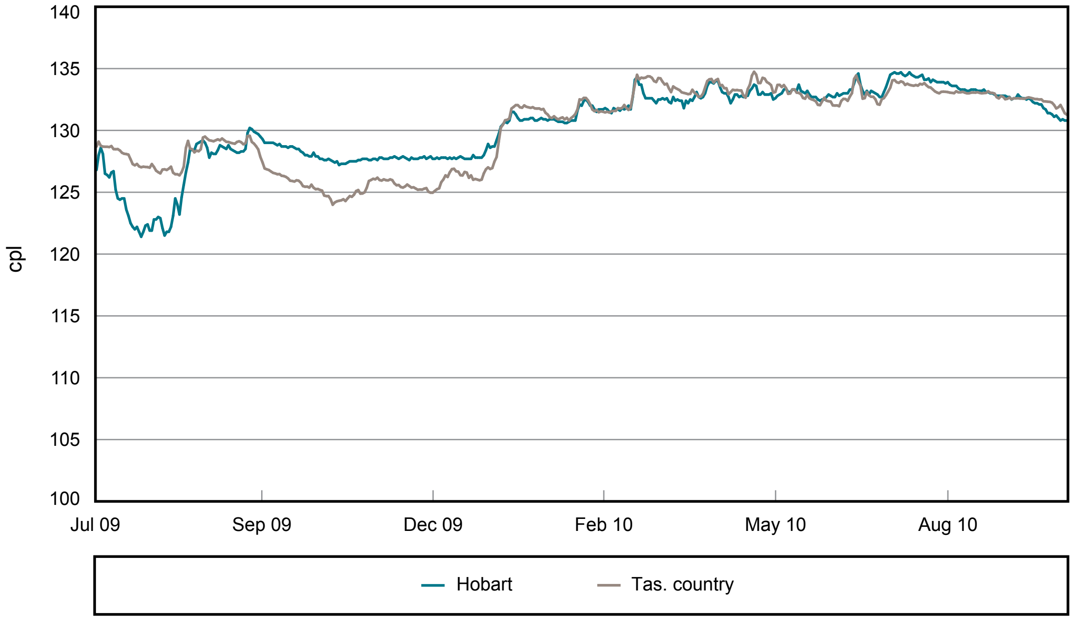
Source: ACCC calculations based on Informed Sources data

Chart 10.6 Perth and Western Australian regional centres and country towns, average daily RULP prices: July 2009 to September 2010



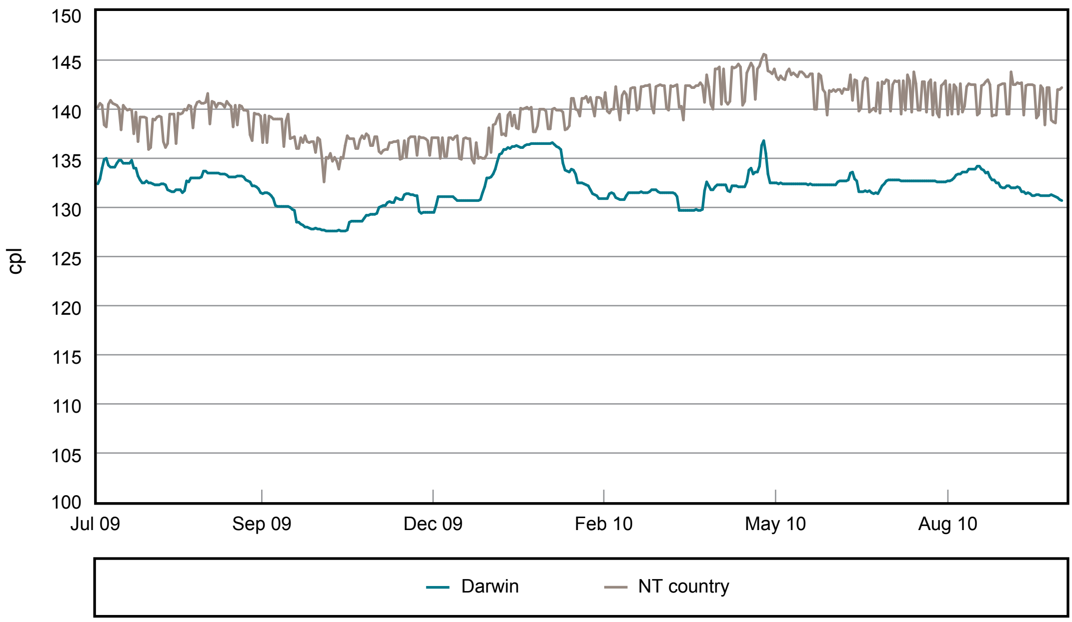
Source: ACCC calculations based on Informed Sources data

Chart 10.7 Hobart and Tasmanian regional centres and country towns, average daily RULP prices: July 2009 to September 2010



Source: ACCC calculations based on Informed Sources data

Chart 10.8 Darwin and Northern Territory regional centres and country towns, average daily RULP prices: July 2009 to September 2010

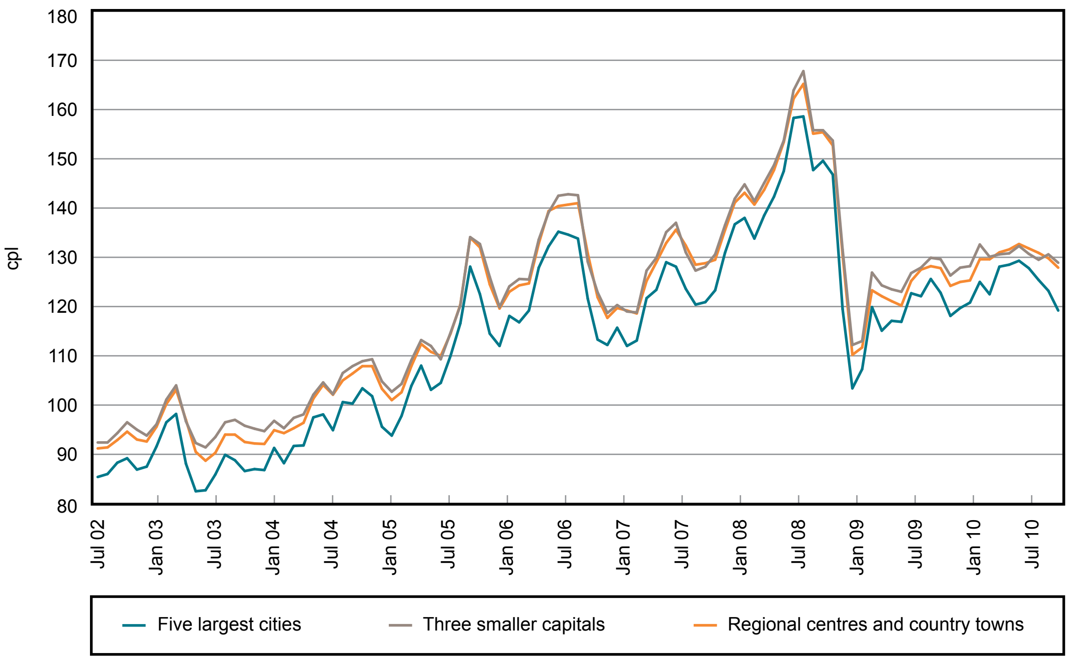


Source: ACCC calculations based on Informed Sources data

Chart 10.9 compares average monthly RULP prices in the five largest cities, three smaller capital cities and regional centres and country towns from July 2002 to September 2010. Since July 2002 average monthly RULP prices in the five largest cities, three smaller capital cities and in regional centres and country towns have followed similar trends. Other observations include:

- Price differentials are broadly consistent with differentials observed in previous years.
- Generally, average prices in the three smaller capital cities are higher than in the five larger cities and in regional centres and country towns.
- On average, relative price differentials between the five largest cities, three smaller capital cities and regional centres and country towns have been reasonably stable over the past three years; however the relative differentials vary from month to month.
- From February 2010 to July 2010, there were instances where average RULP prices in the three smaller cities were equal to or lower than average RULP prices in the regional centres and country towns.

Chart 10.9 Average monthly RULP prices in the five largest cities, three smaller capital cities, and regional centres and country towns: July 2002 to September 2010



Source: ACCC calculations based on Informed Sources data

Table 10.1 shows average annual prices in the five largest cities, the three smaller capital cities, and regional centres and country towns for the eight years from 2002–03 to 2009–10.

Table 10.1 Average annual retail prices of RULP—five largest cities, three smaller capital cities, and regional centres and country towns: 2002–03 to 2009–10

	Five largest capital cities cpl	Three smaller capital cities cpl	Regional centres and country towns cpl
2002–03	88.6	95.5	94.0
2003–04	90.3	97.3	94.7
2004–05	100.6	107.5	106.1
2005–06	121.1	128.2	127.1
2006–07	121.5	128.6	127.5
2007–08	134.5	141.1	140.4
2008–09	127.1	134.8	132.9
2009–10	124.2	129.5	128.1

Source: ACCC calculations based on Informed Sources data

On average, the differentials between retail prices in the five largest cities, the three smaller capitals and the regional centres and country towns were smaller in 2009–10 than 2008–09.

10.3 Price differentials over the past eight years

In general, prices are higher in regional centres and country towns than in the large capital cities because of a number of factors, including:

- lower volumes of fuel sold; this can lead to higher costs per litre of fuel sold
- distance/location factors; for example, there may be greater freight charges for delivery of fuel and other storage costs, especially for more isolated country towns
- number of service stations; this can affect the degree of local competition
- lower convenience store sales; these may be important for some retailers in achieving adequate returns.

These factors may also explain differences in fuel prices between retail sites within a regional centre or country town.

On average, fuel prices in regional centres and country towns do not vary as much and tend to change more slowly than prices in capital cities. The day-to-day differences in petrol prices between the larger cities and country towns are also influenced by the existence of weekly petrol price cycles, which occur in the major capital cities where prices generally increase sharply over a day or two and then decline more gradually over the remainder of the week (see chapter 11). Price cycles do not generally occur in regional centres and country towns.

Table 10.2 provides data on average price differences between capital cities and the regional centres and country towns that are monitored by the ACCC. This table also shows the aggregate indicators of the city–country differential (five-city and eight-city).

Observations from table 10.2 include:

- Average price differentials between regional centres and country towns and the capital cities narrowed in 2009–10. The average price differential between country and city prices across all states and the Northern Territory was 2.4 cpl in 2009–10 compared with 2.7 cpl in 2008–09. Overall, price differentials between capital cities and regional centres and country towns have been decreasing since 2005–06.
- Tasmania has the smallest differential between average prices in its regional centres and country towns and prices in Hobart; this is likely due in large part to the more even population spread in Tasmania compared with other states and the shorter distances from major oil terminals.
- In contrast, Western Australia, a large and sparsely populated state with significant distances between towns, has a large price differential between Perth and its regional centres and country towns.

Table 10.2 Average price differences between the capital city and the regional centres and country towns monitored by the ACCC: 2002–03 to 2009–10

	2002–03 cpl	2003–04 cpl	2004–05 cpl	2005–06 cpl	2006–07 cpl	2007–08 cpl	2008–09 cpl	2009–10 cpl	8-year average cpl
New South Wales	5.5	5.0	4.4	5.9	5.4	4.7	5.1	5.3	5.2
Victoria	4.3	3.9	5.6	5.3	4.5	4.8	2.9	1.4	4.0
Queensland	4.1	2.8	3.5	5.0	4.9	4.7	2.7	2.0	3.7
South Australia	3.0	2.8	3.8	4.3	5.6	4.8	4.2	3.9	4.0
Western Australia	10.0	9.8	11.8	11.3	12.2	12.5	17.0	12.8	12.2
Tasmania	–0.3	0.6	0.5	–1.1	0.1	1.1	1.4	–0.1	0.6
Northern Territory	6.5	3.3	5.4	4.3	5.2	8.0	5.8	7.8	5.8
Aggregate Indicators (difference between country towns and regional centres and the average of the capital cities)									
Five-city	5.4	4.4	5.5	6.0	6.0	5.9	5.5	5.0	5.8
Eight-city	2.8	1.8	3.0	3.4	3.3	3.5	2.7	2.4	3.1

Source: ACCC calculations based on Informed Sources data

11 Retail pricing analysis

Key points:

- In 2009-10 weekly retail price cycles were once again prominent in the largest capital cities, but they were less stable than last year with a number of failed or truncated cycles being evident.
- The days of the week on which price cycles peaked and troughed moved through the week.
- This may suggest a degree of uncertainty in retail pricing.
- Price cycle increases before public holidays are no larger than in other weeks.

One issue that continues to concern many Australian consumers is the retail petrol price cycle that occurs in the larger capital cities. In the 2009 petrol monitoring report the ACCC undertook detailed analysis of petrol price cycles. This chapter analyses price cycles to the end of October 2010. In particular, it considers:

- changes in the days of the week on which prices peak and trough
- changes in the incidence and shape of petrol price cycles
- changes in consumer buying patterns during the price cycle
- price cycle increases before public holidays.

11.1 Price cycles in 2010

Petrol price cycles have changed in 2010, particularly in comparison with 2009. These changes relate to the days of the week on which prices peak and trough, the incidence and shape of price cycles and consumer buying patterns during the price cycle.

A petrol price cycle is a movement in price from the trough to a peak to a subsequent trough. The ACCC considers a cycle to have occurred if the increase in price from trough to peak is greater than 3 per cent of that trough, and the decrease in price to the subsequent trough is also greater than 3 per cent of the initial trough. The amplitude of the price cycle is the increase in price from the initial trough to peak.

11.2 Data on price cycles

Data on the number and average amplitude of petrol price cycles in the five largest cities for the period 1 January 2005 to 31 October 2010 is shown in table 11.1.

Table 11.1 Average price cycle amplitude, average amplitude as a proportion of average annual price and number of price cycles in the five largest cities: 2005 to 2010

	Sydney	Melbourne	Brisbane	Adelaide	Perth
Average amplitude (cpl)					
2005	7.0	7.1	7.1	7.6	10.8
2006	9.0	9.2	8.2	9.8	7.3
2007	9.4	9.6	8.4	10.3	8.0
2008	10.1	9.9	8.5	11.2	9.1
2009	12.2	11.0	9.3	13.5	7.6
2010*	10.4	11.3	9.4	12.9	6.8
Amplitude as per cent of price					
2005	6.3	6.4	6.9	6.7	9.8
2006	7.2	7.3	7.0	7.8	5.9
2007	7.5	7.7	7.1	8.3	6.4
2008	7.1	6.9	6.3	7.9	6.5
2009	10.2	9.1	7.9	11.3	6.5
2010*	8.4	9.0	7.4	10.4	5.4
Number of cycles					
2005	46	28	34	49	6
2006	47	43	45	50	20
2007	44	49	50	45	24
2008	52	48	47	46	11
2009	52	52	51	52	38
2010*	38	40	41	41	40

Source: ACCC analysis based on Informed Sources data

Note: *To 31 October 2010.

The 2009 ACCC petrol monitoring report noted that in Sydney, Melbourne, Brisbane and Adelaide the average price cycle amplitude had increased significantly over time. In 2010 this trend continued in Melbourne and Brisbane, but in Sydney and Adelaide there were declines in the average amplitude of the price cycle. In Sydney and Adelaide, the decrease in the average price cycle amplitude is likely to be related to the greater number of truncated price cycles in 2010 (see section 11.4).

Last year's monitoring report also noted that price cycles in Sydney, Melbourne, Brisbane and Adelaide occurred in almost every week of the year, and that price cycles in Perth occurred more often in 2009 than in any other year during the period. In 2010 there were a number of weeks in which there were no price cycles. These occasions are analysed further in section 11.4.

11.3 Changes in the day of the week for peaks and troughs

Over recent years there have been changes in the day of the week on which prices peak and trough in the weekly petrol price cycles in the five largest capital cities. However, these changes have been particularly pronounced in 2010.

Tables 11.2 to 11.6 show the number of troughs and peaks (and proportion of the annual total) on each day of the week for each of the five largest capital cities for the period 1 January 2005 to 31 October 2010.

Table 11.2 Number of troughs and peaks (and proportion of annual total) on each day of the week, Sydney: 2005 to 2010*

Year	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Trough								
2005	11 (24%)	27 (59%)	6 (13%)	2 (4%)				46
2006	1 (2%)	44 (94%)					2 (4%)	47
2007		43 (98%)			1 (2%)			44
2008		26 (49%)	26 (49%)				1 (2%)	53
2009			52 (100%)					52
2010*	1 (3%)	2 (5%)	11 (30%)	8 (22%)	10 (27%)	3 (8%)	2 (5%)	37
Total	13 (5%)	142 (51%)	95 (34%)	10 (4%)	11 (4%)	3 (1%)	5 (2%)	279
Peak								
2005			4 (9%)	31 (67%)	6 (13%)	3 (7%)	2 (4%)	46
2006			3 (6%)	44 (94%)				47
2007				44 (100%)				44
2008				51 (98%)	1 (2%)			52
2009				12 (23%)	40 (77%)			52
2010*	3 (8%)		1 (3%)	1 (3%)	15 (39%)	10 (26%)	8 (21%)	38
Total	3 (1%)		8 (3%)	183 (66%)	62 (22%)	13 (5%)	10 (4%)	279

Source: ACCC analysis based on Informed Sources data

Note: *To 31 October 2010.

Table 11.3 Number of troughs and peaks (and proportion of annual total) on each day of the week, Melbourne: 2005 to 2010*

Year	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Trough								
2005	9 (32%)	12 (43%)		6 (21%)			1 (4%)	28
2006	2 (5%)	41 (95%)						43
2007	1 (2%)	47 (96%)	1 (2%)					49
2008		23 (47%)	26 (53%)					49
2009			52 (100%)					52
2010*	1 (3%)	3 (8%)	10 (26%)	10 (26%)	11 (28%)	3 (8%)	1 (3%)	39
Total	13 (5%)	126 (48%)	89 (34%)	16 (6%)	11 (4%)	3 (1%)	2 (1%)	260
Peak								
2005			3 (11%)	16 (57%)		2 (7%)	7 (25%)	28
2006				43 (100%)				43
2007				49 (100%)				49
2008				48 (100%)				48
2009				8 (15%)	44 (85%)			52
2010*	2 (5%)	1 (3%)		2 (5%)	16 (40%)	9 (23%)	10 (25%)	40
Total	2 (1%)		3 (1%)	166 (64%)	60 (23%)	11 (4%)	17 (7%)	260

Source: ACCC analysis based on Informed Sources data

Note: *To 31 October 2010.

Table 11.4 Number of troughs and peaks (and proportion of annual total) on each day of the week, Brisbane: 2005 to 2010*

Year	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Trough								
2005	5 (15%)	10 (29%)	1 (3%)	11 (32%)	3 (9%)	1 (3%)	3 (9%)	34
2006		42 (93%)	1 (2%)			1 (2%)	1 (2%)	45
2007		43 (86%)	6 (12%)				1 (2%)	50
2008		21 (45%)	26 (55%)					47
2009		1 (2%)	51 (98%)					52
2010*	1 (3%)	3 (8%)	11 (28%)	11 (28%)	10 (25%)	3 (8%)	1 (3%)	40
Total	6 (2%)	120 (45%)	96 (36%)	22 (8%)	13 (5%)	5 (2%)	6 (2%)	268
Peak								
2005			1 (3%)	15 (44%)	2 (6%)	6 (18%)	10 (29%)	34
2006				45 (100%)				45
2007				49 (98%)	1 (2%)			50
2008				45 (96%)	2 (4%)			47
2009				3 (6%)	48 (94%)			51
2010*	2 (5%)	1 (2%)	1 (2%)	1 (2%)	15 (37%)	10 (24%)	11 (27%)	41
Total	2 (1%)	1 (1%)	2 (1%)	158 (59%)	68 (25%)	16 (6%)	21 (8%)	268

Source: ACCC analysis based on Informed Sources data

Note: *To 31 October 2010.

Table 11.5 Number of troughs and peaks (and proportion of annual total) on each day of the week, Adelaide: 2005 to 2010*

Year	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Trough								
2005	1 (2%)	14 (29%)	1 (2%)	6 (12%)	27 (55%)			49
2006	2 (4%)	47 (92%)					2 (4%)	51
2007		41 (93%)	1 (2%)				2 (5%)	44
2008		34 (72%)	12 (26%)				1 (2%)	47
2009		1 (2%)	50 (96%)				1 (2%)	52
2010*		2 (5%)	23 (58%)	4 (10%)	7 (18%)	3 (8%)	1 (3%)	40
Total	3 (1%)	139 (49%)	87 (31%)	10 (4%)	34 (12%)	3 (1%)	7 (2%)	283
Peak								
2005			1 (2%)	15 (31%)		7 (14%)	26 (53%)	49
2006			1 (2%)	49 (98%)				50
2007				45 (100%)				45
2008				46 (100%)				46
2009				36 (69%)	16 (31%)			52
2010*	2 (5%)	2 (5%)	1 (2%)	1 (2%)	25 (61%)	5 (12%)	5 (12%)	41
Total	2 (1%)	2 (1%)	3 (1%)	192 (68%)	41 (14%)	12 (4%)	31 (11%)	283

Source: ACCC analysis based on Informed Sources data

Note: *To 31 October 2010.

Table 11.6 Number of troughs and peaks (and proportion of annual total) on each day of the week, Perth: 2005 to 2010*

Year	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
Trough								
2005	3 (43%)		1 (14%)	1 (14%)			2 (29%)	7
2006	2 (11%)				1 (5%)	4 (21%)	12 (63%)	19
2007	10 (42%)	4 (17%)	1 (4%)	1 (4%)		1 (4%)	7 (29%)	24
2008	4 (36%)	3 (27%)	2 (18%)				2 (18%)	11
2009		34 (87%)	4 (10%)				1 (3%)	39
2010*		8 (21%)	31 (79%)					39
Total	19 (14%)	49 (35%)	39 (28%)	2 (1%)	1 (1%)	5 (4%)	24 (17%)	139
Peak								
2005	1 (17%)	2 (33%)	1 (17%)	2 (33%)				6
2006		1 (5%)	13 (65%)	6 (30%)				20
2007			3 (13%)	8 (33%)	11 (46%)	2 (8%)		24
2008		2 (18%)		2 (18%)	4 (36%)		3 (27%)	11
2009				1 (3%)	33 (87%)	4 (11%)		38
2010*				2 (5%)	31 (78%)	7 (18%)		40
Total	1 (1%)	5 (4%)	17 (12%)	21 (15%)	79 (57%)	13 (9%)	3 (2%)	139

Source: ACCC analysis based on Informed Sources data

Note: *To 31 October 2010.

11.3.1 Peaks and troughs in 2009

In 2009, price cycles in Sydney, Melbourne, Brisbane and Adelaide were relatively stable: there were 52 weekly price cycles in Sydney, Melbourne and Adelaide and 51 weekly price cycles in Brisbane. The day of the week on which prices peaked and troughed in each city was generally consistent throughout the year. Almost all of the troughs occurred on a Wednesday and the peak of the price cycle occurred on Thursday and Friday. The most common day for the price cycle peak was Friday in all cities except Adelaide (where it was Thursday). In Perth a regular weekly price cycle began in March 2009 after a prolonged period of irregular price cycles. In 2009, prices in Perth most commonly troughed on a Tuesday and peaked on a Friday.

11.3.2 Peaks and troughs in 2010

In 2010, the day of the week on which prices peaked and troughed has changed significantly.

During 2010, prices have troughed on every day of the week in Sydney, Melbourne and Brisbane and on six days of the week in Adelaide. Prices peaked on seven days of the week in Brisbane and Adelaide and on six days in Sydney and Melbourne.

11.3.3 Trend analysis

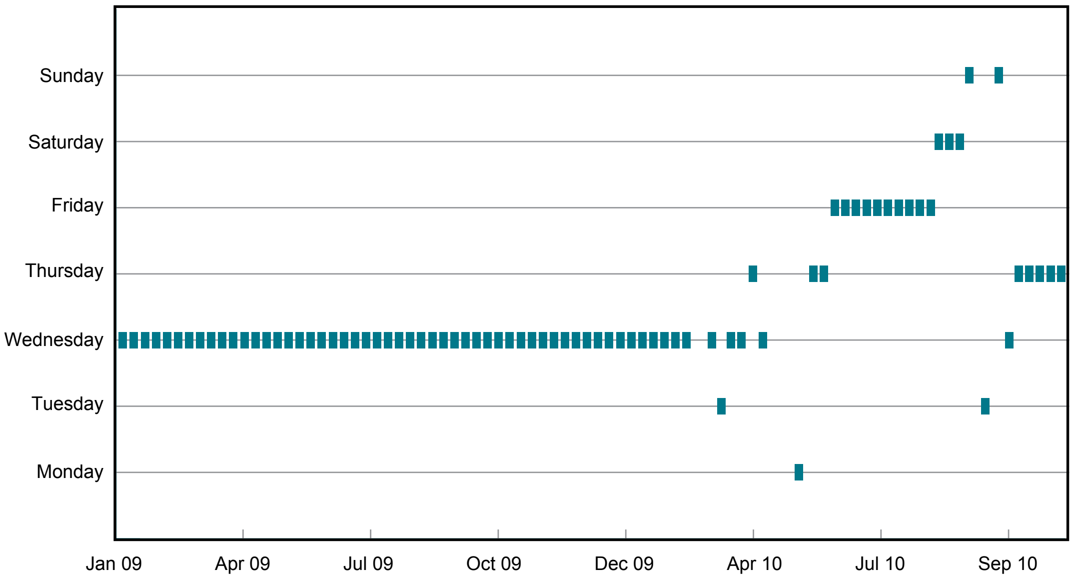
An analysis of the days of the week on which prices troughed and peaked in these cities over time highlights the significant changes that occurred in 2010.

Troughs

Charts 11.1 to 11.5 show the day of the week on which each price cycle trough occurred in each city in the period from 1 January 2009 to 31 October 2010. Each dot in the charts depicts a price cycle trough.

Over this period the day of the week on which the trough occurred in Sydney, Melbourne, Brisbane and Adelaide was overwhelmingly Wednesday until early February 2010. Thereafter, the day of the week on which prices troughed changed from Wednesday to Thursday, then stayed at Friday for a few weeks before moving through the days to Wednesday or Thursday. The charts indicate that the rate of change in the movement in the trough day through the week increased during 2010.

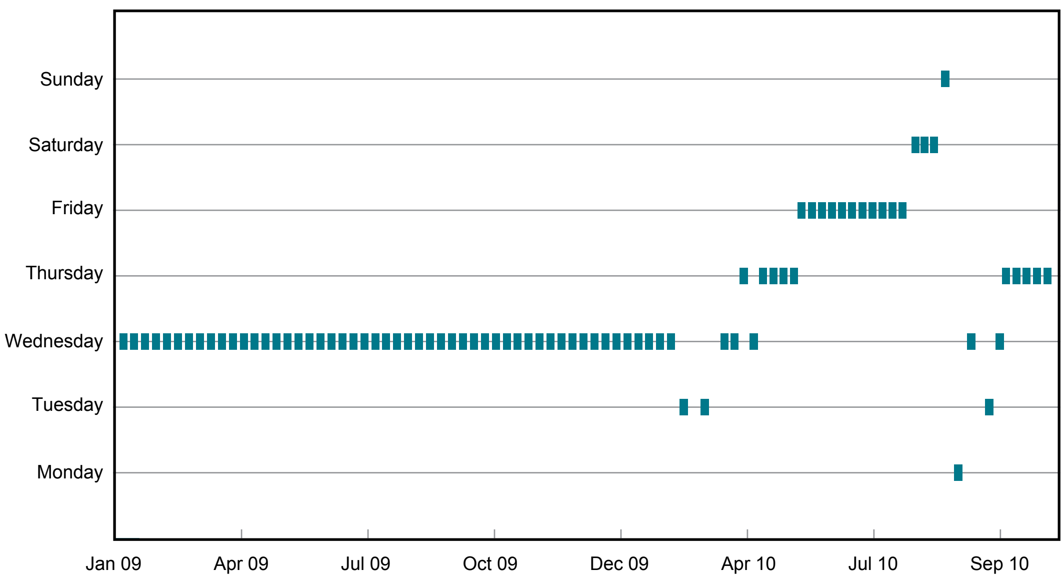
Chart 11.1 Day of trough, Sydney: 1 January 2009 to 31 October 2010



Source: ACCC analysis based on Informed Sources data

Note: Each dot depicts a price cycle trough.

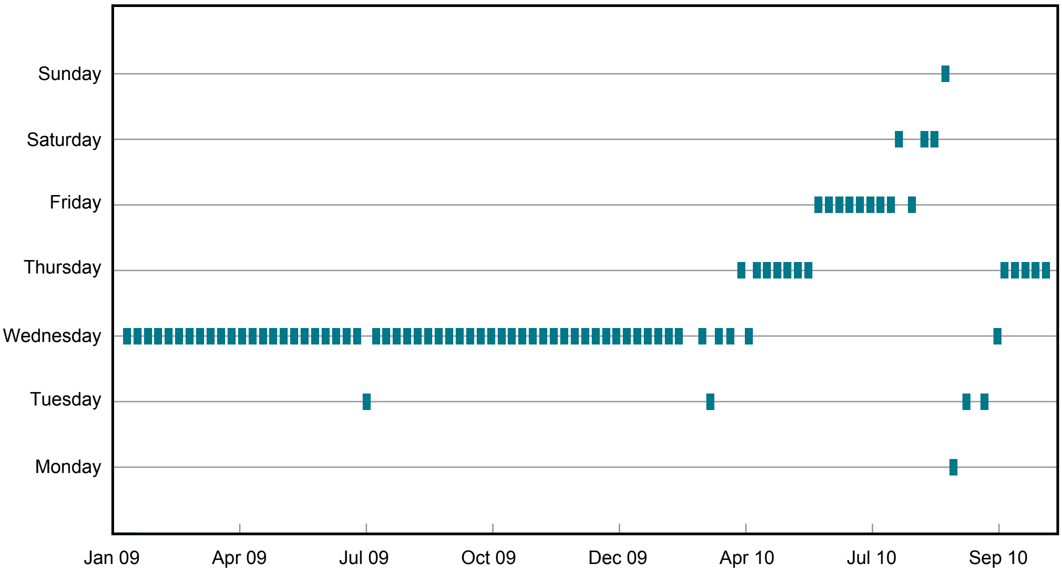
Chart 11.2 Day of trough, Melbourne: 1 January 2009 to 31 October 2010



Source: ACCC analysis based on Informed Sources data

Note: Each dot depicts a price cycle trough.

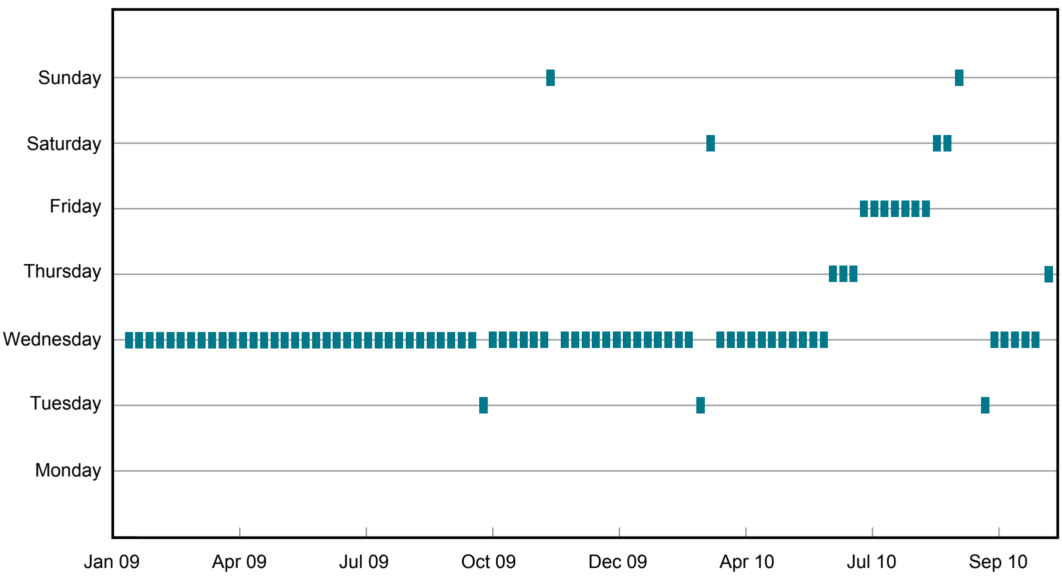
Chart 11.3 Day of trough, Brisbane: 1 January 2009 to 31 October 2010



Source: ACCC analysis based on Informed Sources data

Note: Each dot depicts a price cycle trough.

Chart 11.4 Day of trough, Adelaide: 1 January 2009 to 31 October 2010

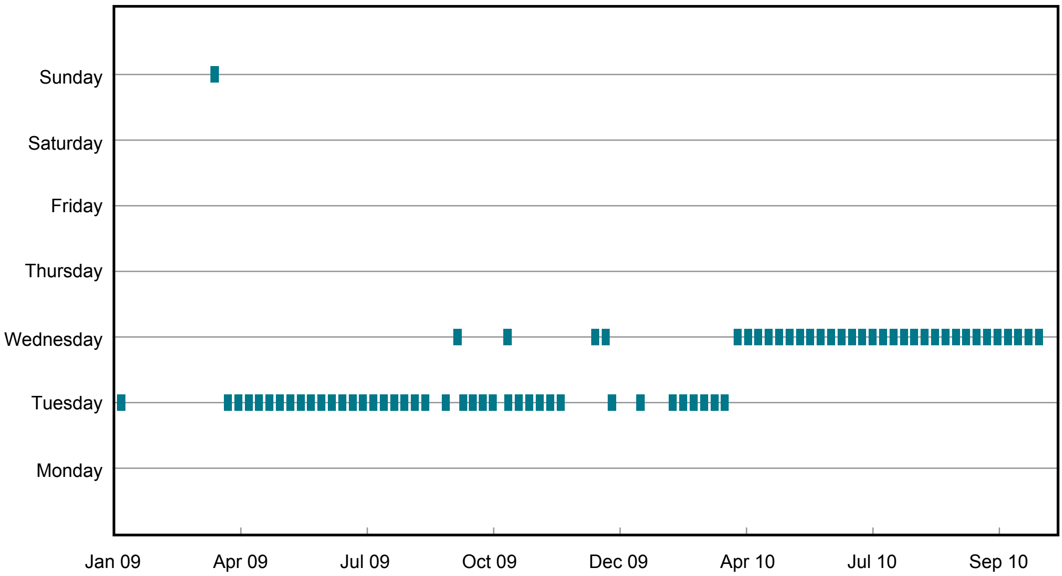


Source: ACCC analysis based on Informed Sources data

Note: Each dot depicts a price cycle trough.

In Perth, the days of the week on which prices peaked and troughed were different from the eastern capital cities. Chart 11.5 shows that, over the period 1 January 2009 to 31 October 2010, the day of the week on which prices troughed in Perth was most commonly Tuesday until late March 2010, after which it was consistently Wednesday.

Chart 11.5 Day of trough, Perth: 1 January 2009 to 31 October 2010



Source: ACCC analysis based on Informed Sources data

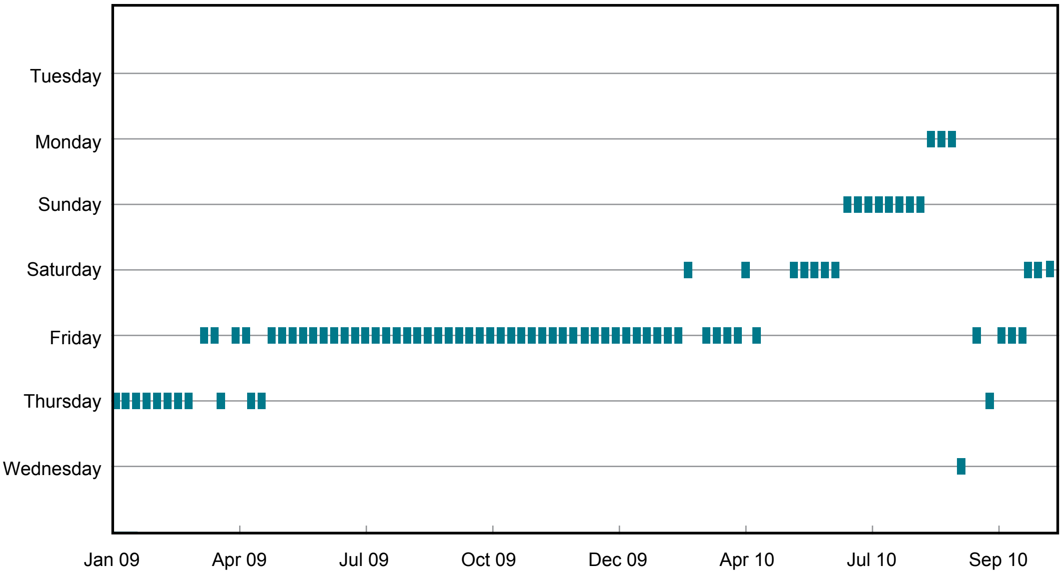
Note: Each dot depicts a price cycle trough.

Peaks

Charts 11.6 to 11.10 show the day of the week on which each price cycle peak occurred in each city in the period from 1 January 2009 to 31 October 2010. Each dot in the charts depicts a price cycle peak.

During 2009, the most common day of the week on which peaks occurred was Friday in Sydney, Melbourne and Brisbane and Thursday in Adelaide. Around March or April 2010, the day of the week on which prices peaked began to change from Friday to Saturday, stayed at Sunday for a few weeks and subsequently moved through the days back to Friday and Saturday. The charts indicate that the rate of change in the movement in the peak day through the week increased during 2010.

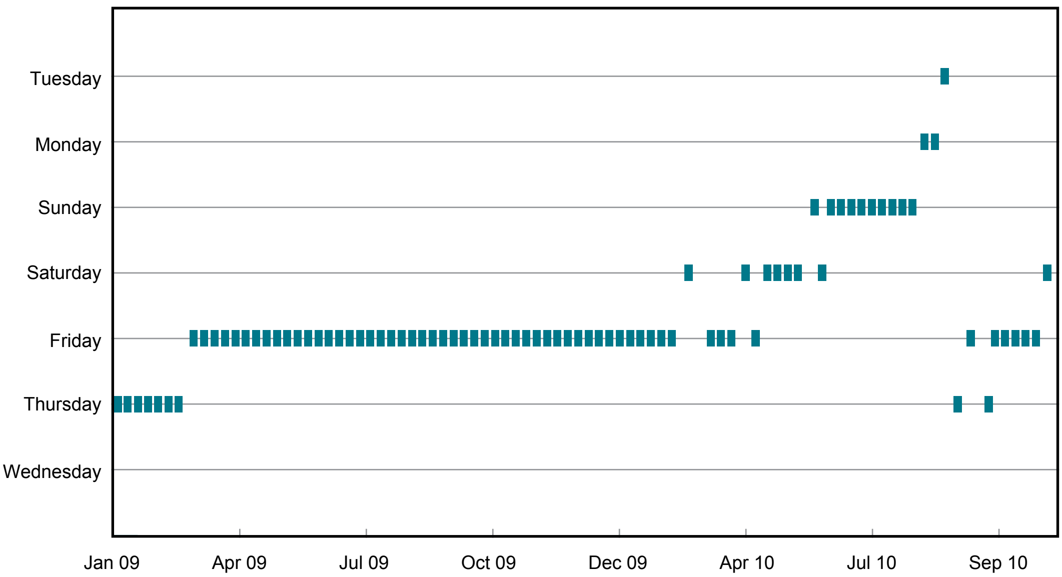
Chart 11.6 Day of peak, Sydney: 1 January 2009 to 31 October 2010



Source: ACCC analysis based on Informed Sources data

Note: Each dot depicts a price cycle peak.

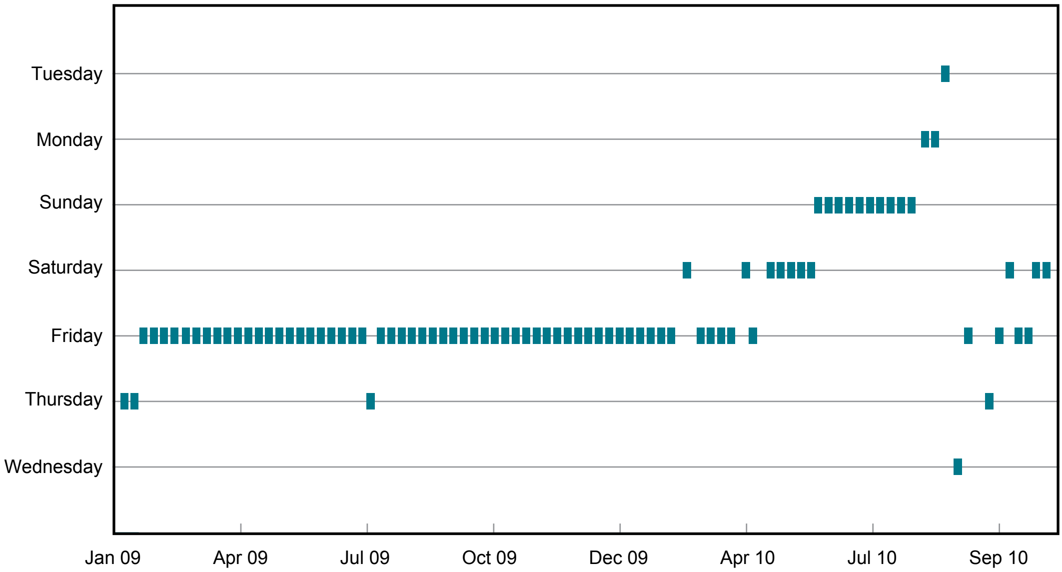
Chart 11.7 Day of peak, Melbourne: 1 January 2009 to 31 October 2010



Source: ACCC analysis based on Informed Sources data

Note: Each dot depicts a price cycle peak.

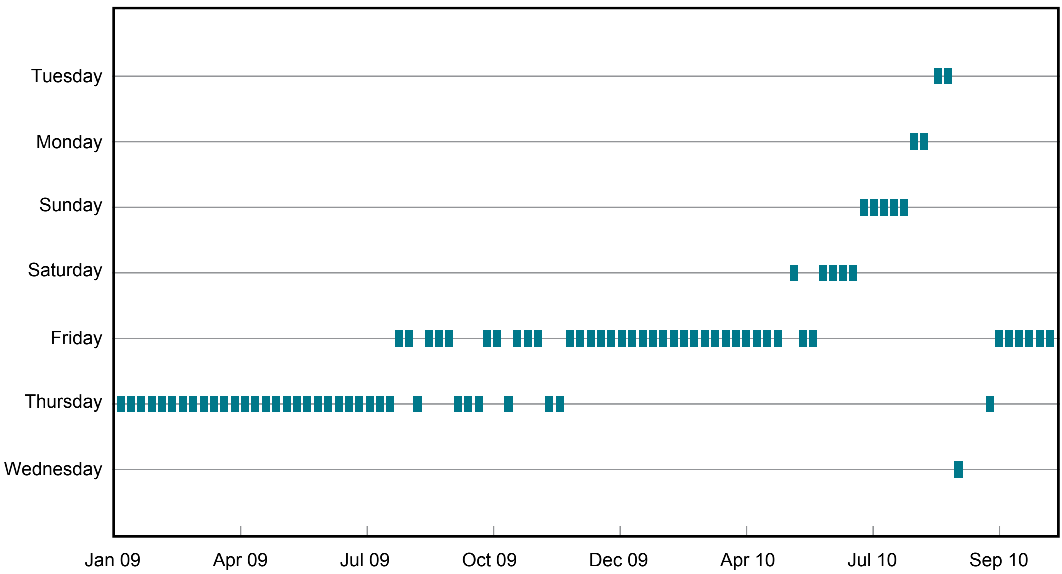
Chart 11.8 Day of peak, Brisbane: 1 January 2009 to 31 October 2010



Source: ACCC analysis based on Informed Sources data

Note: Each dot depicts a price cycle peak.

Chart 11.9 Day of peak, Adelaide: 1 January 2009 to 31 October 2010

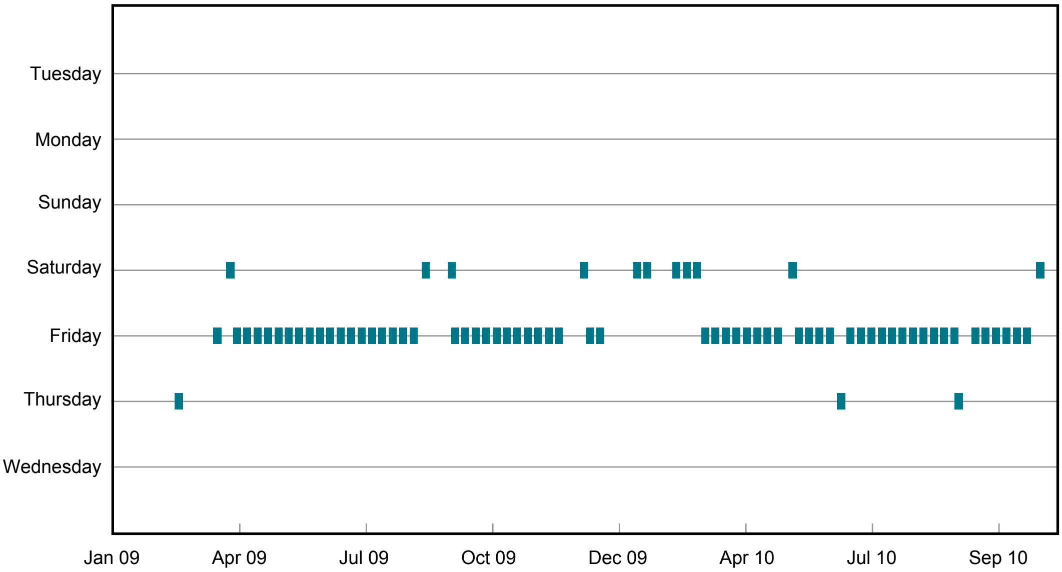


Source: ACCC analysis based on Informed Sources data

Note: Each dot depicts a price cycle peak.

In Perth, the day of the week on which the peak occurred over the period 1 January 2009 to 31 October 2010 was most commonly Friday (see chart 11.10). Some peaks occurred on Saturday and Thursday. However, unlike in the eastern capitals, in Perth there has not been an overall change in the day of the week on which prices peak.

Chart 11.10 Day of peak, Perth: 1 January 2009 to 31 October 2010



Source: ACCC analysis based on Informed Sources data

Note: Each dot depicts a price cycle peak.

11.3.4 Factors that may have contributed to changes in peak and trough days

In September 2010, the ACCC sought the views of the major petrol retailers about why the change in the pattern of the price cycle in 2010 had occurred. Factors that were identified by a number of retailers included:

- an increase in the degree of retail price competition in 2010
- some retailers had been delaying price increases until later in the week in order to increase their market share.

If some retailers delay putting up their prices, other retailers respond to this delay in the current and subsequent price cycles. Over time, this can lead to the movement through the week of trough and peak days of the price cycle. It may also increase uncertainty in the market and lead to a degree of instability with retailers unsure about the behaviour of the market and the response of competitors.

The ACCC decision to oppose the sale of Mobil's retail assets to Caltex in late 2009 may also have led to a greater degree of uncertainty in the industry.

Uncertainty in the market arising from the above factors may also have contributed to the increase in the number of failed and truncated price cycles in 2010 (referred to in section 11.4).

11.4 Regularity of petrol price cycles

In recent years the normal pattern of the petrol price cycle in the larger capital cities has been one where prices have risen quickly at the outset (over one to two days) and then steadily declined over the rest of the week (that is, they moved in a 'sawtooth' pattern). This can be considered to be a 'regular' price cycle. The duration of the regular price cycle has generally been a period of about seven days.

There have been a number of price cycles that could be considered to be irregular. These can be classified as 'failed' or 'truncated' price cycles. The ACCC has examined price cycles up to the end of October 2010, as well as in the period 2005 to 2009, to determine the extent of regular, failed and truncated price cycles over the past year relative to the previous five years.

11.4.1 Methodology

Price cycles have been classified on a weekly basis (as defined by Monday to Sunday) into three categories:

- **regular:** this is a price cycle that meets the 3 per cent definition (see section 11.1 for the definition of a price cycle), where the regular sawtooth pattern is apparent and where the peak occurs during the week.
- **truncated:** this is where the trough-to-peak increase meets the 3 per cent definition of a price cycle, where the peak occurs during the week, but the typical sawtooth pattern is shortened (that is, there is a return to a lower price within one or two days of the establishment of a new peak).
- **failed:** this is where in any specific week there was no peak price recorded under the 3 per cent definition.[147] This is associated with price cycles of durations greater than seven days.

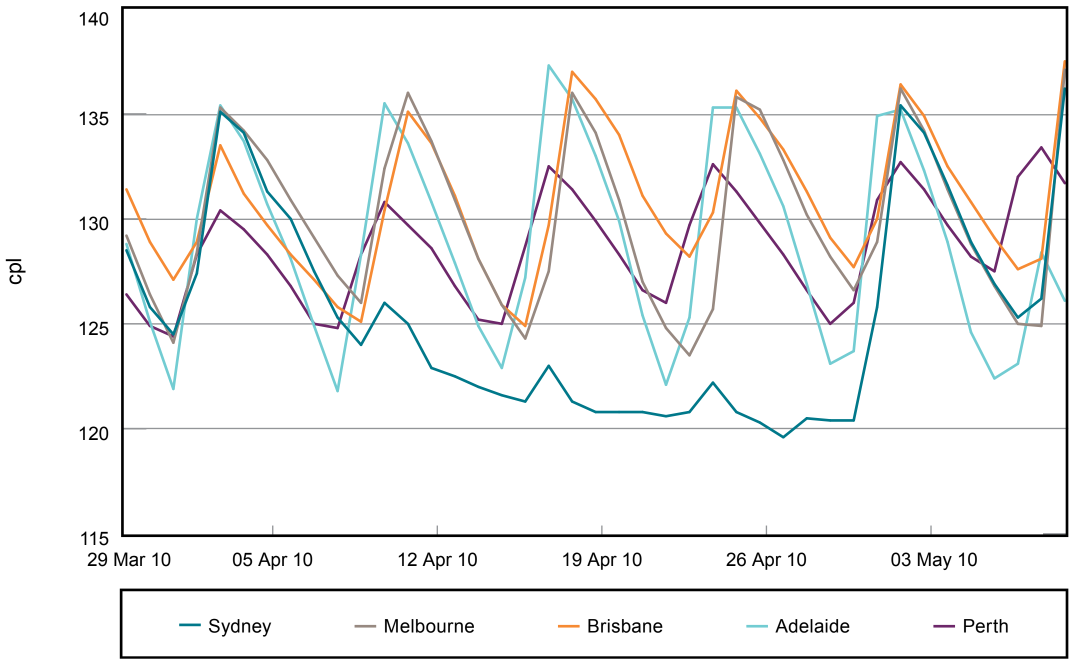
11.4.2 Example of a failed price cycle

Chart 11.11 provides an example of where price cycles failed in 2010. It shows daily average retail prices for the five largest capital cities for the period 29 March to 8 May 2010. In April 2010 there were three failed price cycles in Sydney.

Until prices resumed their cyclical pattern at the end of April 2010, average prices in Sydney during this period were consistently lower than average prices in the other four large capital cities.

147 There is an exception to the failed cycle category. This is where the day of the last peak occurred on the last day of the previous week (that is, on a Sunday) and the next peak was eight days later (that is, on a Monday). Therefore in the specified week there was no peak. These exceptions are denoted by an asterisk in table 11.7. This situation has only occurred once per city since 1 January 2005. These occasions have all been in 2010 and are associated with the movement of the trough and peak days of the price cycle through the week rather than any failure in the price cycle.

Chart 11.11 Daily average retail prices in the five largest cities: 29 March to 8 May 2010



Source: ACCC based on Informed Sources data

11.4.3 Classification of price cycles in 2010

Table 11.7 indicates the classification of the weekly price cycle for the 44 weeks in the period 28 December 2009 to 31 October 2010.

Table 11.7 Petrol price cycles in the five largest capital cities by classification: 28 December 2009 to 31 October 2010

Starting Monday	Ending Sunday	Sydney	Melbourne	Brisbane	Adelaide	Perth
28 Dec	3 Jan	Regular	Regular	Regular	Regular	**Failed**
4 Jan	10 Jan	Regular	Regular	Regular	Regular	Regular
11 Jan	17 Jan	Regular	Regular	Regular	Regular	Regular
18 Jan	24 Jan	Regular	Regular	Regular	Regular	**Failed**
25 Jan	31 Jan	**Truncated**	**Truncated**	**Truncated**	**Truncated**	**Failed**
1 Feb	7 Feb	**Truncated**	**Truncated**	**Truncated**	Regular	Regular
8 Feb	14 Feb	Regular	Regular	Regular	Regular	Regular
15 Feb	21 Feb	**Failed**	**Failed**	**Failed**	**Truncated**	Regular
22 Feb	28 Feb	**Truncated**	**Failed**	**Truncated**	**Truncated**	Regular
1 Mar	7 Mar	Regular	Regular	Regular	Regular	Regular
8 Mar	14 Mar	**Truncated**	Regular	Regular	Regular	Regular
15 Mar	21 Mar	Regular	Regular	Regular	Regular	Regular
22 Mar	28 Mar	Regular	Regular	Regular	Regular	Regular
29 Mar	4 Apr	Regular	Regular	Regular	Regular	Regular
5 Apr	11 Apr	**Failed**	Regular	Regular	Regular	Regular
12 Apr	18 Apr	**Failed**	Regular	Regular	Regular	Regular
19 Apr	25 Apr	**Failed**	Regular	Regular	Regular	Regular
26 Apr	2 May	Regular	Regular	Regular	Regular	Regular
3 May	9 May	Regular	Regular	Regular	**Truncated**	Regular
10 May	16 May	Regular	Regular	Regular	**Truncated**	Regular
17 May	23 May	Regular	Regular	Regular	Regular	Regular
24 May	30 May	Regular	Regular	Regular	Regular	Regular
31 May	6 Jun	Regular	Regular	Regular	Regular	Regular
7 Jun	13 Jun	Regular	Regular	Regular	Regular	Regular
14 Jun	20 Jun	Regular	Regular	Regular	Regular	Regular
21 Jun	27 Jun	Regular	Regular	Regular	Regular	Regular
28 Jun	4 Jul	Regular	Regular	Regular	Regular	Regular
5 Jul	11 Jul	Regular	Regular	Regular	Regular	Regular
12 Jul	18 Jul	Regular	Regular	Regular	Regular	Regular
19 Jul	25 Jul	Regular	Regular	Regular	*	Regular
26 Jul	1 Aug	*	*	*	Regular	Regular
2 Aug	8 Aug	Regular	Regular	Regular	Regular	Regular
9 Aug	15 Aug	Regular	Regular	Regular	Regular	Regular
16 Aug	22 Aug	Regular	Regular	Regular	**Truncated**	Regular
23 Aug	29 Aug	Regular	Regular	Regular	Regular	Regular
30 Aug	5 Sep	**Truncated**	Regular	Regular	**Failed**	Regular
6 Sep	12 Sep	**Failed**	**Failed**	**Failed**	**Failed**	Regular
13 Sep	19 Sep	Regular	Regular	Regular	Regular	Regular
20 Sep	26 Sep	Regular	Regular	Regular	Regular	Regular
27 Sep	3 Oct	Regular	Regular	Regular	Regular	Regular
4 Oct	10 Oct	Regular	Regular	Regular	Regular	Regular
11 Oct	17 Oct	Regular	Regular	Regular	Regular	Regular
18 Oct	24 Oct	Regular	Regular	Regular	Regular	Regular
25 Oct	31 Oct	Regular	Regular	Regular	Regular	**Failed**

Source: ACCC analysis based on Informed Sources data

Note * Denotes eight-day cycle, with the previous peak on a Sunday and the peak occurring on a Monday of the next week, therefore there is no peak in the specified week.

Table 11.7 shows that over the 44 weeks to 31 October 2010:

- Regular price cycles remained the dominant feature of retail prices in the largest capital cities.
- There were 16 failed price cycles: five in Sydney, four in Perth, three in Melbourne and two in Brisbane and Adelaide.
- There were 16 truncated price cycles: six in Adelaide, five in Sydney, three in Brisbane and two in Melbourne. There were no truncated price cycles in Perth.
- Together there were a total of 32 failed and truncated price cycles in the five cities.
- There were failed or truncated price cycles in all five cities in one week (the week beginning 25 January 2010) and failed or truncated price cycles in four out of five cities in three weeks (beginning 15 and 22 February and 6 September 2010).

The occasions in 2010 when failed and truncated price cycles occurred in Sydney, Melbourne, Brisbane and Adelaide are shown in the charts in appendix H.

11.4.4 Classification of price cycles in 2005–09

To provide a historical context for the failed and truncated price cycles in 2010, the ACCC examined petrol price cycles in Sydney, Melbourne, Brisbane and Adelaide over the five-year period 2005 to 2009. The analysis covered a total of 1040 weeks, across the four cities over the five years.

Price cycles in Perth were not examined as they were not as regular or as frequent as those in the other capital cities during this time (this can be seen in table 11.1 in section 11.2).

Table 11.8 indicates the number of failed and truncated price cycles in each of the cities for each year from 2005 to 2009.

Table 11.8 Failed and truncated petrol price cycles in the four eastern capital cities: 2005 to 2009

	Sydney	Melbourne	Brisbane	Adelaide	Total
Failed price cycles					
2005	6	24	18	3	51
2006	5	9	7	2	23
2007	8	3	2	7	20
2008	–	4	5	6	15
2009	–	–	1	-	1
Total	**19**	**40**	**33**	**18**	**110**
Truncated price cycles					
2005	–	–	–	1	1
2006	1	–	–	3	4
2007	–	–	1	1	2
2008	1	–	1	1	3
2009	–	–	–	3	3
Total	**2**	**0**	**2**	**9**	**13**
Failed and truncated cycles					
2005	6	24	18	4	52
2006	6	9	7	5	27
2007	8	3	3	8	22
2008	1	4	6	7	18
2009	–	–	1	3	4
Total	**21**	**40**	**35**	**27**	**123**

Source: ACCC analysis based on Informed Sources data

Table 11.8 shows that from 2005 to 2009 there were 110 failed price cycles and 13 truncated price cycles. These 123 failed and truncated cycles represent approximately 12 per cent of the total weeks in that period. This indicates that on approximately 88 per cent of the weeks during the five year period to 2009 petrol price cycles were classified as regular.

Failed price cycles

Failed price cycles occurred simultaneously in all four cities on three occasions; in three cities on four occasions; and in two cities on 19 occasions. There were 48 occasions when a failed price cycle occurred in only one city.

The three occasions when failed price cycles occurred simultaneously in all four cities were the weeks beginning 29 August 2005 (which was likely to have been due to the steep increase in wholesale and retail prices as a result of Hurricane Katrina), 15 January 2007 and 10 September 2007.

Failed price cycles occurred most frequently in 2005 (with 51, or 46 per cent, of total failed cycles). Subsequently, the frequency of failed price cycles in each year steadily diminished to be only one in 2009.

Melbourne had the largest number of failed price cycles over the five-year period, with 40 failed cycles (or 36 per cent of total failed cycles). Brisbane was next with 33 failed price cycles (30 per cent) followed by Sydney with 19 (17 per cent) and Adelaide with 18 (16 per cent).

Melbourne and Brisbane together accounted for two-thirds of the failed price cycles.

Brisbane was the only city to have a failed price cycle every year over the five years to 2009. Sydney had failed price cycles in only three years. Melbourne and Adelaide had failed price cycles in four years.

Truncated price cycles

There were 13 truncated price cycles identified during the five years. Of these, there was only one occasion when truncated price cycles occurred in more than one city at the same time. This was the week beginning 12 May 2008 when there was a truncated price cycle in Sydney, Brisbane and Adelaide. There was also a failed price cycle in Melbourne during the same week.

The city with the most truncated price cycles was Adelaide with nine truncated cycles (69 per cent of total truncated cycles). Sydney and Brisbane had two truncated price cycles each and Melbourne had none.

11.4.5 Price cycles in 2010 compared with 2005–09

A comparison of 2010 price cycle data (to 31 October, in section 11.4.3) with data for the period 2005 to 2009 (in section 11.4.4) indicates that:

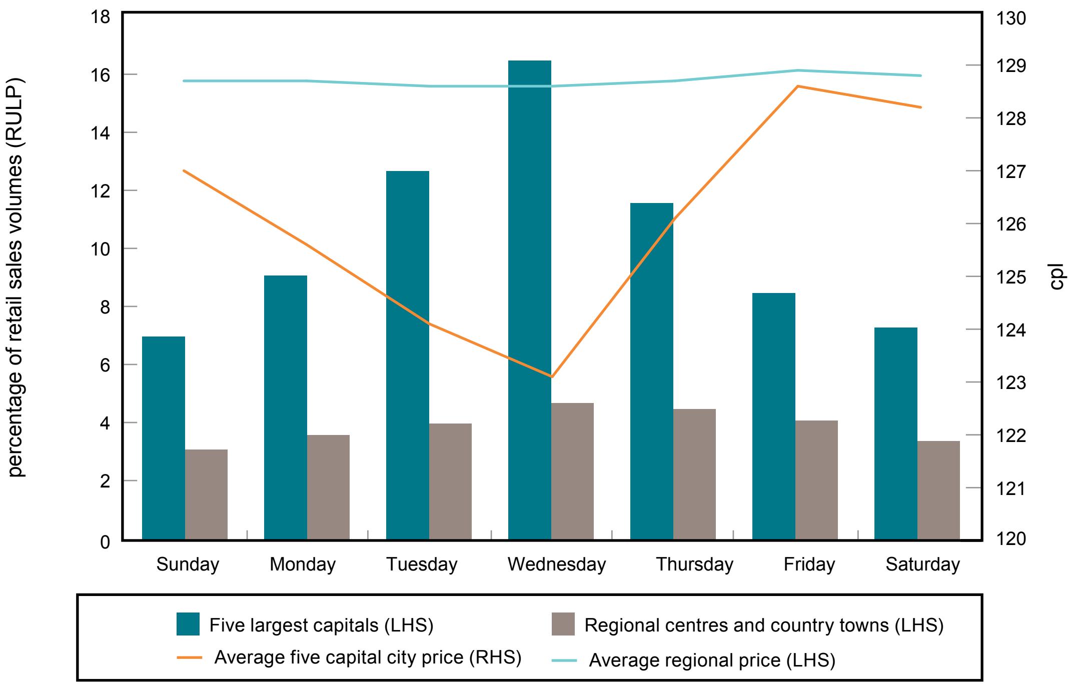
- While the number of price cycle failures up to the end of October 2010 (16 cycles) was higher than in 2009 (one cycle), it appears that 2009 may have been a year with an unusually low number of failed cycles relative to previous years.
- The number of truncated price cycles in 2010 (16) was higher than the combined total of truncated cycles for the past five years (13).
- The number of failed and truncated price cycles up to the end of October 2010 (32 cycles) was the highest since 2006 (27 cycles).
- The city with the most truncated price cycles up to the end of October 2010 was Adelaide (six cycles), which was consistent with the period 2005 to 2009.

11.5 Consumer buying patterns during the price cycle

Consumer buying patterns changed during 2009–10 reflecting changes in the petrol price cycle over the course of the week. With prices increasingly at their lowest later in the week than was the case in 2008–09, Wednesday was the day with the highest proportion of weekly sales in 2009–10.

Chart 11.12 shows the proportion of average sales volumes and average retail prices for RULP by day of the week in 2009-10 in the five largest capital cities and regional centres and country towns.[148] It can be seen that in 2009–10 the proportion of sale volumes in the five capital cities over the course of the week was highest on Wednesday. This represents a change from 2008–09 when Tuesday was the day with the highest proportion of weekly sales in those cities.

Chart 11.12 Average RULP sales volumes and prices by day of the week, five largest capital cities and regional centres and country towns: 2009–10



Source: ACCC analysis based on Informed Sources data and information from firms monitored through the ACCC's monitoring process

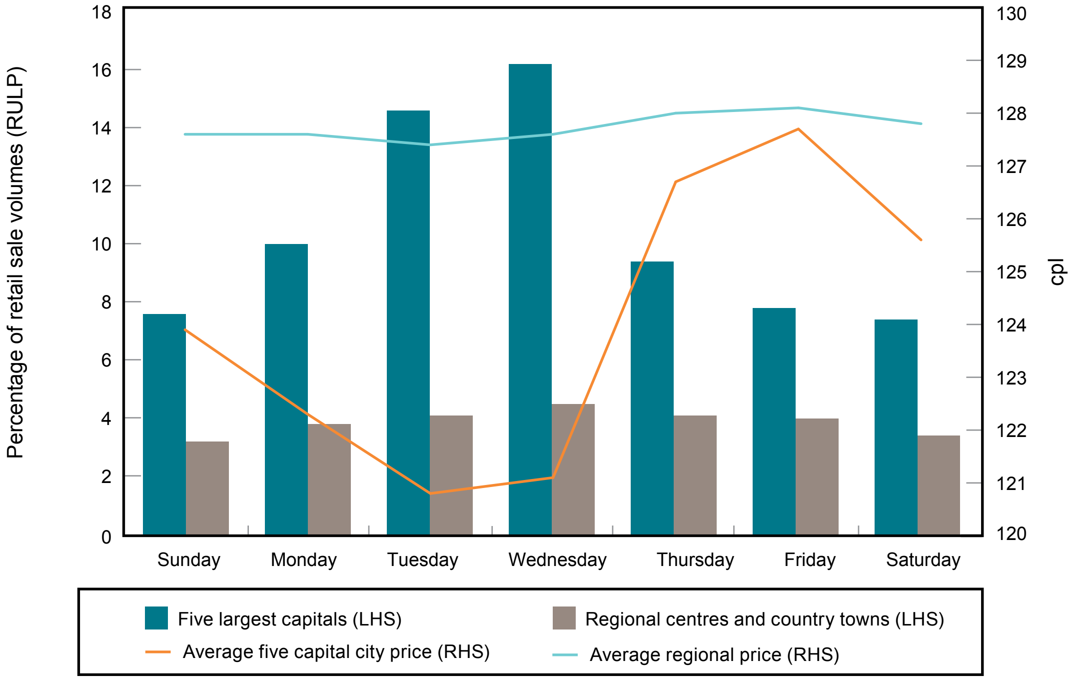
Chart 11.12 suggests that, in aggregate, buying patterns by consumers in the largest capital cities generally bear an approximately inverse relationship with price levels.

Buying patterns in regional areas of Australia reflect the less cyclical nature of prices and are more consistent over the course of the week than in the largest cities.

Chart 11.12 is based on average annual data and thus does not fully reveal the changes that occurred in price cycles during 2009–10. To see more clearly these changes, charts 11.13 and 11.14 show average retail sales by days of the week for two distinct periods, July 2009 and June 2010.

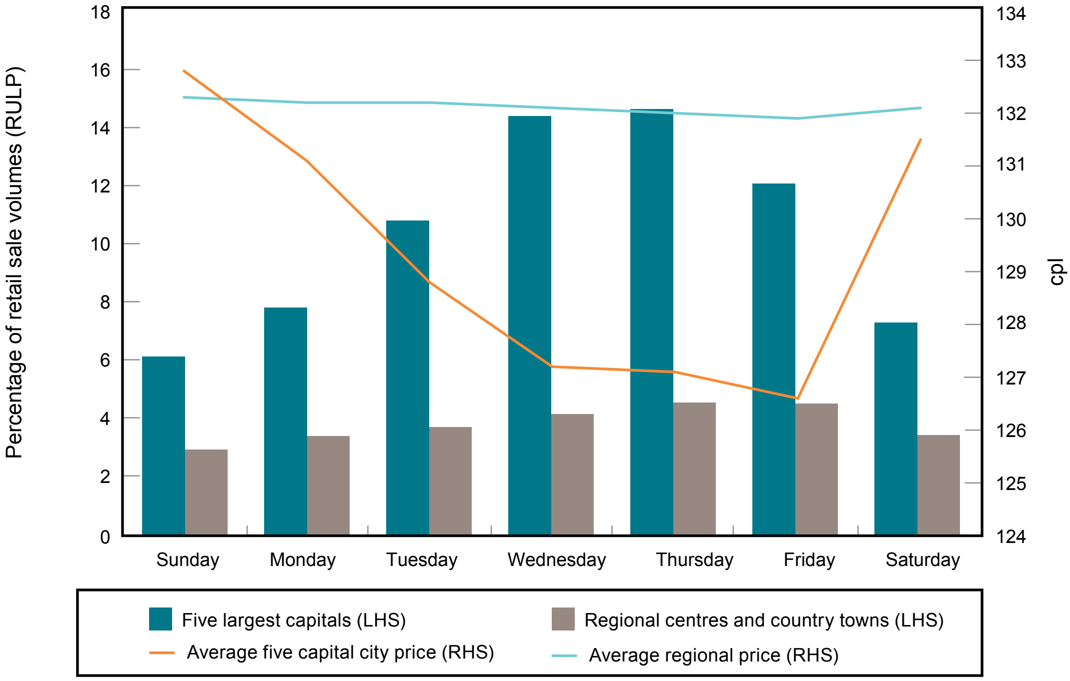
148 Note that Canberra is included in regional centres and country towns, as this is the way data was reported by the monitored firms.

Chart 11.13 Average RULP sales volumes and prices by day of the week, five largest capital cities and regional centres and country towns: July 2009



Source: ACCC analysis based on Informed Sources data and information from firms monitored through the ACCC's monitoring process

Chart 11.14 Average RULP sales volumes and prices by day of the week, five largest capital cities and regional centres and country towns: June 2010



Source: ACCC analysis based on Informed Sources data and information from firms monitored through the ACCC's monitoring process

The move of the lowest price day through the week during 2009–10 is evident from charts 11.13 and 11.14. The charts indicate that consumers observe pricing behaviour in the market and respond by buying more petrol on the lower price days. They also suggest that consumers' perceptions of how the cycle changes adapt gradually. While Friday had the cheapest prices in June 2010, more petrol was purchased on Wednesday and Thursday. It may be that this is because as the cheapest day was moving quickly through the week, it is difficult for consumers to change their behaviour in response. Furthermore it is likely to take time for consumers to become fully aware of any changes to the cycle and to change their buying patterns accordingly.

11.6 Price cycle increases and public holidays

It is often claimed that retail prices increase before public holidays by more than they otherwise do as part of the regular price cycle. In other words, price cycle increases (or amplitudes) before public holidays are always higher than the price cycle increases when there is no public holiday.

The 2009 ACCC petrol monitoring report examined petrol price increases before public holidays and long weekends in each of the five largest cities (Sydney, Melbourne, Brisbane, Adelaide and Perth) for the period January 2007 to June 2009. It found that during this period the average price cycle amplitude before public holidays was equal to or above the annual average amplitude less than half (45 per cent) of the time.

There are three main influences on the size of price cycle increases: changes in wholesale prices, the extent to which there is discounting (and especially before the price cycle increase), and the overall price level (for example the price increase when prices are approximately 150 cpl may be higher than when prices are approximately 100 cpl). These factors are not influenced by the timing of public holidays and long weekends.

Analysis of price cycle increases in the five largest cities has been updated to cover the three and a half year period January 2007 to June 2010. In each of the years 2007, 2008, 2009 and the first half of 2010, the price cycle amplitude before public holidays was compared with the relevant yearly average (or half yearly in the case of 2010) amplitude. The results are shown in Table 11.9. Charts showing price cycle increases and public holidays in the five largest cities in 2009–10 are provided in appendix H.

Table 11.9 shows that during this period the price cycle amplitudes before public holidays were equal to or above the average annual average amplitude less than half (48 per cent) of the time.[149]

Table 11.9 Petrol price cycle amplitudes before public holidays in the five largest cities: January 2007 to June 2010

	Number of amplitudes before public holidays	Number and proportion of amplitudes before public holidays greater than or equal to the calendar year average amplitude	Number and proportion of amplitudes before public holidays less than average amplitude	Number and proportion of amplitudes before public holidays lower than highest amplitude in the calendar year
Sydney	26	11 (42%)	15 (58%)	26 (100%)
Melbourne	29	16 (55%)	13 (45%)	27 (93%)
Brisbane	27	11 (41%)	16 (59%)	26 (96%)
Adelaide	27	19 (70%)	8 (30%)	25 (93%)
Perth	22	6 (27%)	16 (73%)	22 (100%)
Average	26.2	12.6 (48%)	13.6 (52%)	25.2 (96%)

Source: ACCC analysis based on Informed Sources data

The table shows that:

- The majority of petrol price cycles before public holidays had smaller price increases than the average annual price cycle increase.
- In Sydney, Brisbane and Perth price amplitudes before public holidays were equal to or below the average annual amplitude more than half of the time.
- In Melbourne and Adelaide price amplitudes before public holidays were equal to or above the average annual amplitude more than half of the time.
- In Melbourne and Adelaide there were two occasions when the price cycle amplitude before a public holiday was the highest amplitude for the year. In Brisbane there was one occasion and in Sydney and Perth there were none.

149 There are two methodological issues that need to be borne in mind when considering this analysis. First, a price cycle increase before a public holiday has been defined as having occurred within the week up to and including the day of the public holiday. However, the period before a public holiday was extended to two weeks prior to 2009 in Perth, as price cycles there were around two weeks duration up to around April 2009. Second, the price increase before the New Year's Day public holiday is compared with the average amplitude for the previous year. This is because the price increase usually occurs in the last week of the previous year. The same methodology is used when the price increase occurs on New Year's Day.

The results for the three and a half year period January 2007 to June 2010 are consistent with the conclusion from the 2009 ACCC petrol monitoring report; that is, that there is little evidence to support the claim that price cycle increases before public holidays are always higher than the price cycle increases when there is no public holiday.

11.7 Price cycles and coordinated conduct

Price cycles are a source of concern for many motorists. As noted in the 2009 petrol monitoring report they are also a concern for the ACCC because of the degree of coordination exhibited in the price cycle.

Retail petrol markets in Australia are conducive to coordinated conduct because of the combination of features which characterise them: homogeneous products; numerous small sales; the historically stable market structure; repeated nature of competitive interaction; and barriers to entry, combined with the high degree of communication of retail prices between major players in the market. In these circumstances less competitive outcomes can result.

The high level of transparency in retail petrol pricing, mainly through the Oil Pricewatch system provided by Informed Sources, assists retailers to quickly signal price moves, monitor competitors responses and quickly react to them.

Informed Sources provides subscribers with regular and timely information on retail prices for all subscribers' retail sites as well as many sites owned by companies that do not subscribe to the service. This allows market participants to have near real time data on prices that other participants are changing. When any market player moves its price, that move is quickly communicated to other competitors who can see how the rest of market reacts to the price move.

In considering the proposed acquisition by Caltex of Mobil's retail assets in 2009, the ACCC concluded that the information provided by the Informed Sources service:

> *enables the first mover to effectively signal its intentions to increase prices to other refiner-marketers and major petrol retailers*
>
> *provides the first mover with comprehensive and timely information on the response of other refiner-marketers and major retailers to its price increase.*[150]

The ACCC further concluded that:

> *As a result, the exchange of prices among retailers … has at least two critical effects:*
>
> *It reduces the risk of being the first to increase prices during the restoration phase of the cycle—since the 'first mover' can readily reduce its price if other refiner-marketers and major retailers do not follow in a timely fashion.*
>
> *It limits any temporary competitive advantage to a refiner-marketer or major retailer from delaying increasing prices at their sites during the restoration phase—since other refiner-marketers and major retailers can readily observe such delays and reduce their prices accordingly (known as 'rollback').*[151]

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150 ACCC, Public Competition Assessment, 9 February 2010, Caltex Australia Limited – proposed acquisition of the retail assets of Mobil Oil Australia Pty Ltd; p. 14.

151 ibid., p. 15.

The ACCC opposed the proposed purchase of Mobil's retail assets by Caltex as it would likely result in a substantial lessening of competition because it would increase the 'risk of more stable and more effective coordinated pricing behaviour'.[152]

The changes observed in the way the price cycle has behaved in 2010, particularly the change in the days of the week on which prices peak and trough, and the increased incidence of failed and truncated cycles, may indicate a degree of uncertainty among retailers about competitors' responses. The ACCC's decision to oppose the sale of Mobil's retail assets to Caltex and the subsequent changes in the structure of the retail industry may have created a less stable and predictable environment for retailers. This uncertainty may have then led retailers to delay price rises, which caused further uncertainty.

Despite this, in the majority of cases price cycles in 2010 continued to exhibit a high degree of regularity. The ACCC remains concerned that that the exchange of pricing information through Informed Sources facilitates coordinated conduct among petrol retailers.

11.8 Concluding comments on price cycles

During 2010, the ACCC has observed changes in price cycles:

- the days of the week on which prices peak and trough moved through the week
- a higher incidence of failed or truncated price cycles relative to 2009 but broadly comparable with levels observed in prior years
- consumer buying patterns during the price cycle changed as the days of the week on which prices troughed and peaked moved through the week.

Analysis of price cycles before public holidays in the three and a half year period between January 2007 to June 2010 confirmed the conclusion of previous analysis; that is, that price cycle increases are not generally higher before public holidays.

While, overall, retail petrol price cycles in 2010 have been less stable than in 2009, the occurrence of regular weekly cycles is still a feature of retail petrol markets in most Australian capital cities. The ACCC remains concerned about the level of coordinated conduct that may be affecting these price cycles.

152 ibid., p. 16.

12 Financial performance of the downstream petroleum industry

Key points:

- In 2009–10, the downstream petroleum industry recorded a net profit of approximately $1.2 billion or 1.4 cpl. However, the net profit in 2009–10 was below average profits of the past few years.
  - In 2008–09 the downstream petroleum industry made a total loss of approximately $1 billion.
- In terms of petrol, the ACCC has estimated that net profit was $530 million in 2009–10, up from negative $490 million in 2008–09.
  - The amount that motorists paid as profits to the petrol companies was 2.9 cpl in 2009–10.
- Relative to other industries in Australia or in comparison with downstream petroleum industries overseas, the profitability of Australia's downstream petroleum sector, as measured by key performance indicators, is broadly at or below domestic and international industry averages.

12.1 Overview

This chapter reports on the overall financial performance of the downstream petroleum sector. The sector includes total supply (refining, importing and buy–sell transactions), wholesale and retail activities. In particular, the chapter reports on the revenues, costs and profits associated with petrol, as specified by the minister's direction of 17 December 2007.

The financial results and ratios presented for petrol take into account regular unleaded petrol (RULP), premium unleaded petrol (PULP, for RON 95 and RON 98), and E10 (regular unleaded petrol with up to 10 per cent ethanol content). The financial results of activities in marketing other products in the downstream petroleum market such as diesel are also discussed.

The revenues, costs and profits of petrol for the refinery and total supply sector are discussed in greater detail in chapter 13, while chapter 14 focuses on the revenues, costs and profits of petrol in the wholesale and retail sectors.

12.2 Methodology for assessing profitability in the downstream petroleum industry

12.2.1 Replacement and historical cost profit measures

As discussed in the 2009 ACCC petrol monitoring report, the petroleum industry normally reports profits on a replacement cost basis. This method excludes the impact of rises or falls in prices of crude oil and refined products, and is considered an underlying measure of profitability. Profit is calculated by adjusting the cost of sales using the replacement cost of goods rather than historical cost. That replacement cost can differ from the historical cost originally paid on the product's purchase, especially when market prices are volatile.

The ACCC reports profits on a historical cost basis, consistent with the approach taken in the 2009 ACCC petrol monitoring report. Historical cost reporting has two main advantages over replacement cost reporting:

- It is consistent with Australian accounting standards.
- It shows the actual returns to a company's shareholders.

However, in the short term, profits measured using historical costs can be volatile if there are large and rapid movements in the price of crude oil and/or refined petroleum products. The ACCC has analysed profit measures over several years to minimise the impact of short-term price volatility.

The data in chapters 12, 13 and 14 was obtained by the ACCC from the monitored companies using established financial templates. These templates sought data on revenues, costs and profits for each company in aggregate and for each sector that they operate in. Data was also requested for the major products produced or marketed by the various industry participants. Most of the information presented in these chapters is based on industry or sectoral average financial results.

12.2.2 Key performance indicators for assessing the profitability and performance of the downstream petroleum sector

A number of key performance indicators (KPIs) are used to assess the profitability and performance of the downstream petroleum sector. KPIs are also presented for petrol and for the various sectors in the industry, for example, net profit on petrol in the retail sector.

The most common and widely used KPI is profit, which is measured by deducting costs from revenues. An accepted accounting measure of profit is earnings before deducting interest expenses and taxes (EBIT). The ACCC has further adjusted this measure to remove costs and revenues not directly associated with petroleum products. For example, this may apply to profits or losses made on the sale of fixed assets.

The ACCC's preferred measure of underlying profits from the sale of petrol and other products is adjusted EBIT (also referred to in this report as net profit). Box 12.1 provides more detail on the various KPIs used in this report.

Net profit is presented in dollar values as well as in cents per litre (cpl). The net profit for the industry as a whole or for each sector is based on all downstream or sectoral activities. It includes:

- all fuels and products (in the case of the refiner-marketers it includes petrol, diesel, aviation fuels, LPG, and other products such as petroleum coke, lubricating oils, naphtha and bitumen[153]) and convenience store sales (for those with retail operations)
- the commercial and retail sectors (largely applicable for market participants at the wholesale level).

The net profit results presented in cpl terms need to be treated with caution, as they include all revenue and expenses relating to the business activities of the market participants. For example, for retailers, cpl net profit includes revenue from fuel products as well as convenience store sales. Therefore, the cpl net profit is a measure of the net profit earned per litre of fuel sold as well as other business operations.

The methodology for estimating profits assumes that the particular costs associated with refining or selling petrol and other products are proportional to the volumes of these products. As various products may have different costs associated with their refining, importing, wholesaling and retailing, the net profit measures presented in cpl terms are estimates only.

There have been minor revisions to the financial data for previous years and methodologies used to derive some of the charts in this report, including the data and analysis of the KPIs for the domestic and international comparisons of industries. As such, the results or data included in some charts prior to 2009–10 may marginally vary from those presented in the 2009 ACCC petrol monitoring report.

Box 12.1 Key performance indicators

Gross profit: Gross profit is a measure of profit calculated by deducting the costs of goods or services sold from sales revenues. Those costs can include the cost of refining the product and delivering it to the customer. The measure of gross profit does not include all costs, as other operating expenses not allocated to a specific product are not included. Gross profit on a cpl basis is calculated by dividing the gross profit by the volumes of product sold.

Please note that the gross indicative margins included in this report other than those in the financial chapters (chapters 12, 13 and 14) are based on international benchmark prices for crude oil and refined products, notional import parity prices, published terminal gate prices and average retail prices. As such, they differ from the estimates provided in the financial chapters, which are based on information provided directly by the monitored companies.

Gross margin: Gross margin is the ratio of gross profit to sales, and indicates the extent to which the average mark-up on the goods or services can cover other expenses and provide a profit. Gross margin is expressed as a percentage.

153 The revenues and costs associated with these other products (such as petroleum coke, lubricating oil, naphtha and bitumen) may be significant from a refinery's overall profitability. The profitability of these products is not the focus of the financial analysis undertaken in chapters 12, 13 and 14. However, profits earned by these products are included in the overall downstream and refinery results.

Box 12.1 Key performance indicators (continued)

Adjusted EBIT (net profit): While EBIT is a common accounting measure of profit, it is geared to measuring the total returns to the firm before interest incomes or expenses and taxes are taken into account. Adjusted EBIT, as calculated by the ACCC, excludes non-operating incomes, amortisation, impairment charges, and profits or losses on sales of fixed assets. This provides a consistent measure of profits from petrol activities and the petroleum industry rather than of total profits of the monitored companies. Adjusted EBIT is commonly referred to in this report as net profit. It is presented in dollars as well as cpl.

Adjusted EBIT to sales (return on sales): The ratio of adjusted EBIT relative to sales revenue calculates the extent to which profit is earned from each dollar of revenue after deducting all relevant operating costs, other than interest and tax. This measure is referred to in this report as return on sales. It is expressed as a percentage.

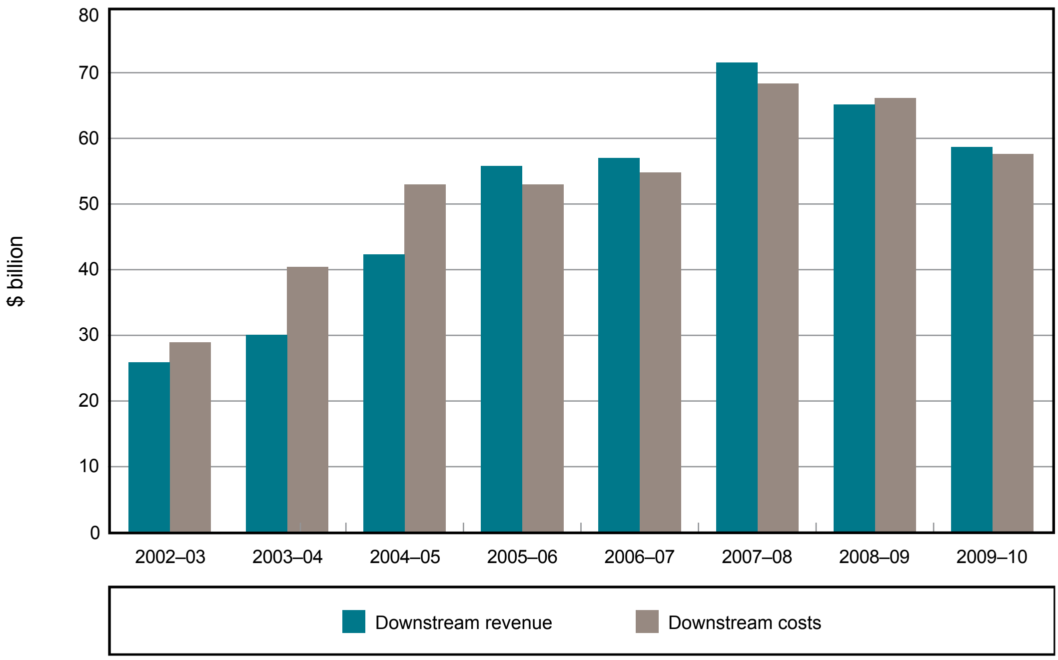
Return on adjusted total assets (return on assets): The ratio of adjusted EBIT to total assets calculates the extent to which profit is earned relative to assets used in the business. Where possible, return on assets has excluded those assets not directly associated with downstream petroleum activity. For instance, deferred tax assets are relevant to an after-tax profit assessment, and intangibles are excluded since those values have not been consistently provided by the monitored companies, and usually arise from the acquisition of other companies (as opposed to growth solely by increasing sales). It is expressed as a percentage.

Return on capital employed: The ratio of adjusted EBIT to total assets less current liabilities is a common measure of the return on capital employed. That is, it compares earnings with the capital invested in the company. In this respect, it is a similar measure to return on assets, but it takes into account current liabilities such as trade and other payables. This measure has been calculated by taking into account adjusted EBIT and adjusted assets (as discussed above) and adjusted current liabilities that exclude tax provisions. The measure is expressed as a percentage.

12.3 Revenues, costs and profits in the downstream petroleum industry

Revenues and costs in the downstream petroleum sector arise from the production and sale of various petroleum products. Total industry revenues and costs are shown in chart 12.1. Total revenues and costs exclude excise, GST, income taxes, interest incomes and expenses.[154]

Chart 12.1 Downstream petroleum revenues and costs: 2002–03 to 2009–10



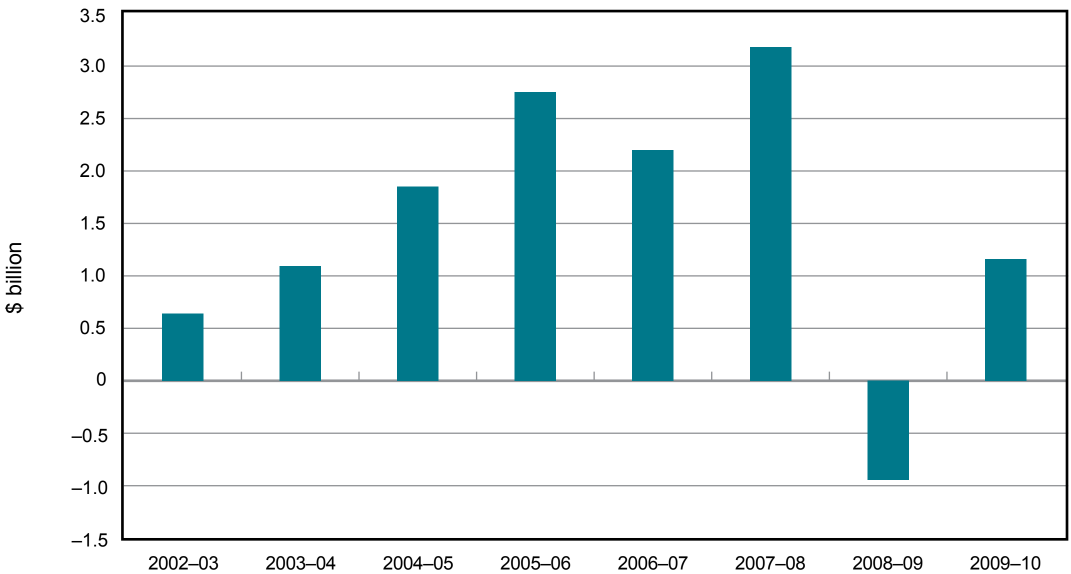
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

In 2009–10, total revenues and costs in the petroleum industry were less than $60 billion, for the first time since 2006–07, largely reflecting lower average prices for petroleum products in 2009–10 compared with the previous two financial years.

Taking into account the relevant revenues and costs, the net profit of the downstream petroleum sector in 2009–10 was approximately $1.2 billion compared with a loss of $945 million in 2008–09 (chart 12.2). The net profit in 2009–10 was approximately $330 million below the average net profit for the downstream petroleum industry for the period 2002–03 to 2009–10.

154 Total downstream or consolidated revenues, costs and volumes of each sector exclude transactions between different sectors within the same company in order to eliminate double counting. However, as different companies sell and buy products within and between sectors, there is some double counting of the revenues, costs and volumes of different products. This does not affect profits estimated for the industry and the various sectors.

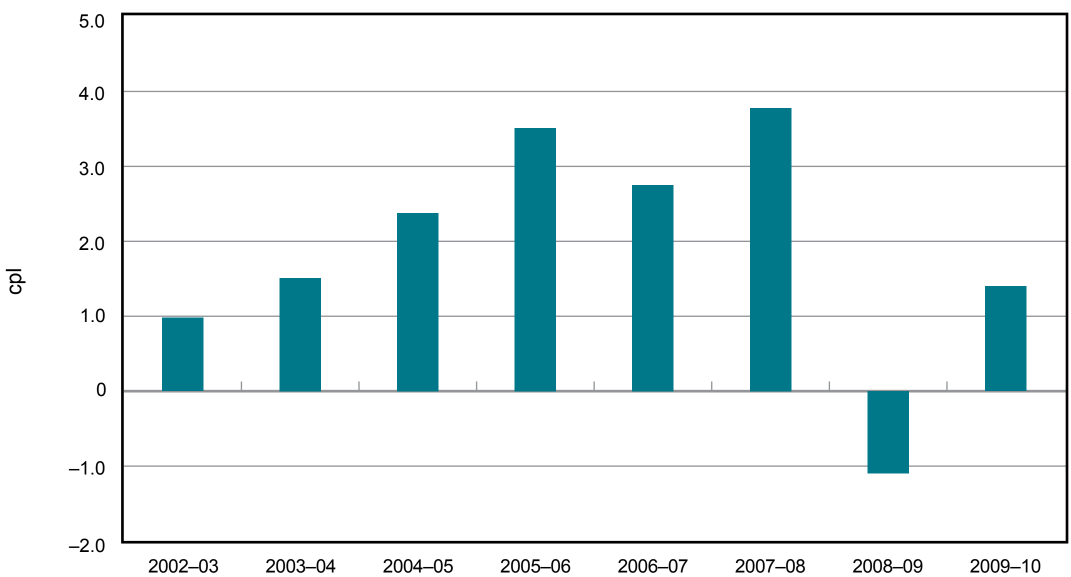
Chart 12.2 Downstream petroleum industry net profit (adjusted EBIT): 2002–03 to 2009–10



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

On a cpl basis, net profit for the downstream petroleum industry was 1.4 cpl in 2009–10, an increase from negative 1.1 cpl in 2008–09 (chart 12.3). The 2008–09 loss was the first since at least 2002–03. The average cpl net profit over the period 2002–03 to 2009–10 has been 1.9 cpl.

Chart 12.3 Downstream petroleum industry net profit (adjusted EBIT): 2002–03 to 2009–10



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

12.4 Revenues, costs and profits by sector in the downstream petroleum industry

In this section, estimates of the revenues, costs and profits of the downstream petroleum sector are presented in terms of four downstream sectors: refining; total supply (which includes refining, imports and net buy–sell positions); wholesale; and retail.

Charts 12.4 and 12.5 illustrate the sectoral revenues and costs respectively for the downstream petroleum sector between 2002–03 and 2009–10. In 2009–10, revenues and costs were lower in all four sectors relative to 2008–09, largely being influenced by lower international crude oil and refined product prices in Australian dollars.

The revenues and costs of the retail sector have been less volatile than those in the refining, total supply and wholesale sectors in recent years. For example, annual changes in revenues and costs for the retail sector have been approximately 11 per cent between 2005–06 and 2009–10.[155] This volatility in revenues and costs for the refining, total supply and wholesale sectors has been in the order of 15 to 18 per cent over this period.

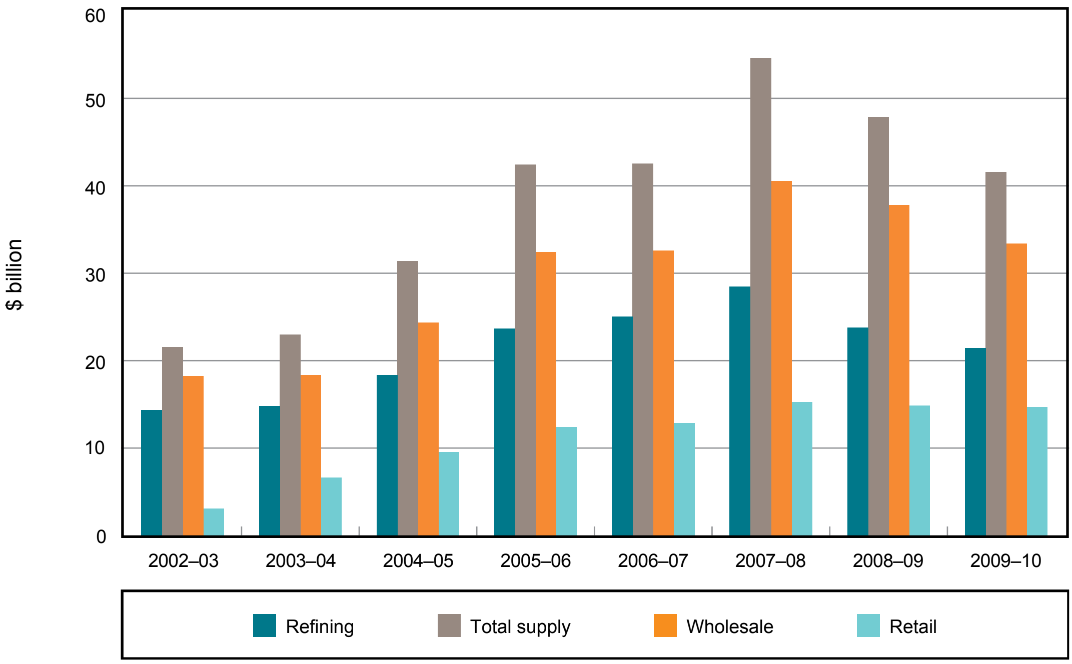
Aside from local factors, for example increases in refinery costs due to unforseen maintenance, the greater volatility in refinery and total supply revenues and costs may be influenced by the exposure of these sectors to international price movements and exchange rate movements. These risks are especially elevated when international markets are volatile, as was the case in 2008.

In other words, the financial performance of the industry at the refining and total supply sectors is notably influenced by the impact of price movements in international crude oil and refined petroleum products and the time lags associated with refining and delivering these products to the domestic petroleum market.

The general performance of refineries, international freight logistics and other local market factors are also important factors in the profitability of the refining and total supply sectors.

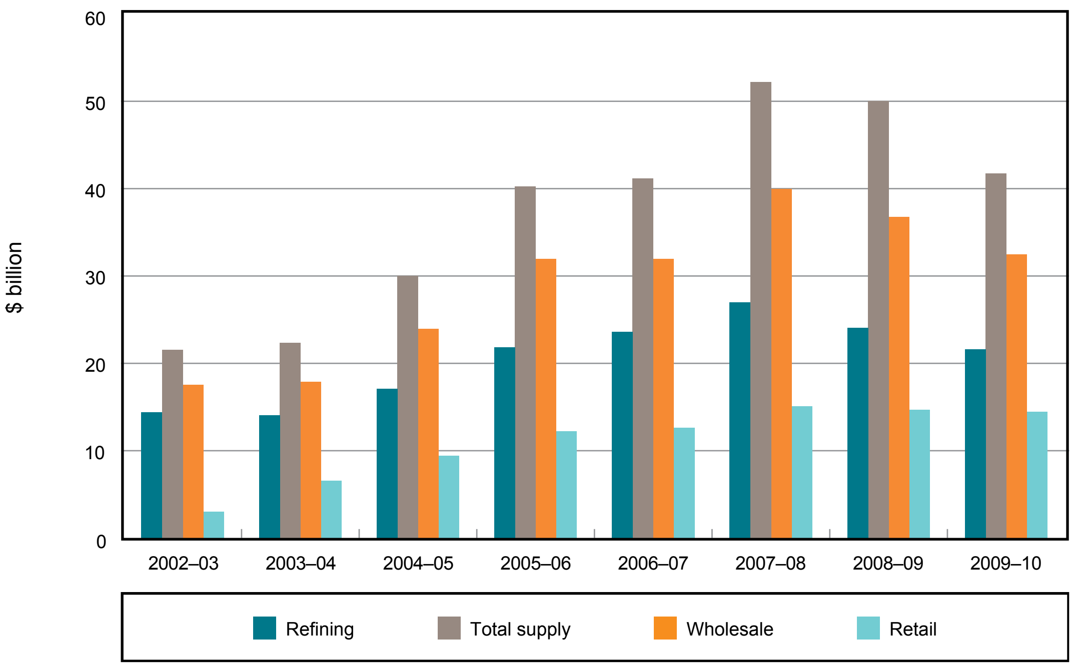
155 Annual per cent changes are based on average absolute annual changes in revenues and costs between 2005–06 and 2009–10.

Chart 12.4 Revenues by sector in the downstream petroleum industry: 2002–03 to 2009–10



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

Chart 12.5 Costs by sector in the downstream petroleum industry: 2002–03 to 2009–10

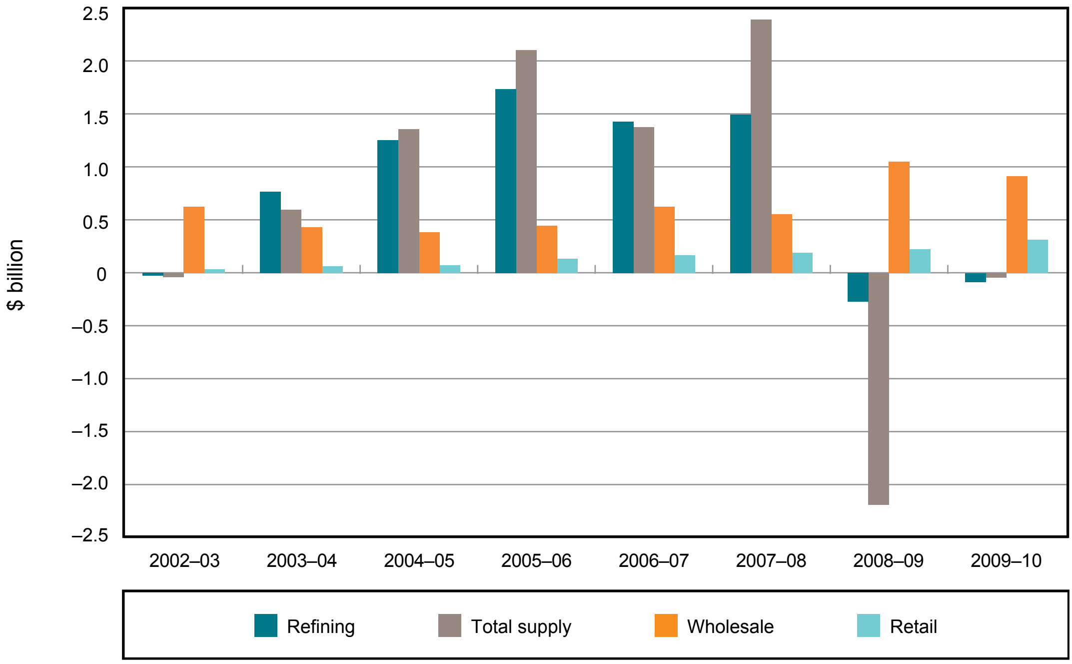


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

As indicated in chart 12.6, refining and total supply net profits in 2009–10 were approximately negative $100 million and negative $50 million, respectively, after a loss of approximately $275 million for refining and approximately $2.2 billion for total supply in 2008–09.

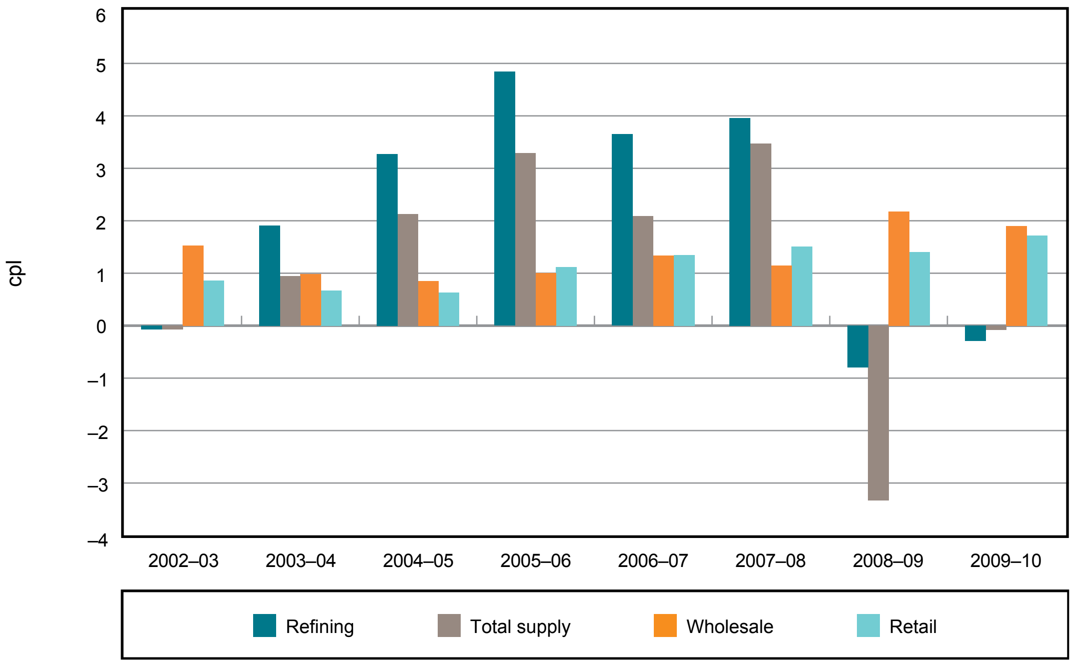
The losses in refining and total supply over the past two years are in contrast with the four years between 2002–03 and 2007–08 when both these sectors were profitable. On a cpl basis, the retail sector earned 1.7 cpl in 2009–10, the highest in recent years. Wholesale net profits were 1.9 cpl in 2009–10, marginally lower than the 2.2 cpl net profit estimated for 2008–09 (chart 12.7).

Chart 12.6 Downstream petroleum industry net profits by sector: 2002–03 to 2009–10



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

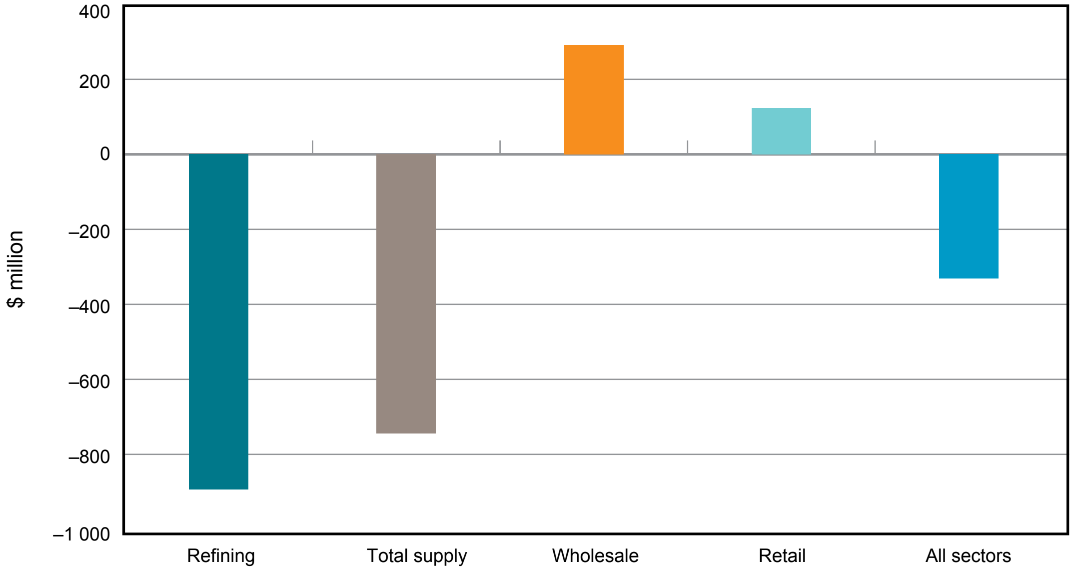
Chart 12.7 Downstream petroleum industry net profits by sector: 2002–03 to 2009–10



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

The net profits of each of the four sectors in 2009–10 relative to their long-term average net profits (between 2002–03 and 2009–10) are depicted in chart 12.8. In 2009–10, the net profits of the refining and total supply sectors were significantly below long-term average net profits for these sectors. On the other hand, net profits in the wholesale and retail sectors were above long-term average net profits in 2009–10. Overall, net profits in 2009–10 were approximately $330 million below the long-term average net profits.

Chart 12.8 Variation in net profits by sector: 2009–10 less long-term average (2002–03 to 2009–10)

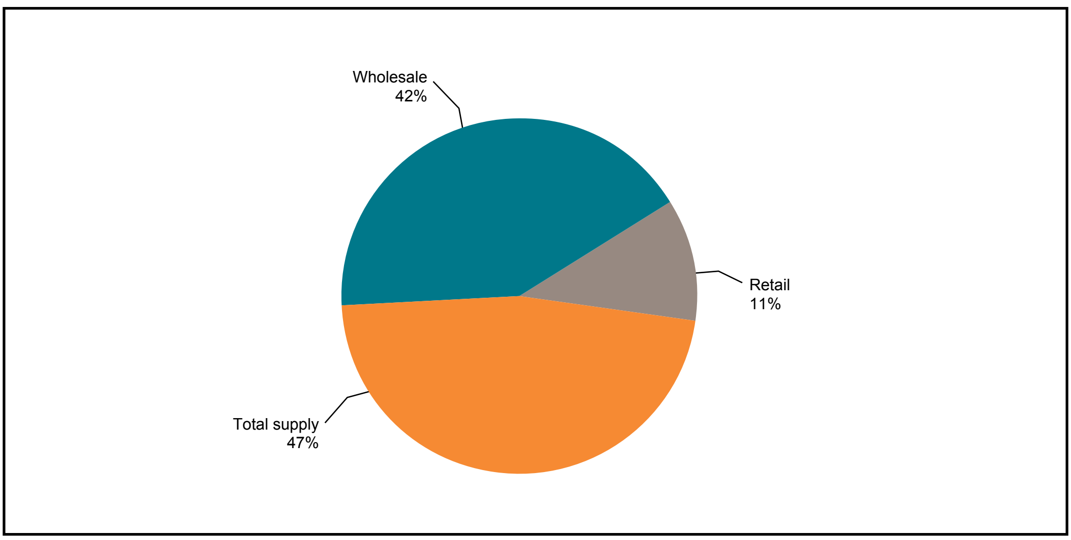


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

Despite the volatility in annual profits earned by the total supply sector (refining, imports and buy–sell transactions), on average over the period 2002–03 to 2009–10, total supply (at 47 per cent) was the largest sector contributing to the downstream profitability of the industry (chart 12.9).

This suggests that the overall profitability of the downstream petroleum sector in Australia is significantly influenced by the financial performance of domestic refining, importing and buy–sell transactions of petroleum products.

Chart 12.9 Share of downstream petroleum net profits by sector: average between 2002–03 to 2009–10



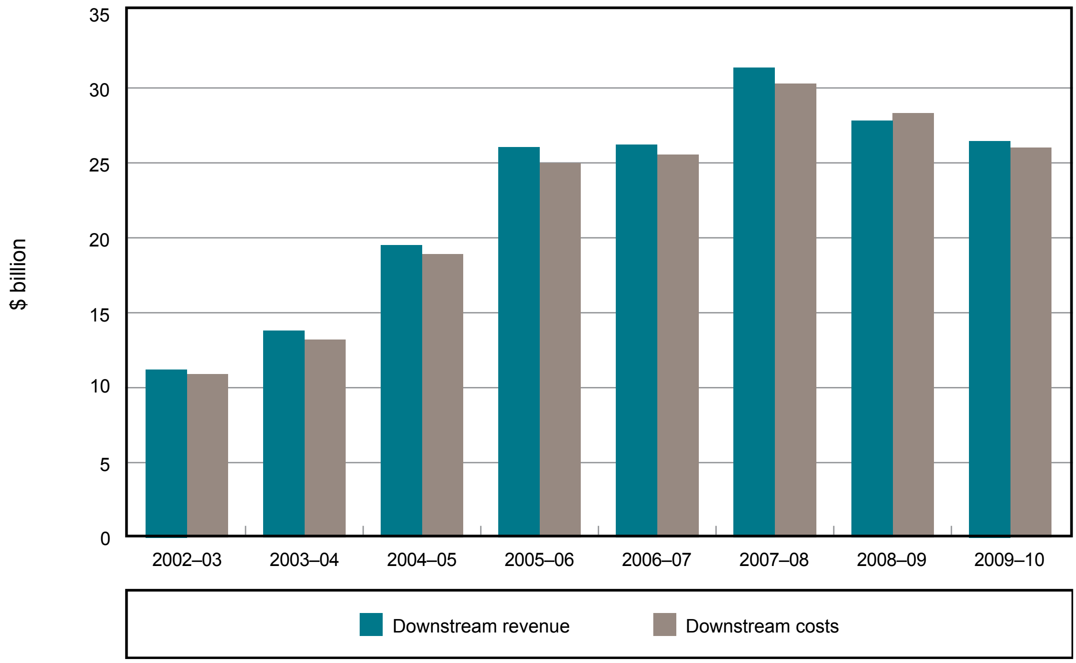
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

12.5 Revenues, costs and profits in the downstream petrol industry

The previous section discussed the overall revenues, costs and profits in the downstream petroleum industry. This section discusses the profitability of the downstream petrol sector. Petrol revenues and costs were lower in 2009–10 compared with 2008–09, following the trends in the overall downstream petroleum market (chart 12.10).

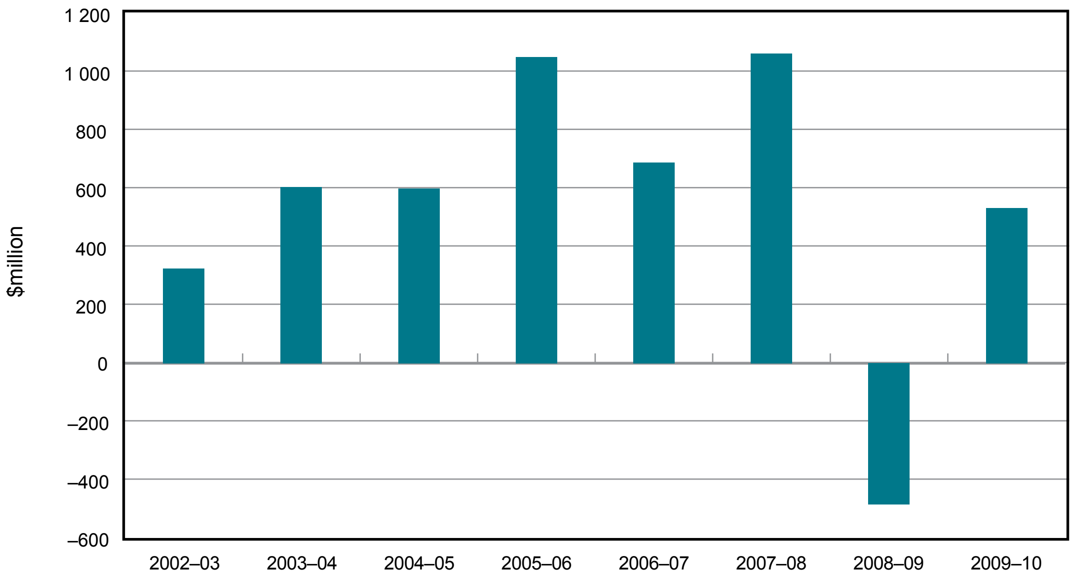
The downstream petrol market recovered in 2009–10 from the losses incurred in 2008–09 (charts 12.11 and 12.12). Petrol net profits were approximately $530 million in 2009–10 or 1.4 cpl.

Chart 12.10 Downstream petrol sector revenues and costs: 2002–03 to 2009–10



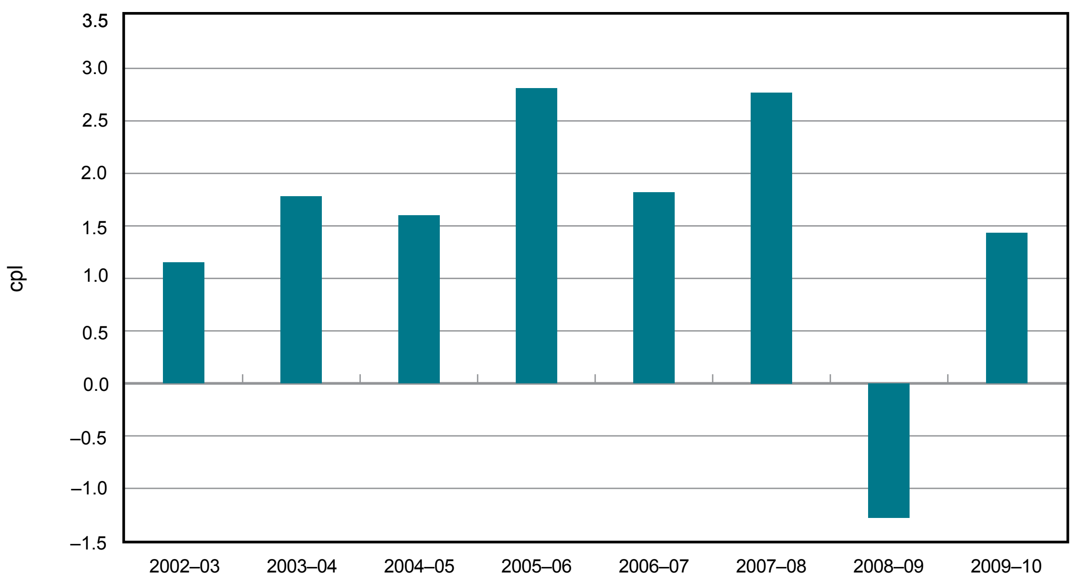
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

Chart 12.11 Downstream petrol sector net profit (adjusted EBIT): 2002–03 to 2009–10



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

Chart 12.12 Downstream petrol sector net profit (adjusted EBIT): 2002–03 to 2009–10



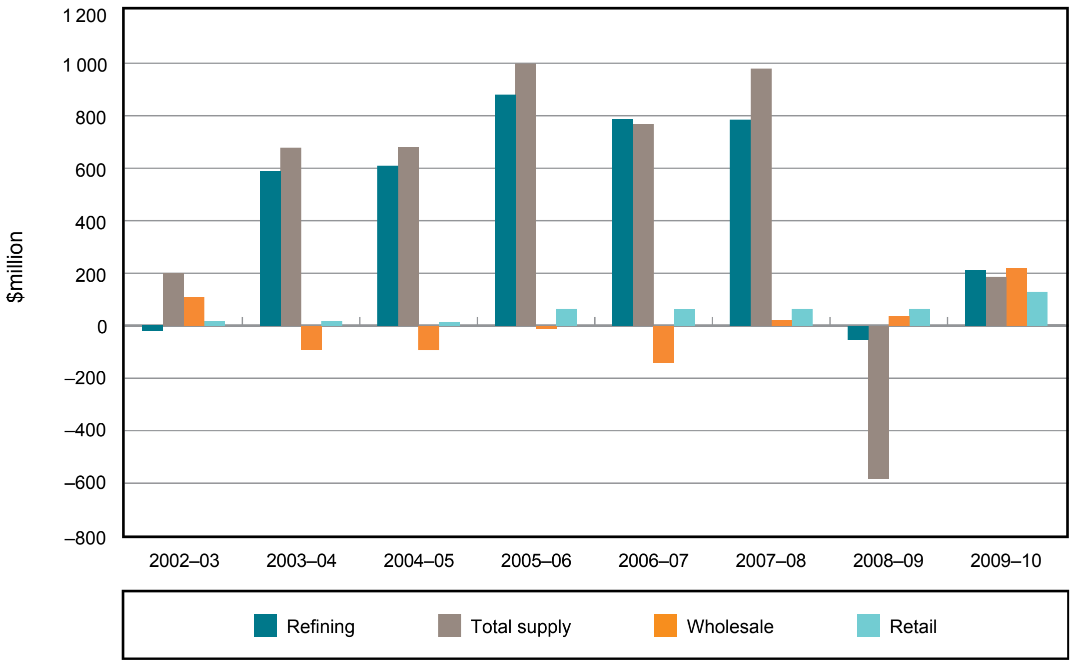
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

All four petrol downstream sectors recorded profits in 2009–10 (chart 12.13). The petrol total supply sector recorded a profit of $185 million (0.4 cpl) in 2009–10, following losses of almost $600 million in 2008–09. Refining made a profit of $210 million in 2009–10. The profits in the petrol wholesale and retail sectors were approximately $220 million and $130 million respectively.

Petrol refining and total supply were much more profitable between 2002–03 and 2007–08 than they have been in the past two years. In contrast, the petrol profitability of the wholesale and retail sectors has improved over the past two years (chart 12.14).

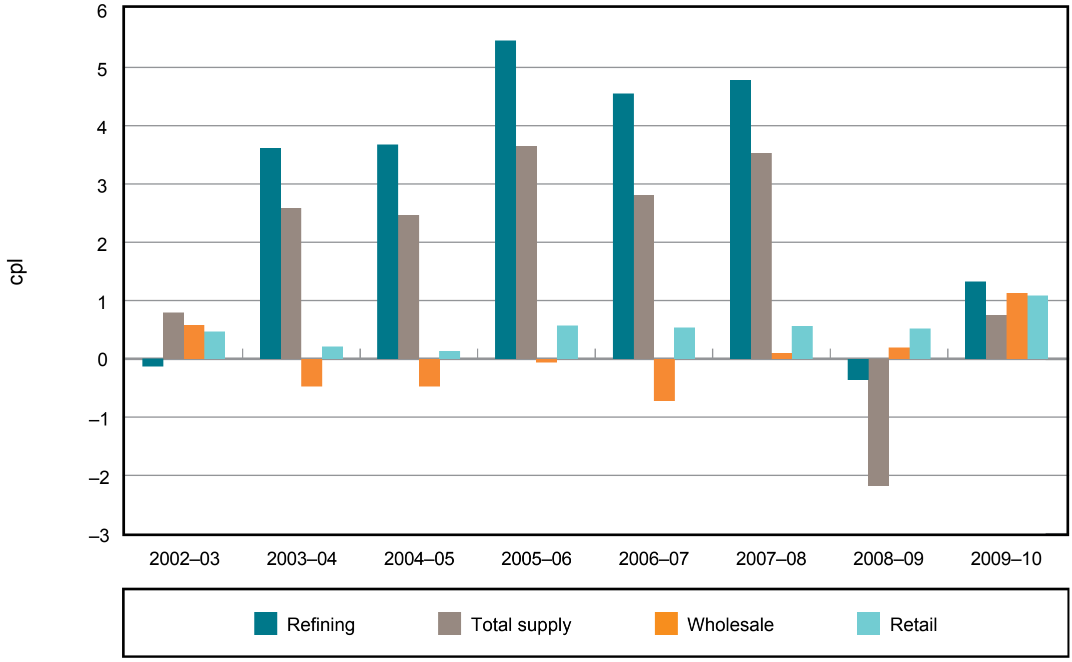
Wholesale sector petrol net profit was 1.2 cpl in 2009–10 (up from 0.2 cpl in 2008–09) and retail sector net profit for petrol was 1.1 cpl in 2009–10 (an increase from 0.5 cpl in 2008–09).

Chart 12.13 Downstream petrol net profits by sector: 2002–03 to 2009–10



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

Chart 12.14 Downstream petrol net profits by sector: 2002–03 to 2009–10

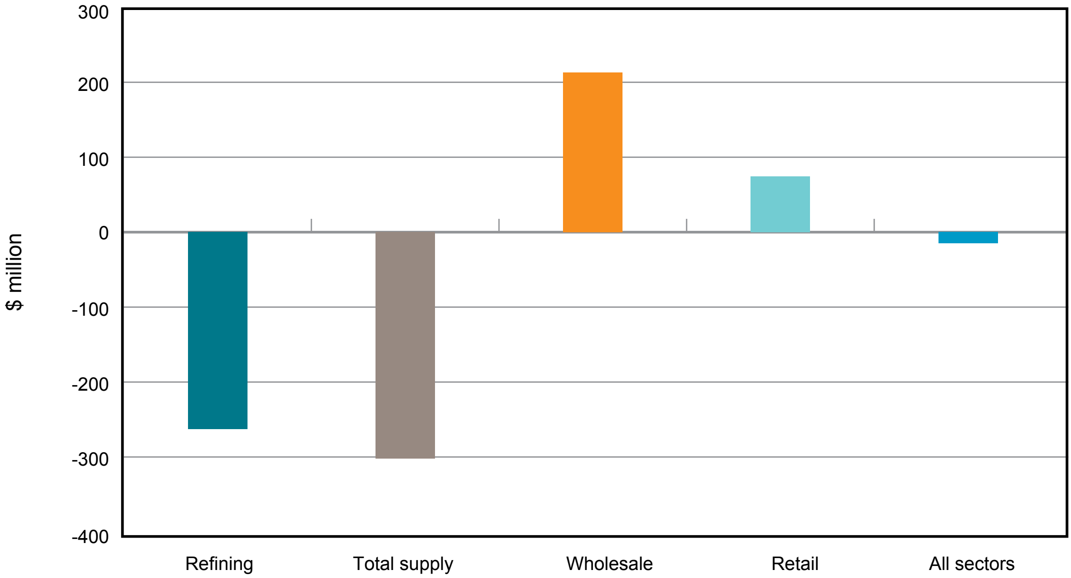


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

In relative terms, the downstream petrol market's profitability in 2009–10 was slightly below its long-term average (chart 12.15). That is, net profits in 2009–10 were approximately $15 million less than the average between 2002–03 and 2009–10.

The profitability of the wholesale petrol sector in 2009–10 was approximately $215 million above its long-term average, while total supply net profit was approximately $300 million below its long-term average. The profitability of the retail petrol sector in 2009–10 was approximately $75 million above the average between 2002–03 and 2009–10.

Chart 12.15 Variation in petrol net profits by sector in 2009–10 relative to long-term average: 2002–03 to 2009–10



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

12.5.1 Amount that motorists paid as profits to the petrol companies

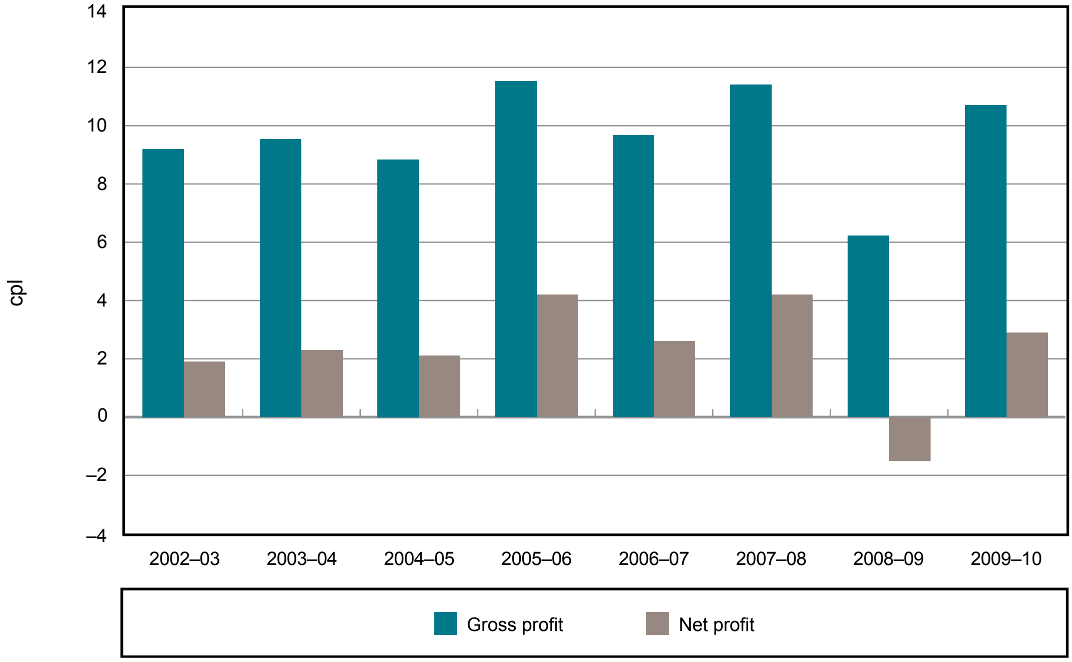
While chart 12.12 indicated the downstream petrol sector net profit on a cpl basis, motorists may ask how much of the petrol price they pay at the retail level may be attributed as net profit for the petrol industry. In isolation, each sector in the supply chain (total supply, wholesale and retail) makes a profit or loss by taking into account the revenues and costs in that particular sector.[156] For the purposes of the motorist's perspective, the gross and net cpl profits in the downstream petrol sector have been aggregated across the three sectors.[157]

As indicated in chart 12.16, petrol gross profit from the motorist's perspective in 2009–10 (sales revenue less cost of goods or services) was 10.7 cpl, slightly above the long-term average (2002–03 to 2009–10) of 9.6 cpl. After deducting other expenses, net profit for petrol in 2009–10 from the motorist's perspective was 2.9 cpl, or 0.6 cpl above its long-term average.

156 For example, consider three non-vertically integrated sectors: supply, wholesale and retail, with one company operating in each sector. If each company in each sector makes a net profit of 2 cpl, then from the motorist's perspective, the total net profit of the industry is 6 cpl. That is, if the consumer pays 6 cpl less for petrol at the retail level than otherwise, the petrol industry in aggregate would make no profit from the motorist's perspective.

157 Each sector's gross (net) cpl profit has been added to estimate gross (net) profit the industry receives from selling each litre of petrol at the retail level. This aggregated profit measure from the motorist's perspective is different from the consolidated profit measure for the industry as presented in chart 12.12, which calculates the downstream petrol industry average cpl. profitability. However, from the motorist's perspective, the cpl profits at each sector have been added in order to illustrate the 'total cpl profit' that consumers pay when purchasing a litre of petrol.

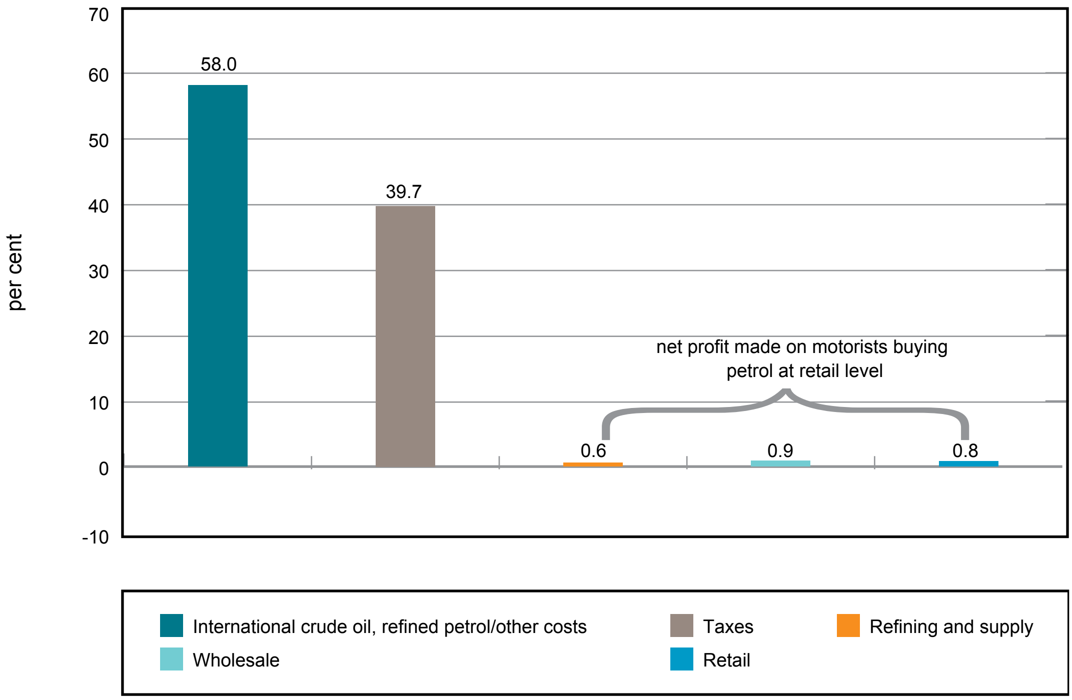
Chart 12.16 Petrol profits paid by motorists to the petrol companies: 2002–03 to 2009–10



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

In other words, of the total estimated average retail price (weighted by volume) that consumers paid to purchase petrol in 2009–10, from the motorist's perspective approximately 2.3 per cent was profit earned by the various downstream market participants formally monitored by the ACCC (chart 12.17). Approximately 58 per cent of the average retail price of petrol can be attributed to various costs mainly those related to crude oil and refined petrol. Taxes (excise and GST) were approximately 40 per cent.

Chart 12.17 Components of petrol retail price and petrol net profit made by petrol downstream industry: 2009–10

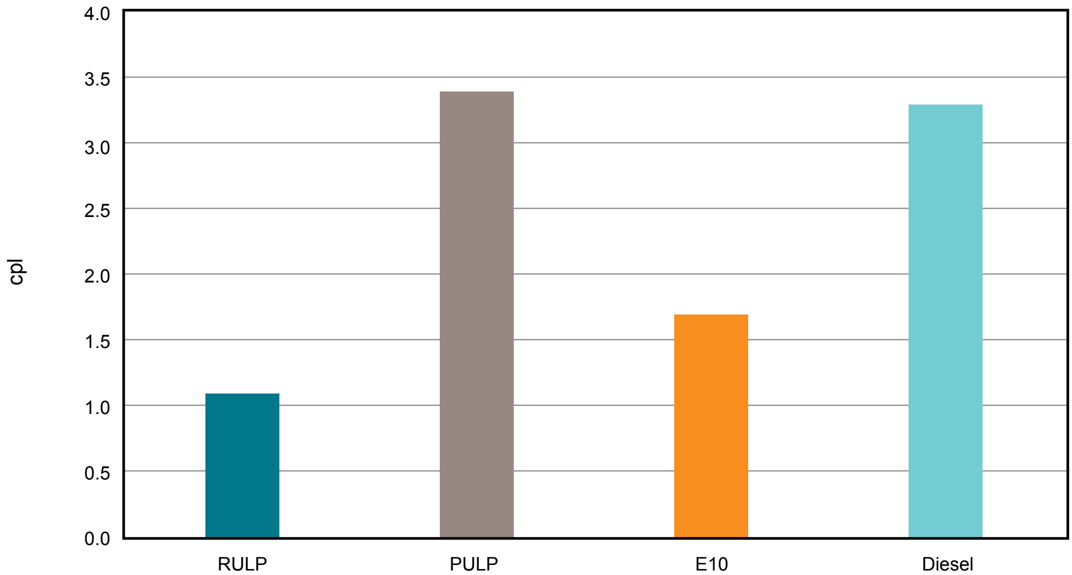


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

12.5.2 Net profits by fuel type

Net profits in cpl by fuel type in the downstream industry are illustrated in chart 12.18. The average net profit between 2005–06 and 2009–10 has been estimated to be the highest for PULP and diesel, followed by E10 and RULP.

Chart 12.18 Downstream industry net profit by fuel type: Average (2005–06 to 2009–10)



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

12.6 Key performance indicators for the downstream petroleum industry

This section analyses the KPIs for the downstream petroleum sector. To measure the profitability of different products and activities, a common accounting method is to compare net profits (in this instance, adjusted EBIT) to sales and to total assets.[158] An alternative measure to return on assets is return on capital employed, which takes into account current liabilities of the business (the three KPIs were discussed in box 12.1).

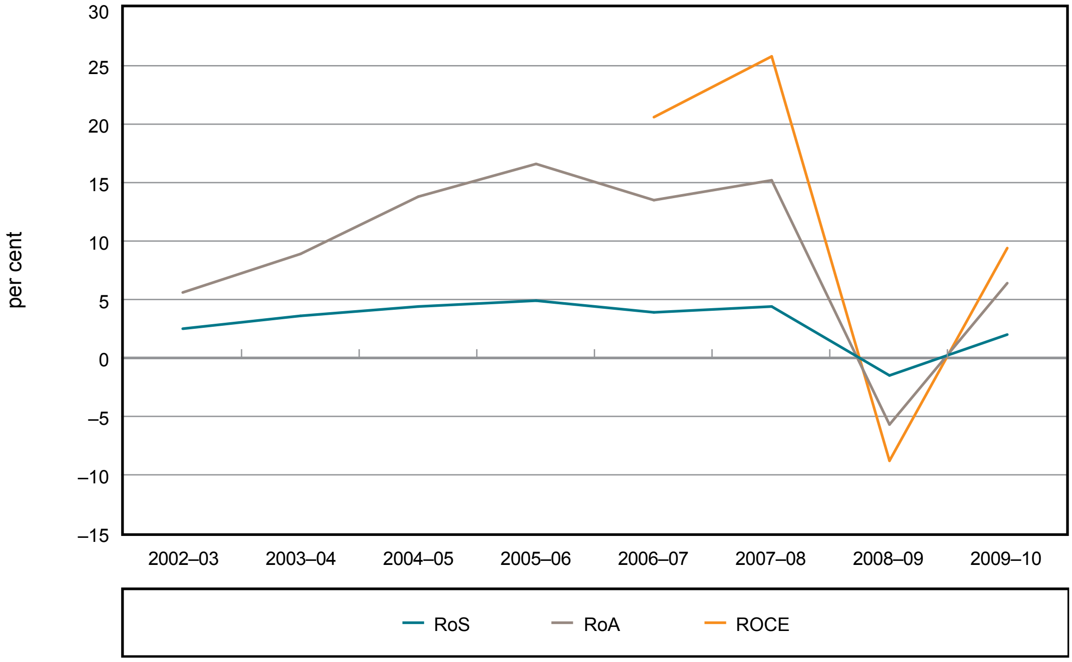
As shown in chart 12.19, the three KPIs were significantly affected by the profit losses in 2008–09. The KPIs have improved in 2009–10 largely as EBIT has increased.

For example, the value of (adjusted) assets in 2009–10 has increased by approximately 11 per cent from 2008–09, while EBIT increased to approximately $1.2 billion in 2009–10 from negative $1 billion in 2008–09.

Over the period 2002–03 to 2009–10, the average return on sales was 3 per cent and the average return on assets was 9.3 per cent. The average for return on capital employed was 11.8 per cent for the period 2006–07 to 2009–10.

158 The ACCC has adjusted total assets to remove intangibles, deferred tax assets, investments and other intangible assets. Intangibles have been removed because they are difficult to accurately measure in terms of their direct contribution to petrol profitability.

Chart 12.19 Total downstream return on sales, return on assets and return on capital employed: 2002–03 to 2009–10



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

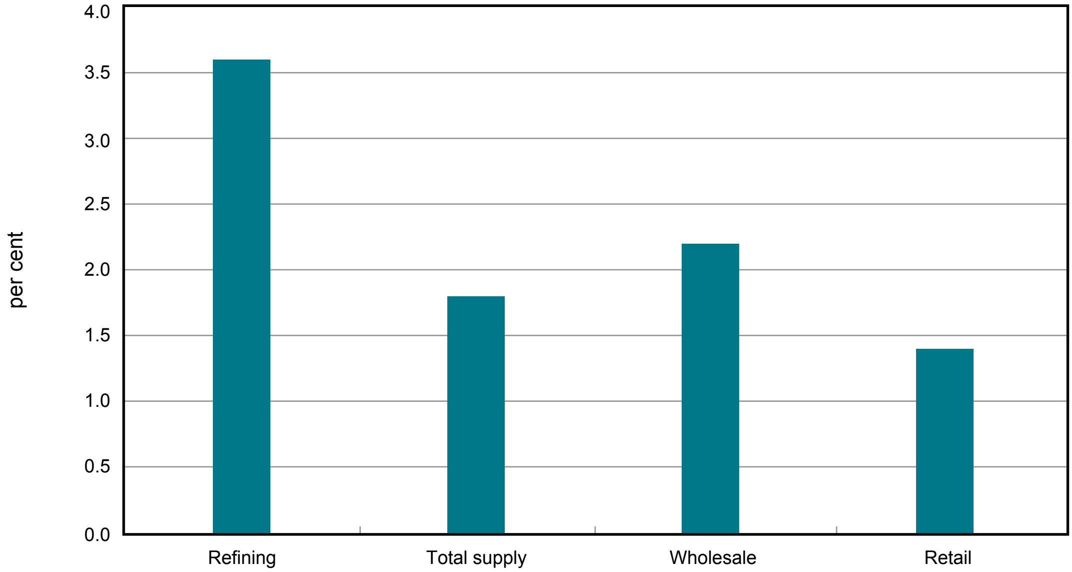
Note: Return on capital employed is presented from 2006–07 onwards.

The next three charts provide long-term averages of the three KPIs for the four sectors in the downstream petroleum industry (charts 12.20, 12.21 and 12.22).

Between 2002–03 and 2009–10, the average return on sales was the highest in the refinery sector (chart 12.20). This is being influenced by the relatively higher EBIT in the refinery sector compared with the other downstream petroleum sectors.

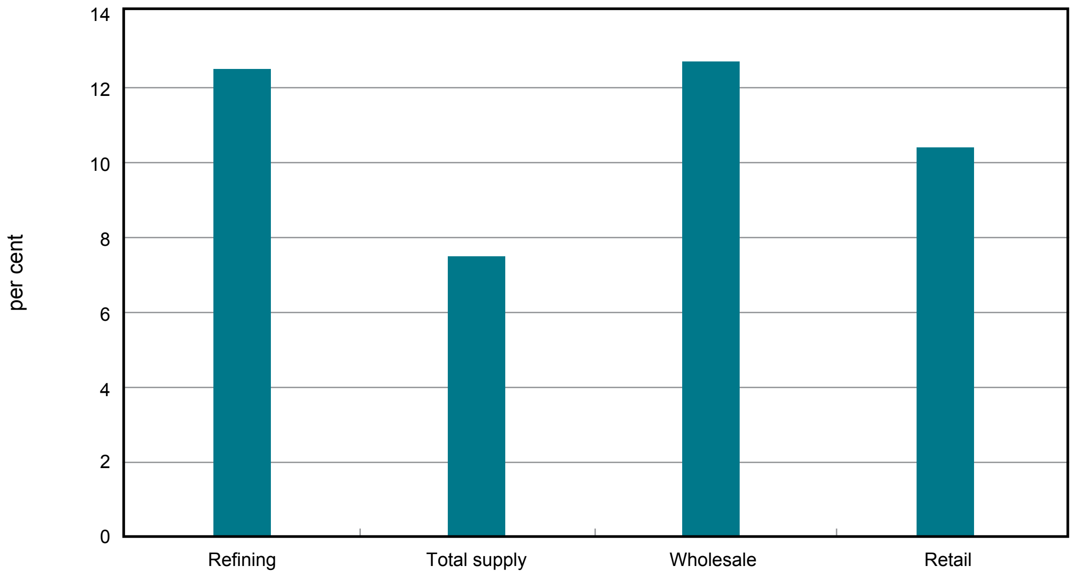
Over the same period, return on assets was the lowest in total supply sector (chart 12.21) while the wholesale and retail sectors had higher return on capital employed (chart 12.22) between 2006–07 and 2009–10.

Chart 12.20 Return on sales by sector: 2002–03 to 2009–10 average



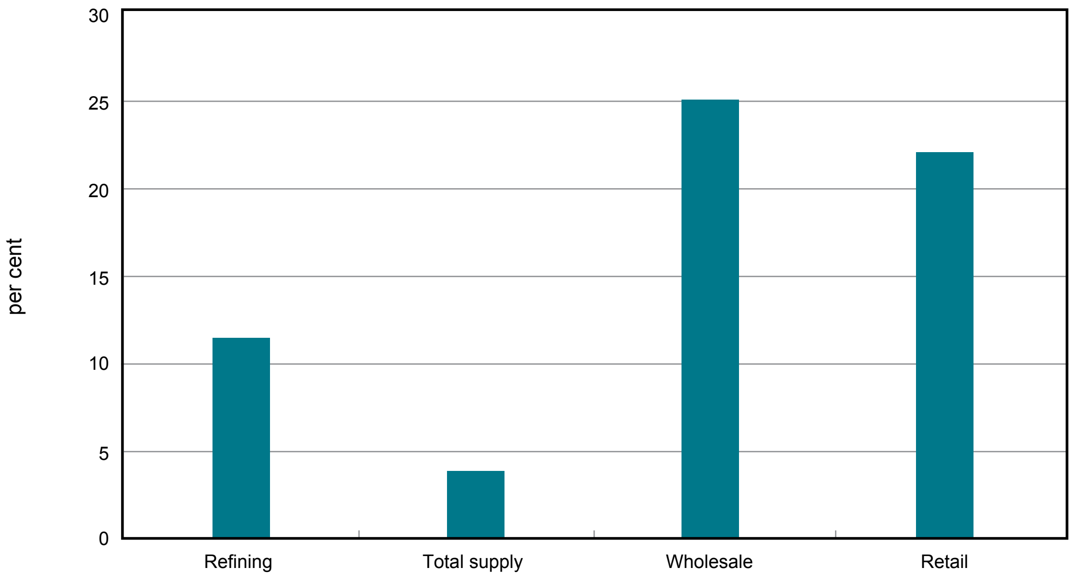
Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process

Chart 12.21 Return on assets by sector: 2002–03 to 2009–10 average



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

Chart 12.22 Return on capital employed by sector: 2006–07 to 2009–10 average



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

12.7 Comparison of the profitability of the downstream petroleum industry with other industries

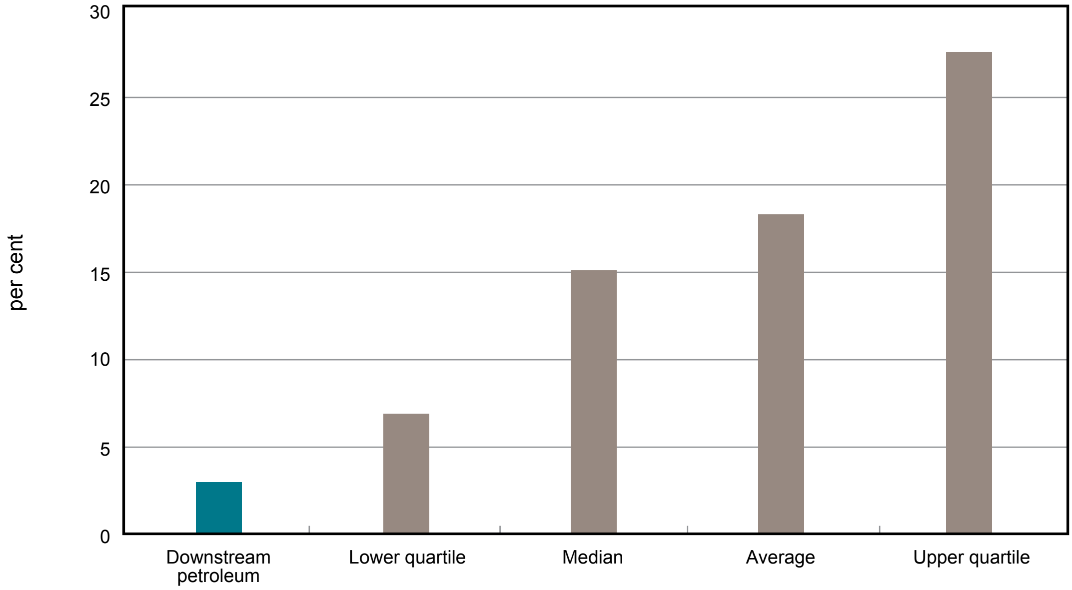
To provide some context for the petroleum industry's financial results reported in this chapter, the ACCC has compared the performance of the Australian petroleum industry with other Australian industries and with petroleum industries overseas.

12.7.1 Australian comparisons

The profitability of Australian downstream petroleum companies can be compared with Australian industries more broadly. The ACCC has compiled information on the financial performance of the top 200 companies listed on the Australian Securities Exchange (ASX). Two KPIs are used for these comparative purposes: return on sales and return on assets.

It is estimated that the downstream petroleum sector return on sales between 2002–03 and 2009–10 were, on average, approximately 3 per cent. This is less than the average of the return on sales of the lower quartile (bottom 25 per cent) of the ASX 200 companies (chart 12.23).

Chart 12.23 Comparison of return on sales for downstream petroleum industry and ASX 200 companies: 2002–03 to 2009–10 average

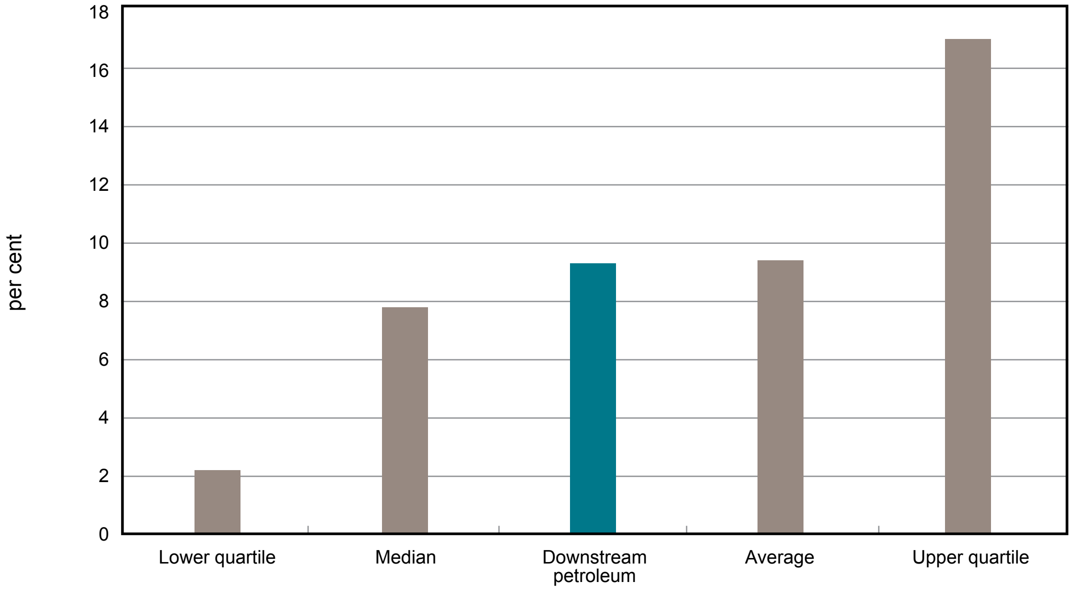


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database.

Note: Calculations of return on sales of more than 70 per cent (positive and negative) in any year for any company have been excluded. As such, the list of companies is less than 200. Not all companies have data for all years. Some companies report on calendar/other annual basis. Caltex has been excluded from the ASX 200. The list of companies in the ASX 200 is as at 24 September 2010.

In terms of return on assets, the average for the downstream petroleum sector was 9.3 per cent between 2002–03 and 2009–10. This KPI is estimated to be approximately the same as the average of the ASX 200 companies over the same period but less than the estimated average return on assets for the 25 per cent of companies in the ASX 200 with the highest average return on assets (chart 12.24).

Chart 12.24 Comparison of return on assets for downstream petroleum industry and ASX 200 companies: 2002–03 to 2009–10 average



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

Note: Calculations of return on assets of more than 70 per cent (positive and negative) in any year for any company have been excluded. As such, the list of companies is less than 200. Not all companies have data for all years. Some companies report on calendar/other annual basis. Caltex has been excluded from the ASX 200. The list of companies in the ASX 200 is as at 24 September 2010.

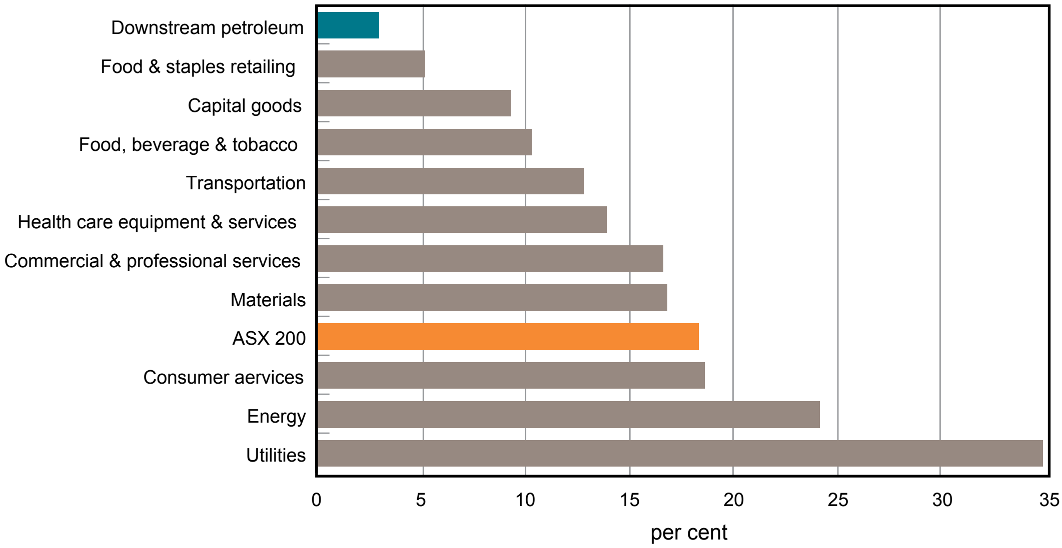
It should be noted that calculations of return on sales and return on assets may be influenced by the nature of the industry. For example, in the downstream petroleum sector, the return on sales may be influenced by total sales revenue. When international petroleum product prices are increasing, this will lead to increases in domestic product prices and hence revenue (other things being equal). Profits may be largely unchanged as products costs are also increasing with the increases in the international prices. In this case, return on sales may be relatively low, as sales revenue increases. Further, high volume, low margin industries generally have lower return on sales relative to low volume, high margin industries.

Similarly, return on assets may be influenced by the valuation of assets such as refineries and terminals, depreciation of assets and recent investments or sale of assets. For example, the historical value of assets such as refineries may be relatively low given their age and depreciation over time. As such, comparisons of profitability across industries using these KPIs should be treated with caution.

Charts 12.25 and 12.26 present the return on sales and return on assets by ASX industry, respectively. In each chart, the industry is based on the Standard and Poors' Global Industry Classification Standard (CIGS). The charts illustrate the return on sales and the return on assets for the ASX 200 top 10 CIGS industry groups, based on market capitalisation with at least three companies in each industry group. These industry groups are compared with the downstream petroleum sector (for comparative purposes, the financial and media ASX sectors have been excluded).

In relative terms, the return on sales for the downstream petroleum sector is low, while the return on assets is estimated to be the same as the average of ASX 200 companies.

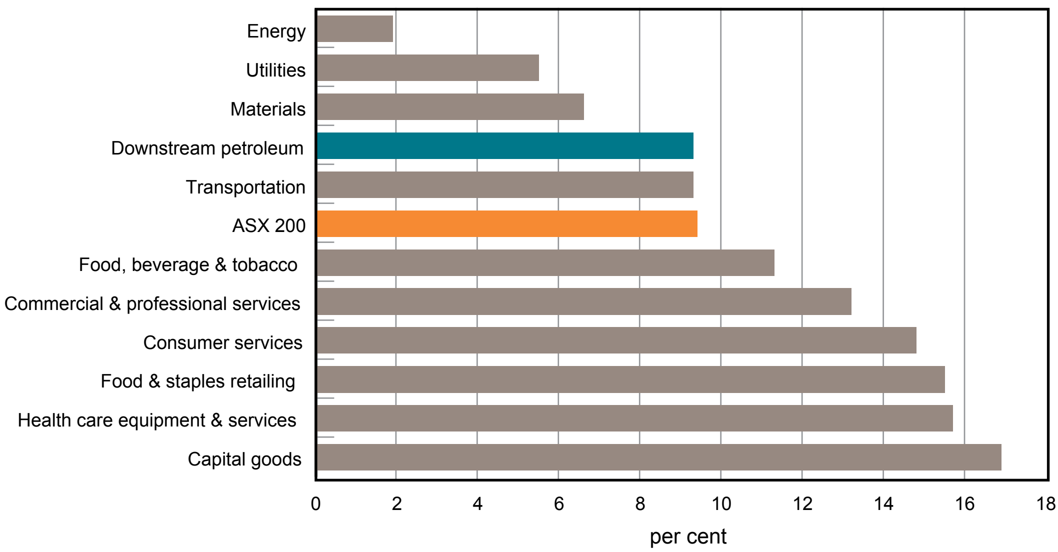
Chart 12.25 Comparison of return on sales for downstream petroleum industry, ASX 200 average and ASX top 10 CIGS industry groups (excluding financial and media sectors): 2002–03 to 2009–10 average



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

Note: Calculations of return on sales of more than 70 per cent (positive and negative) in any year for any company have been excluded. As such, the list of companies is less than 200. Not all companies have data for all years. Some companies report on calendar/other annual basis. Caltex has been excluded from the ASX 200. The CIGS include at least three companies. The list of companies in the ASX 200 is as at 24 September 2010.

Chart 12.26 Comparison of return on assets for downstream petroleum industry ASX 200 average and ASX top 10 CIGS industry groups (excluding financial and media sectors): 2002–03 to 2009–10 average



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

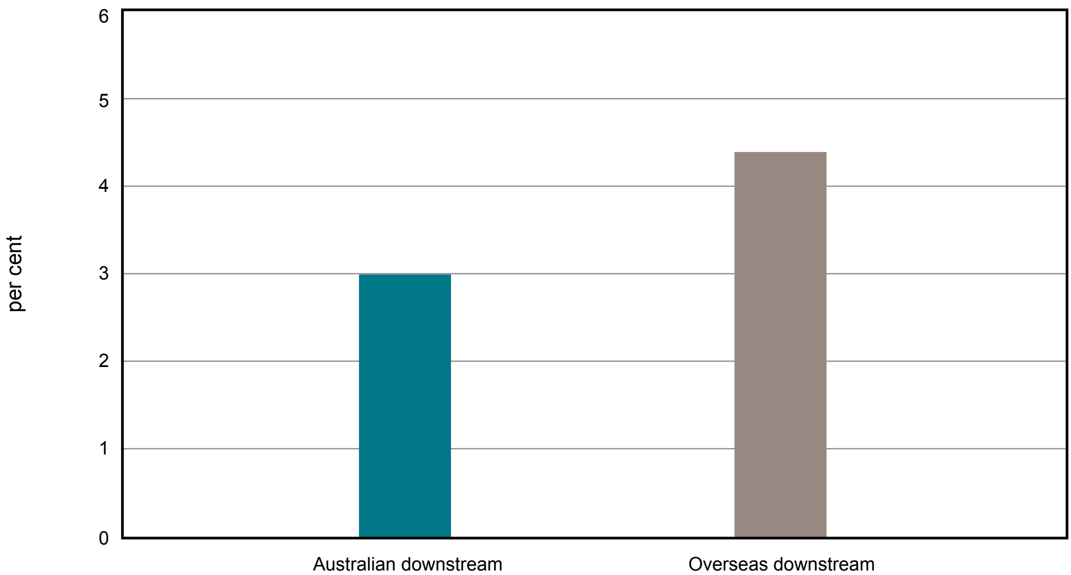
Note: Calculations of return on assets of more than 70 per cent (positive and negative) in any year for any company have been excluded. As such, the list of companies is less than 200. Not all companies have data for all years. Some companies report on calendar/other annual basis. Caltex has been excluded from the ASX 200. The CIGS include at least three companies. The list of companies in the ASX 200 is as at September 2010.

12.7.2 Comparison of KPIs between Australian and overseas downstream petroleum industries

This section compares three KPIs between the Australian and overseas downstream petroleum industries—return of sales, return on assets and return on capital employed. The calculations for the Australian downstream industry are based on the ACCC monitored companies. The calculations for the overseas downstream industry are based on a sample of about 30 companies that operate across a dozen countries with greatest representation from the US. The comparison is based on averages between 2002–03 and 2009–10, except for the return on capital employed, which is an average between 2006–07 and 2009–10.

The charts below (chart 12.27, 12.28 and 12.29) suggest that the indicators of profitability in Australia's downstream petroleum industry are broadly similar to the overseas indicators of profitability in the downstream industry.

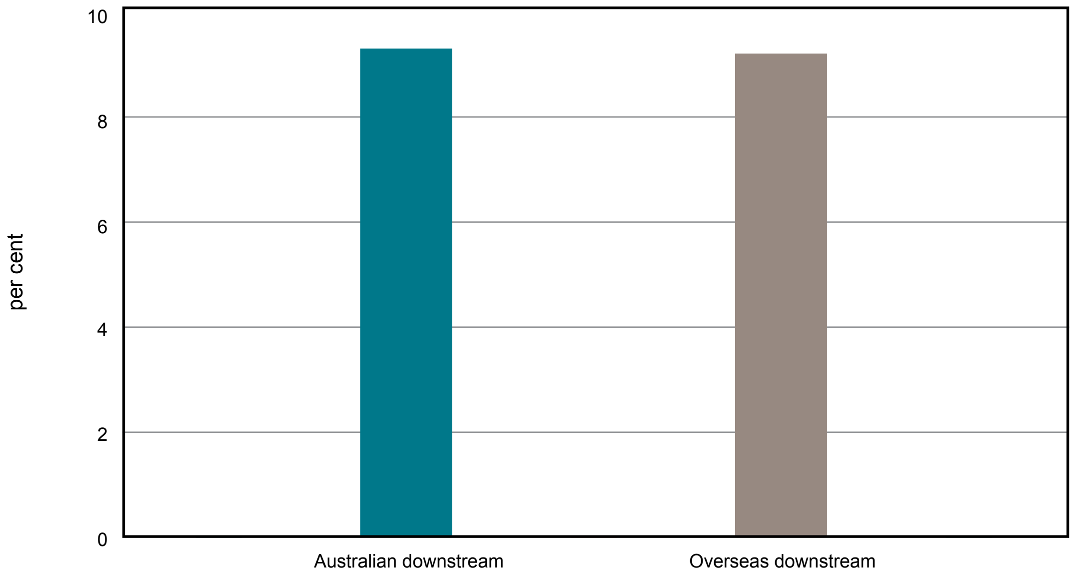
Chart 12.27 Comparison of return on sales for downstream petroleum industry in Australia and overseas: 2002–03 to 2009–10 average



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process and Bureau van Dijk Orbis database

Note: Not all companies have data for all years. Overseas companies report on various annual bases. For example, year 2009 has been taken as 2009–10. 2002–03 to 2009–10 averages are based on simple average of annual figures.

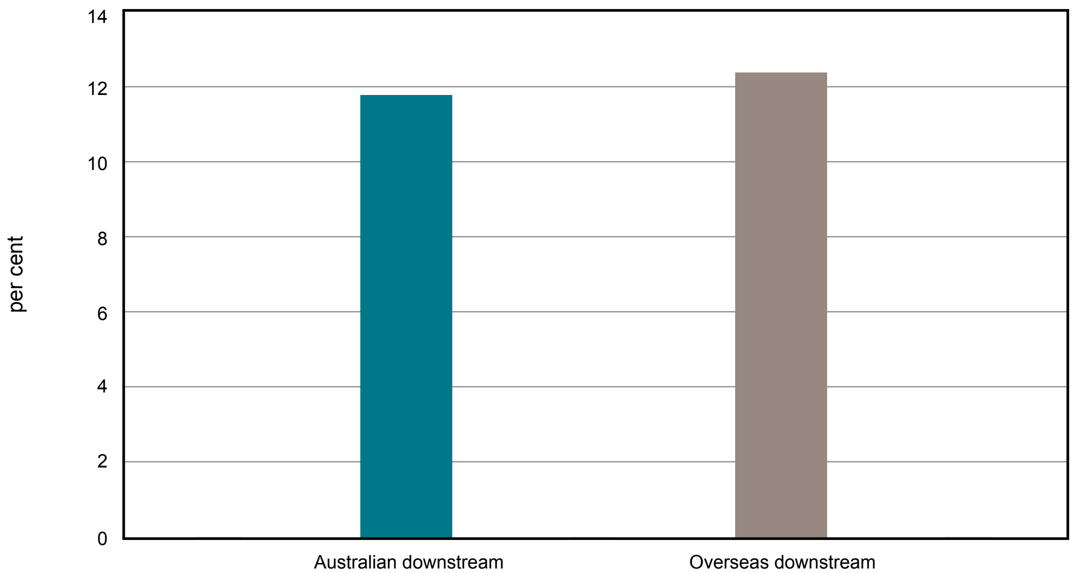
Chart 12.28 Comparison of return on assets for downstream petroleum industry in Australia and overseas: 2002–03 to 2009–10 average



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process and Bureau van Dijk Orbis database.

Note: Not all companies have data for all years. Overseas companies report on various annual bases. For example, year 2009 has been taken as 2009–10. 2002–03 to 2009–10 averages are based on simple average of annual figures.

Chart 12.29 Comparison of return on capital employed for downstream petroleum industry in Australia and overseas: 2006–07 to 2009–10 average



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process and Bureau van Dijk Orbis database

Note: Not all companies have data for all years. Overseas companies report on various annual bases. For example, year 2009 has been taken as 2009–10. 2006–07 to 2009–10 averages are based on simple average of annual figures.

12.8 Concluding remarks on the financial performance of the downstream petroleum industry

In 2008–09, the downstream petroleum industry made a total loss of approximately $1 billion due to the rapid decrease of international crude oil and petroleum product prices, depreciating AUD–USD exchange rate and the impact of time lags in refining and delivering petrol and diesel to end users. The overall losses were driven by significant losses in the total supply sector given its exposure to the volatile international markets in a period of heightened global economic and financial uncertainty that was evident in the second half of 2008.

By contrast, in 2009–10, the downstream petroleum industry rebounded—net profit was approximately $1.2 billion or 1.4 cpl. However, the net profit in 2009–10 was below average profits of the past few years. In particular:

- The refining and total supply sectors incurred losses of approximately $100 million and $50 million respectively in 2009–10 after significant losses in 2008–09.
- Wholesale net profits were almost $1 billion in 2009–10 (or 1.9 cpl), slightly less than the previous year.
- The retail sector recorded a net profit of approximately $290 million (or 1.7 cpl) in 2009–10, up from $230 million (or 1.4 cpl) in the previous year.

Over the past two financial years, the refining and total supply sectors have been less profitable than in the years between 2002–03 and 2007–08. However, the net profits in the wholesale and retail sectors appear to be relatively higher in the past two financial years compared with their profitability between 2002–03 and 2007–08.

In terms of petrol, the ACCC has estimated that net profit was $530 million (or 1.4 cpl) in 2009–10, up from negative $490 million (or approximately –1.3 cpl) in 2008–09. In particular:

- Total supply petrol sector profit was $185 million (0.7 cpl) in 2009–10 after a $580 million loss (–2.2 cpl) in 2008–09.
- Refining petrol net profits were approximately $220 million (or 1.4 cpl) in 2009–10.
- Wholesale petrol net profit was approximately $220 million or 1.2 cpl.
- Retail petrol net profit was $130 million or 1.1 cpl.

From a motorist's perspective (the aggregated profit or loss made by industry at relevant stages in the supply chain), the petrol net profit was 2.9 cpl in 2009–10. In 2008–09, net profit on petrol from the motorist's perspective was negative 1.5 cpl but in recent years has generally been in the range of 2 to 4 cpl.

Accounting KPIs for the downstream petroleum industry improved in 2009–10. Return on sales was 2 per cent, return on assets was 6.4 per cent and return on capital employed was 9.4 per cent. All three KPIs were negative in 2008–09.

Relative to other industries in Australia or in comparison with downstream petroleum industries overseas, the profitability of Australia's downstream petroleum sector, as measured by accounting KPIs, is broadly at or below domestic and international industry averages.

13 Financial performance of the refining and supply sectors

Key points:

- The profitability of the refinery and total supply sectors in 2009–10 has been below the average of recent years.
- Foreign exchange losses — which were a significant contributor to the overall losses incurred at the supply sector in 2008–09 — were not a notable factor in 2009–10.
- Net profit of the refinery sector in 2009–10 was negative $100 million (–0.3 cpl) compared with negative $280 million (–0.8 cpl) in 2008–09.
- Petrol refinery net profit was $210 million (1.4 cpl) in 2009–10, after a loss of $55 million (–0.4 cpl) in 2008–09.
- The net profit of the total supply sector in 2009–10 was approximately negative $50 million (–0.1 cpl) compared with negative $2.2 billion (–3.3 cpl) in 2008–09.
- Petrol supply profit was $185 million (0.7 cpl) in 2009–10, after a loss of $580 million (–2.2 cpl) in 2008–09.

13.1 Overview

The previous chapter analysed the financial performance of the downstream petroleum industry. In this chapter, the refining and total supply sectors are discussed in greater detail. It reports on the revenues, costs and profits of the refinery sector and those of total supply on a historical cost basis.

The refining sector in Australia consists of seven refineries, located in Melbourne, Perth, Geelong, Sydney and Brisbane. Each refinery refines crude oil into petrol, diesel and a range of other petroleum products. The product mix produced at refineries depends on the configuration of refineries and their equipment as well as the type of crude oil used.

The total supply sector purchases (domestic and imported) crude oil for the refineries, as well as refined fuel products. The total supply sector also includes the sale and purchase of refined products under the buy–sell arrangements.

13.2 Revenues, costs and profits in the refinery sector

Revenues and costs in the refinery sector arise from the refining of various petroleum products.

Refinery revenues arise from the sale of petrol products (such as regular and premium unleaded petrol), diesel, aviation fuels, liquefied petroleum gas, and other products such as lubricant oils and bitumen.

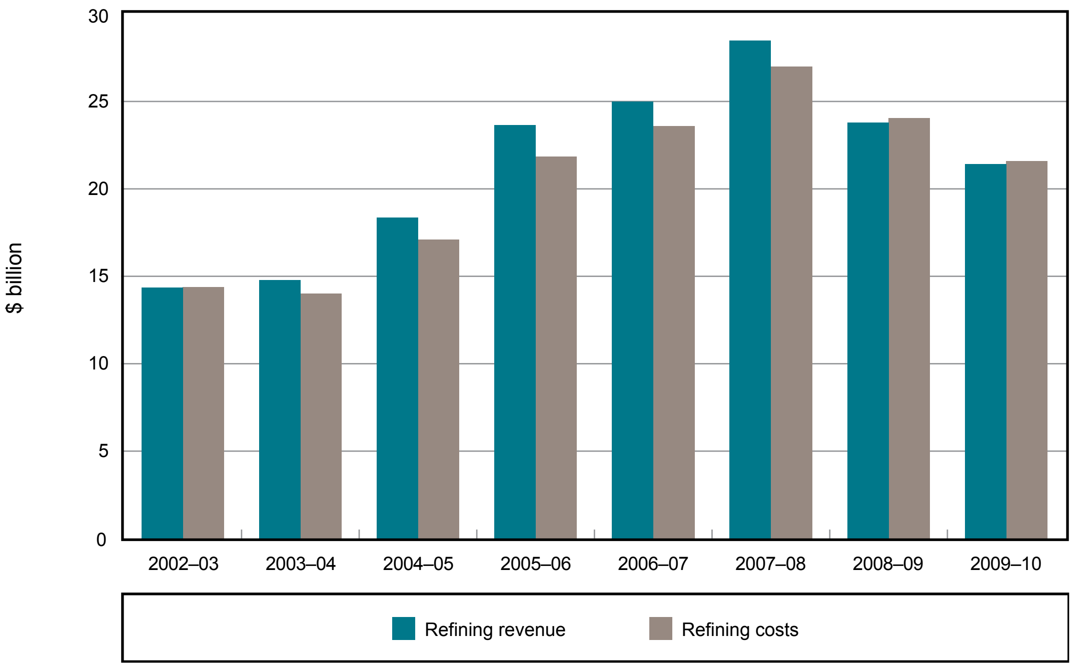
The major cost for refineries is the cost of crude oil and other additives used in the refining process. Other important costs include energy, labour and maintenance.

Refining sector revenues and costs between 2002–03 and 2009–10 are shown in chart 13.1. Total revenues and costs move in the same direction, largely reflecting international crude oil price movements (the major input cost for refinery) and international prices for refined products (the revenues received from the sale of refined products).

In 2009–10, the refining sector revenues and costs were approximately $21 billion, approximately 10 per cent lower than in 2008–09. This decline in revenues and costs was largely due to lower international crude oil and refined product prices in Australian dollars.

Refinery volumes in 2009–10 increased by 0.7 per cent from 2008–09. However, they were approximately 11 per cent lower than the refinery volumes in 2006–07.

Chart 13.1 Refining sector revenues and costs: 2002–03 to 2009–10



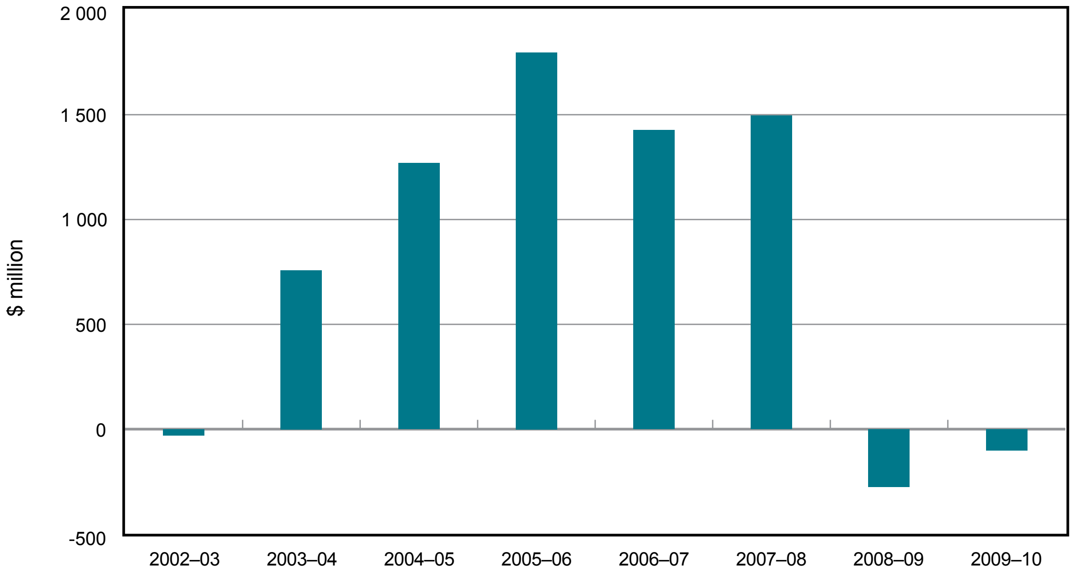
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

Taking into account the relevant revenues and costs, the net profit of the refinery sector in 2009–10 was approximately negative $100 million compared with negative $280 million in 2008–09 (chart 13.2).

The financial losses of the refinery sector in Australia over the past two years are in contrast to the profits earned between 2003–04 and 2007–08.

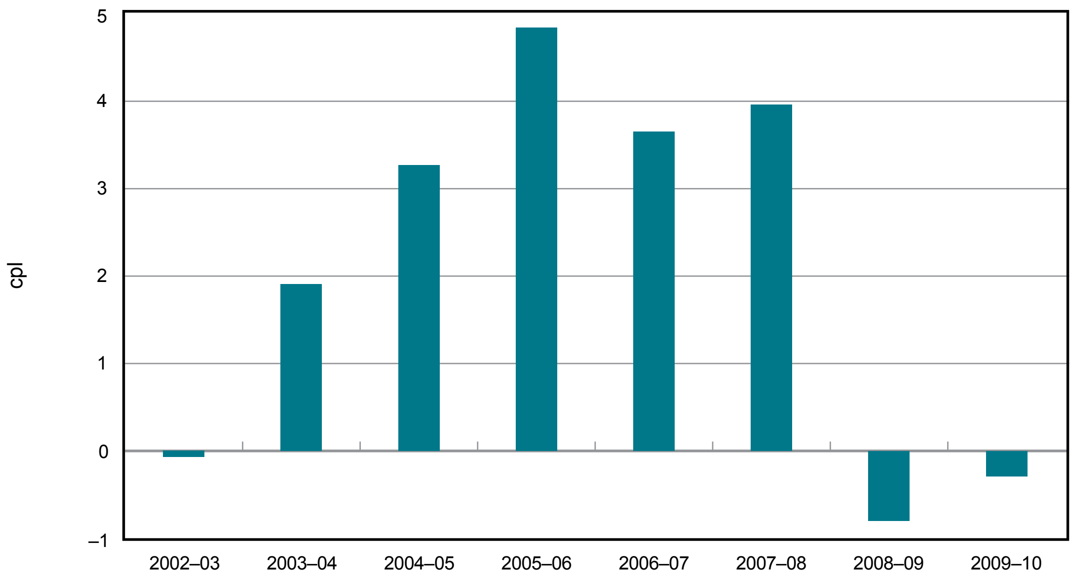
On a cpl basis, net profit for the refinery sector was negative 0.3 cpl in 2009–10, an improvement from negative 0.8 cpl in 2008–09 (chart 13.3). The average cpl net profit over the period 2002–03 to 2009–10 has been 2.1 cpl.

Chart 13.2 Refinery sector net profit (adjusted EBIT): 2002–03 to 2009–10



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

Chart 13.3 Refinery sector net profit (adjusted EBIT): 2002–03 to 2009–10



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

13.3 Revenues, costs and profits of petrol refining

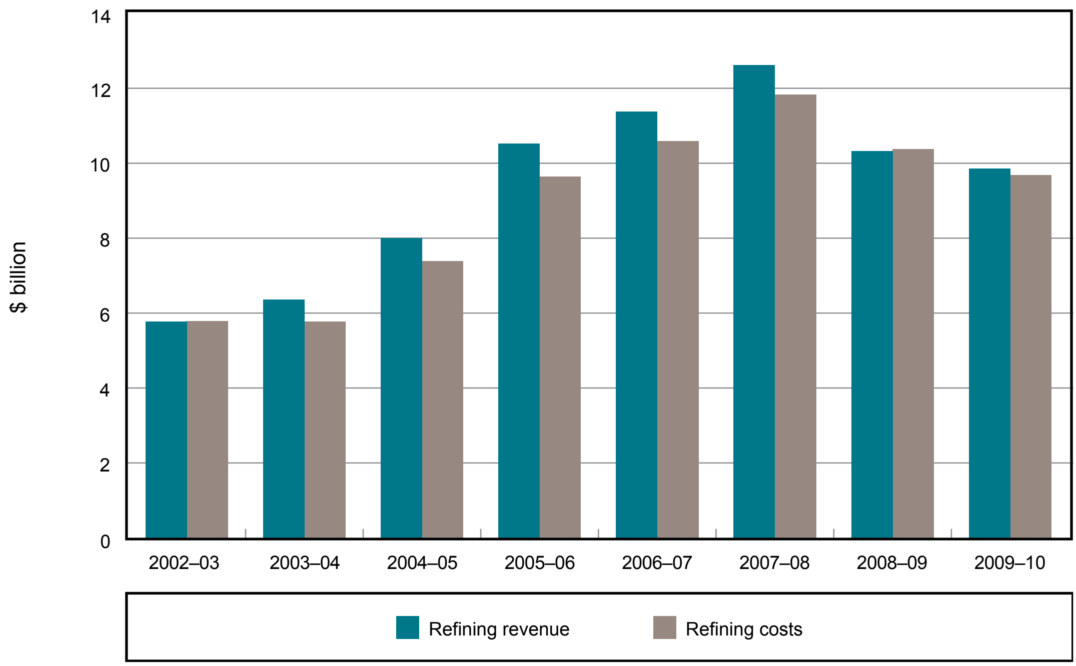
While revenues from the sale of particular refined products such as petrol are relatively straightforward to identify by refiners, allocating costs to each product is a more difficult task.

Petrol (and diesel) are jointly produced with other petroleum products, using common facilities and from the same barrel of crude oil. To obtain an indication of the costs associated with the refining of petrol, the ACCC has allocated common costs to specific products. The ACCC has generally allocated costs to specific products according to the sales volume of each product. This method provides an indication of the costs and profits associated with petrol at the refinery sector.

Chart 13.4 indicates the petrol refining revenues and costs for the period 2002–03 to 2009–10. In 2009–10 compared with 2008–09, the decrease in petrol revenues from refining (of approximately 4.5 per cent) was less than the decrease in costs allocated to petrol refining (of approximately 7 per cent).

On the other hand, the volumes of refined petrol were 2.3 per cent higher in 2009–10 compared with 2008–09. At approximately 15.3 billion litres in 2009–10, refined petrol volumes were approximately two billion litres (or 11 per cent) less than the refined petrol volumes in 2006–07.

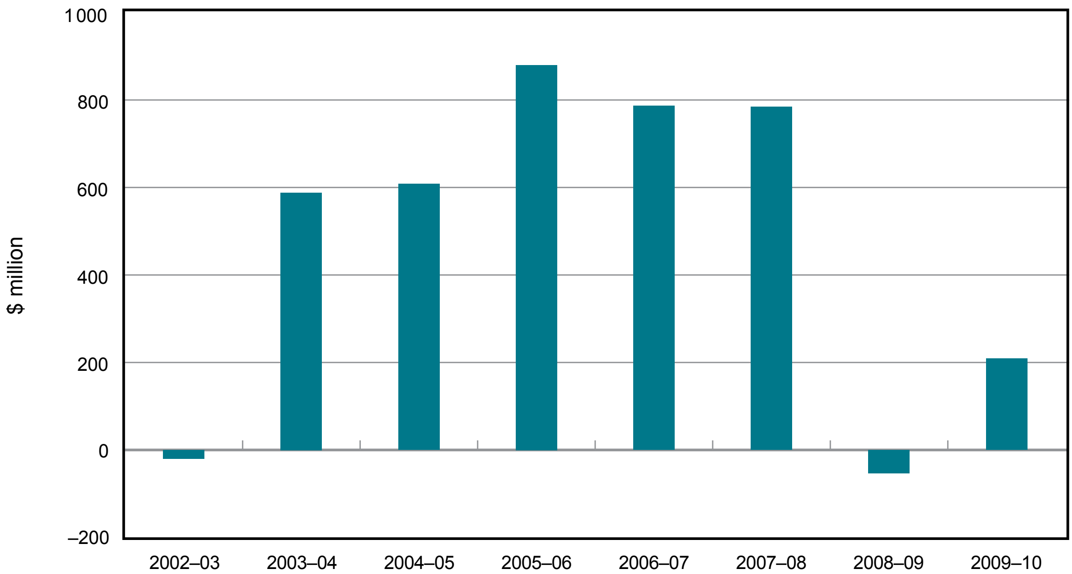
Chart 13.4 Petrol refining revenues and costs: 2002–03 to 2009–10



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

The ACCC has estimated that refinery petrol profit was $210 million in 2009–10, after a loss of $55 million in 2008–09 (chart 13.5). The average annual net profit on refined petrol in Australia since 2002–03 has been estimated to be approximately $470 million.

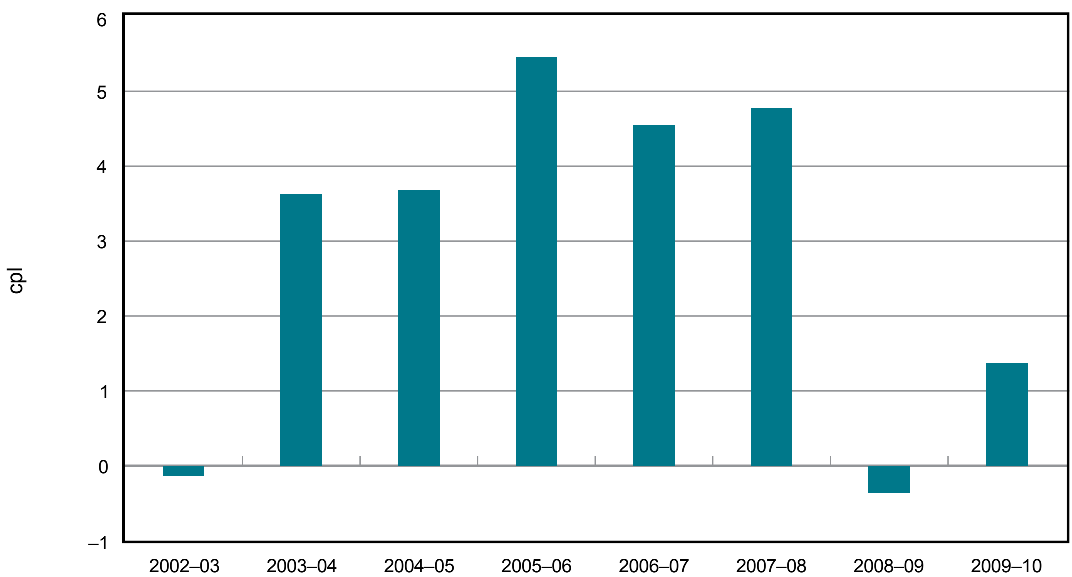
Chart 13.5 Refinery petrol net profit (adjusted EBIT): 2002–03 to 2009–10



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

Refinery petrol net profit was 1.4 cpl in 2009–10, after negative 0.4 cpl in 2008–09 (chart 13.6). The average annual net profit on refined petrol in Australia has been estimated to be 2.9 cpl since 2002–03.

Chart 13.6 Refinery petrol net profit (adjusted EBIT): 2002–03 to 2009–10



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

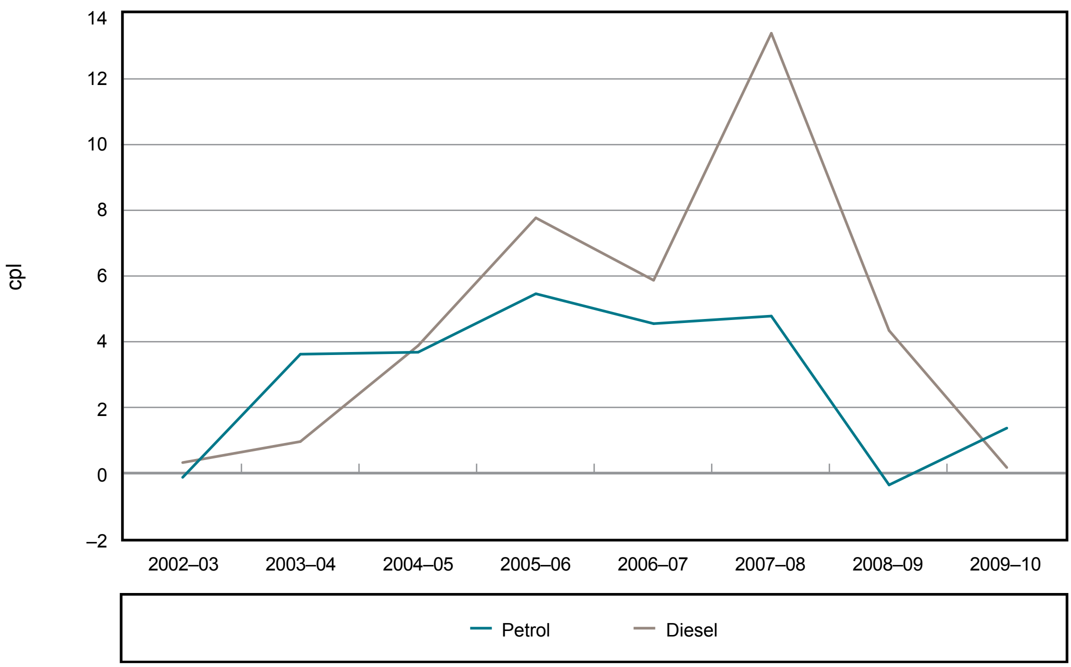
13.3.1 Comparison between petrol and diesel net profits

As petrol refined products and refined diesel represent approximately 75 per cent of all volumes produced at Australian refineries, the revenues and costs associated with producing these products have a significant impact on the overall profitability of the industry.

As illustrated in chart 13.7, diesel cpl refinery net profit has been generally higher than petrol cpl refinery net profit. On average, diesel refinery net profit has been 4.6 cpl since 2002–03 (petrol refinery net profit has averaged 2.9 cpl), partly reflecting the relatively high diesel cpl refinery net profit estimated for 2007–08.

In the first half of 2008, the demand for diesel in the global market was very strong, largely spurred by increased demand from China and other booming economies prior to the onset of the Global Financial Crisis in the second half in 2008. By mid-2008, global refinery margins for diesel were relatively high, Australia was no exception. In fact, the strong downstream petroleum sector profitability of over $3 billion recorded in 2007–08 was significantly influenced by the refinery net profit on diesel in that year ($1.6 billion).

Chart 13.7 Petrol and diesel refinery net profits: 2002–03 to 2009–10



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

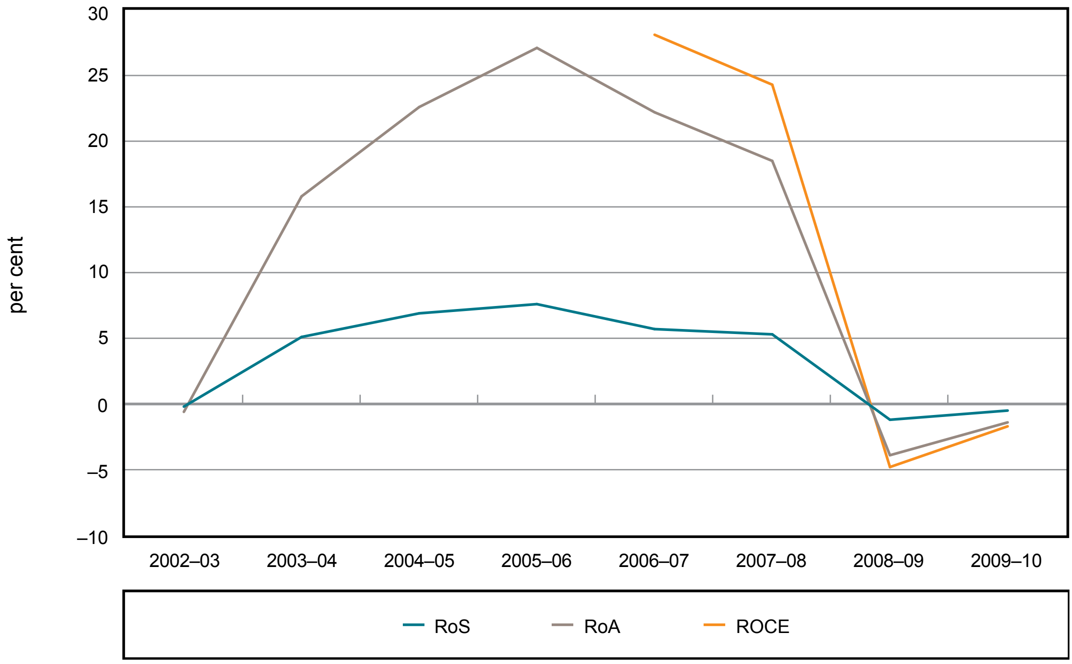
As growth in the major world economies slowed down considerably in the second half of 2008, so did demand for diesel.[159] In 2009–10, diesel refinery net profit was 0.2 cpl, lower than the 1.4 cpl petrol refinery net profit.

159 Diesel is used as a fuel across a number of industries, including transport, the resources sector and agriculture. So an economic slowdown in these sectors generally decreases demand for diesel.

13.4 KPIs for the domestic refinery sector

The three KPIs (return on sales, return on assets and return on capital employed) improved in 2009–10 from 2008–09 (chart 13.8). However, they are lower than the ratios estimated for the years 2004–05 to 2007–08 when EBIT in the refinery sector was relatively higher than the one estimated for the past two financial years.

Chart 13.8 KPIs for the domestic refinery sector: 2002–03 to 2009–10



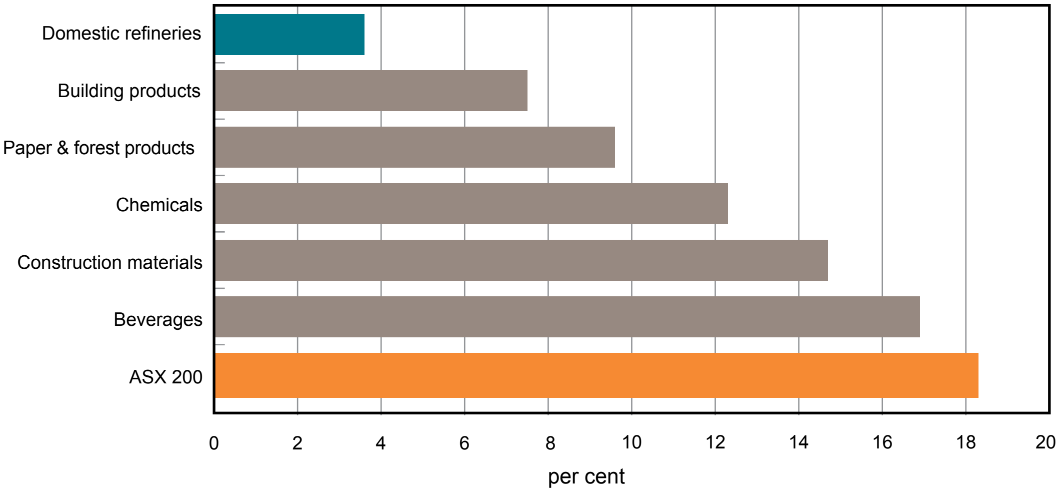
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

13.5 Comparison of refinery sector KPIs with other industries in Australia

The profitability of the Australian refining sector can be compared to industries involved in the broad manufacturing sector in Australia. Two KPIs are used for these comparative purposes: return on sales and return on assets. Please note that the caveats discussed in chapter 12 about comparing the profitability of various industries using standard KPIs also applies in this section.

It is estimated that the domestic refining sector return on sales between 2002–03 and 2009–10 are, on average, 3.6 per cent. This is lower than other manufacturing industries in Australia, as depicted in chart 13.9.

Chart 13.9 Comparison of return on sales for domestic refining sector and manufacturing companies in the ASX 200: 2002–03 to 2009–10 average

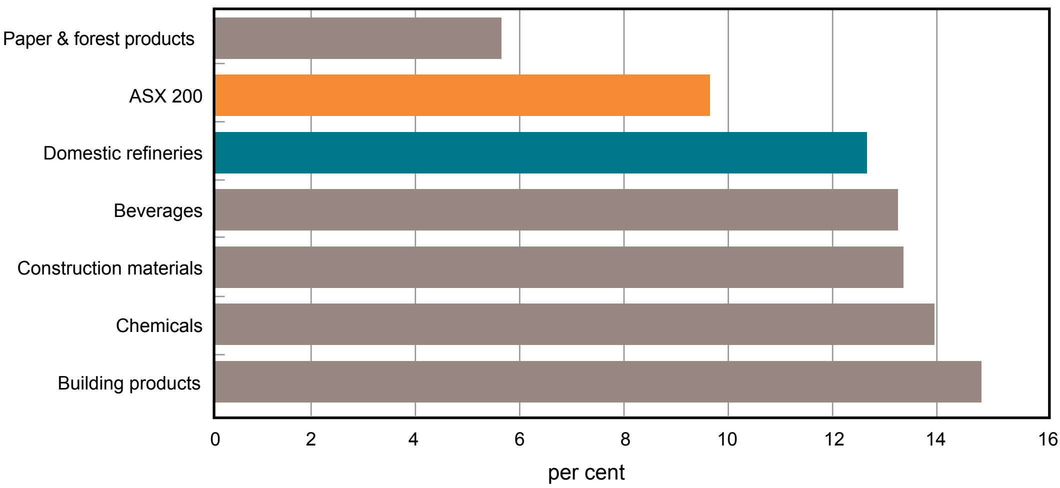


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

Note: Calculations of return on sales of more than 70 per cent (positive and negative) in any year for any company have been excluded. As such, the list of companies is less than 200. Not all companies have data for all years. Some companies report on calendar/other annual basis. Caltex has been excluded from the ASX 200. The Global Industry Classification Standard (CIGS) include at least two companies. The list of companies in the ASX 200 is as at 24 September 2010.

In terms of return on assets, the average return for the domestic refining sector between 2002–03 and 2009–10 has been 12.5 per cent. While higher than the average for the ASX200 this is about the average of most manufacturing industries in Australia, as depicted in chart 13.10.

Chart 13.10 Comparison of return on assets for domestic refining sector and manufacturing companies in the ASX 200: 2002–03 to 2009–10 average



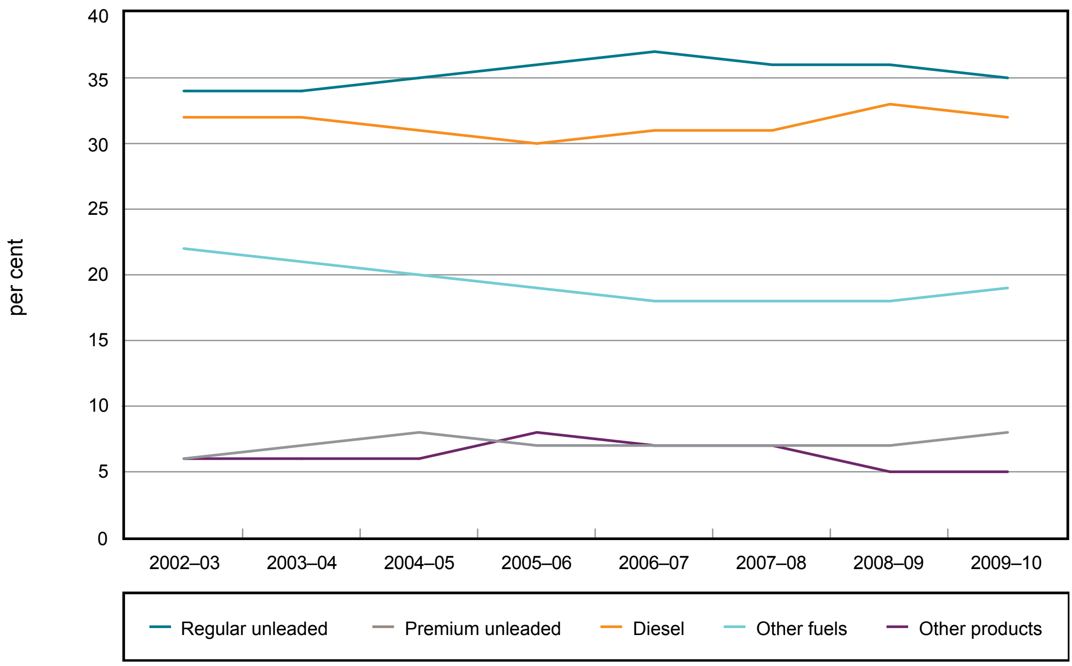
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

Note: Calculations of return on sales of more than 70 per cent (positive and negative) in any year for any company have been excluded. As such, the list of companies is less than 200. Not all companies have data for all years. Some companies report on calendar/other annual basis. Caltex has been excluded from the ASX 200. The Global Industry Classification Standard (CIGS) include at least two companies. The list of companies in the ASX 200 is as at 24 September 2010.

13.6 Refinery sector product mix

Australian refineries largely produce RULP (RON 91) and diesel. The production mix has not altered significantly in recent years (chart 13.11). Other fuels (which includes aviation fuels) is the third largest category followed by PULP (RON 95 and RON 98) and other products.

Chart 13.11 Production mix at Australian refineries: 2002–03 to 2009–10



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

13.7 Refinery utilisation rates

The refinery utilisation rate shows the extent to which the capacity of a refinery has been used to process crude oil and refine various petroleum products. Chart 13.12 shows estimated total refinery utilisation rates since 2002–03.[160]

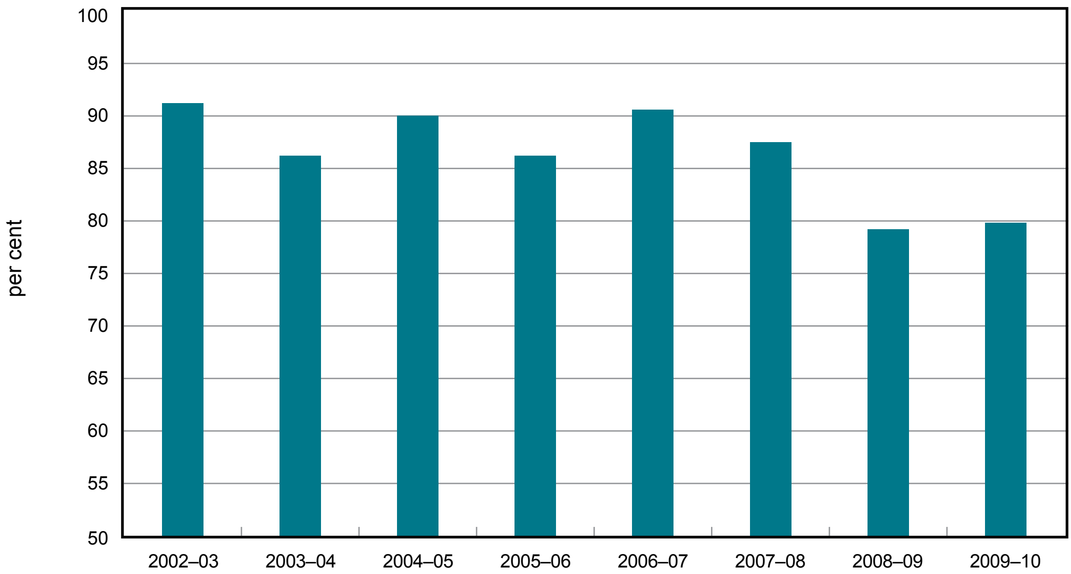
Between 2002–03 and 2009–10, the estimated average refinery utilisation rate for Australia was 86 per cent. Refinery utilisation rates were marginally higher in 2009–10 compared with 2008–09, at approximately 80 per cent. That is, they were approximately 6 percentage points below the long-term average utilisation rate (between 2002–03 and 2009–10).

Maintenance and refinery upgrades can impact capacity utilisation since they prevent operation of the refinery at full capacity. Unplanned refining interruptions also affect refining throughput.

Over the past two years, the temporary shutdown of the Shell's Clyde refinery and more recently major planned maintenance at Caltex' Kurnell refinery and a total plant shutdown at Lytton refinery in Brisbane have affected overall refinery volumes and hence estimated refinery utilisation rates.

160 The estimates of refinery utilisation rates are based on theoretical capacities and refinery sales volumes. Detailed analyses of refinery utilisation rates are performed by Australian refiners and they may show higher or lower utilisation rates than the ones presented here. The refinery utilisation rates estimated for 2009–10 are based on company estimates for 2009.

Chart 13.12 Refining utilisation rates in Australia: 2002–03 to 2009–10



Source: AIP downstream petroleum reports and ACCC calculations

13.8 Revenues, costs and profits of the total supply sector

The total supply sector includes imports of crude oil for refining, imports of refined products, domestic refining as well as volumes traded under the buy–sell arrangements by the four refiner–marketers.[161] The estimates of profitability also take into account exports of petroleum products.[162]

Refined products from the total supply sector are marketed at the wholesale level by the refiner-marketers and independent wholesalers and distributors. The basis for pricing, and hence, revenue at the supply level is linked to import parity pricing, as discussed in chapters 7 and 8 on wholesale prices of PULP and RULP respectively.

Costs in total supply primarily relate to the purchase of (domestic and imported) crude oil, refined fuel products, and fuel products purchased from other refiner-marketers under the buy–sell arrangements. Prices of products are generally linked to international market prices, and revenues and costs generally follow these closely.

However, as was discussed in the 2009 ACCC petrol monitoring report, volatility in international prices and the exchange rate can impact on the value of product purchases and sales, and ultimately on the profitability of the overall supply sector.

The impact of exchange rate gains and losses is discussed later in the chapter.

161 In this chapter, the total supply sector is confined to the activities of the refiner-marketers only. Independent imports are not covered in the analysis. As the buy–sell product volumes are either refined domestically or imported, there is double counting of volumes. However, this does not affect the estimates of profitability for this sector.

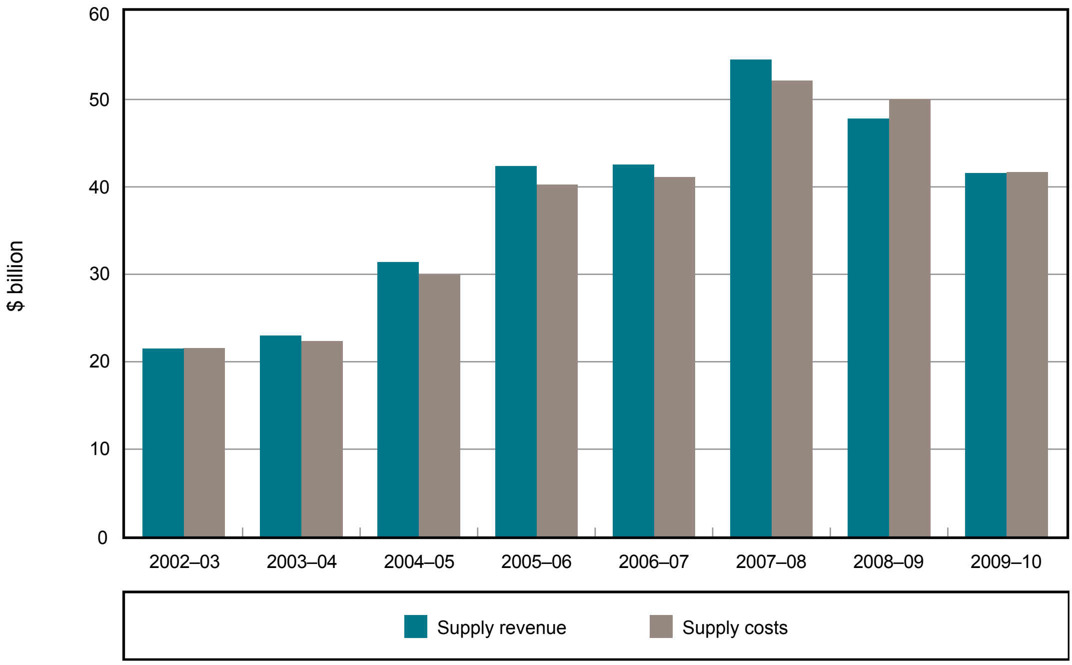
162 Petroleum exports in 2009–10 were around 1 billion litres, or about 1.5 per cent of total supply volumes. More than half of these exported volumes were petroleum products other than petrol or diesel.

The total supply sector revenues and costs between 2002–03 and 2009–10 are shown in chart 13.13. Total supply revenues and costs move in the same direction, largely reflecting international crude oil price movements and international prices for refined products in Australian dollars.

In 2009–10, the total supply sector revenues and costs were approximately $42 billion, approximately $8 billion lower than in 2008–09. This decline in revenues and costs was largely due to lower international crude oil and refined product prices in Australian dollars.

Total supply volumes in 2009–10 decreased by 0.3 per cent from 2008–09. They were approximately 3.5 per cent lower than the total supply volumes in 2007–08, prior to the global financial crisis.

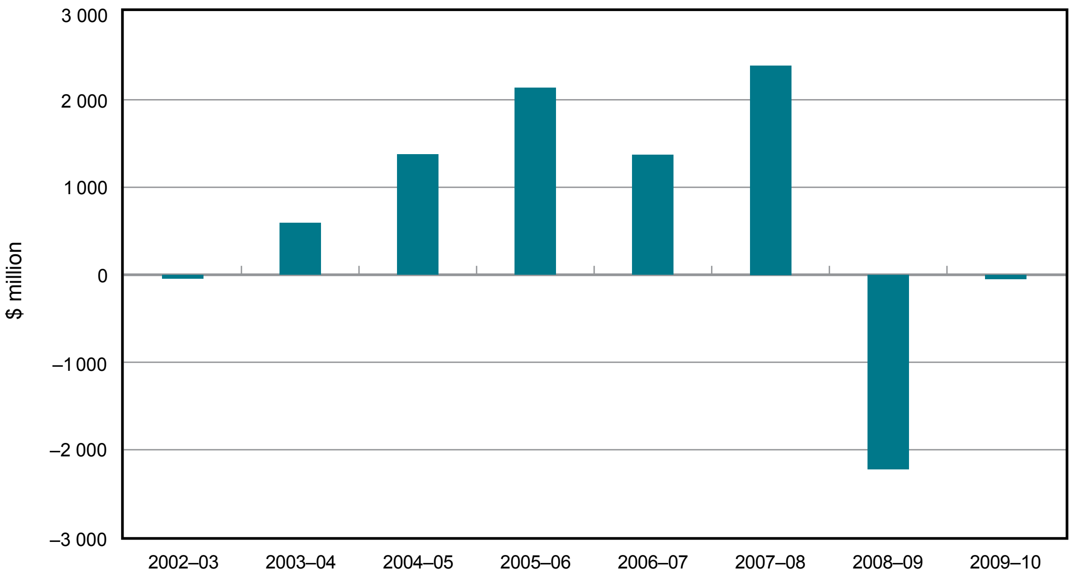
Chart 13.13 Total supply revenues and costs: 2002–03 to 2009–10



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

Taking into account the relevant revenues and costs, the net profit of the total supply sector in 2009–10 was approximately negative $50 million compared with negative $2.2 billion in 2008–09 (chart 13.14).

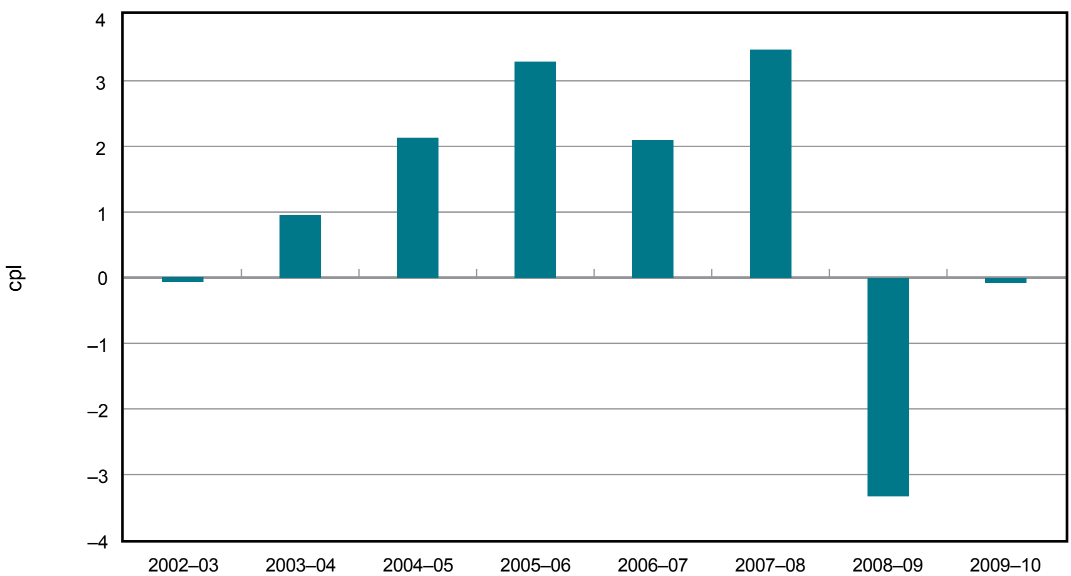
Chart 13.14 Total supply sector net profit (adjusted EBIT): 2002–03 to 2009–10



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

Net profit for the total supply sector was negative 0.1 cpl in 2009–10, an improvement from negative 3.3 cpl in 2008–09 (chart 13.15). The average cpl net profit over the period 2002–03 to 2009–10 has been 1.1 cpl.

Chart 13.15 Total supply sector net profit (adjusted EBIT): 2002–03 to 2009–10



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

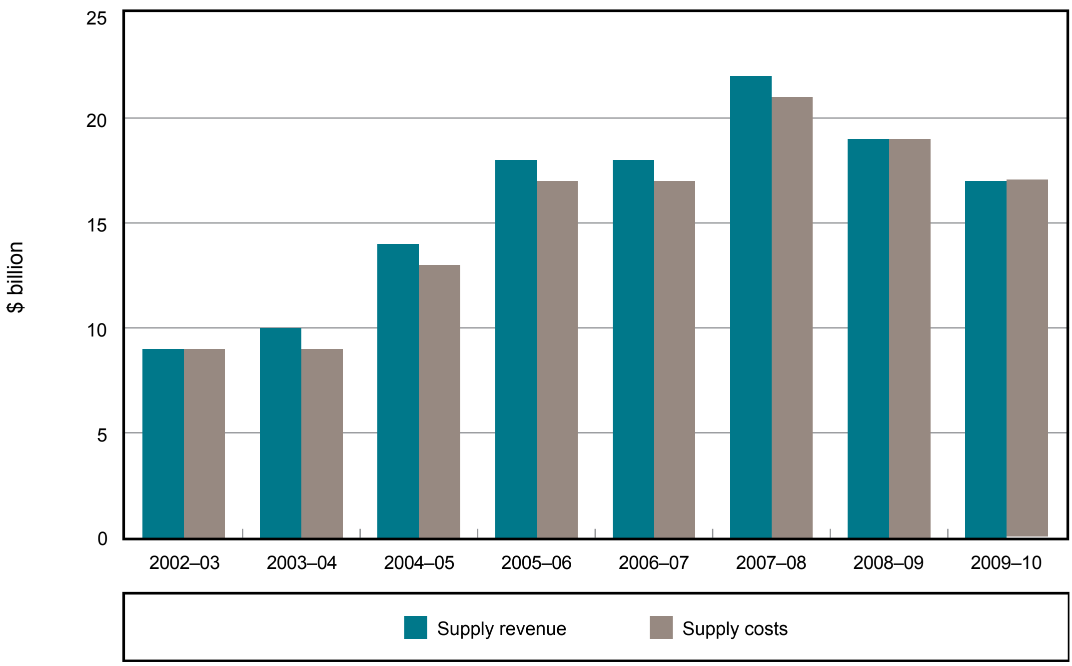
13.9 Revenues, costs and profits of the total supply petrol sector

This section analyses the profitability of the total supply petrol sector.

Chart 13.16 indicates the total supply petrol revenues and costs for the period 2002–03 to 2009–10. In 2009–10 compared with 2008–09, the decrease in petrol supply revenues (of approximately 7.5 per cent) was less than the decrease in costs allocated to the supply of petrol (of approximately 11 per cent).

On the other hand, petrol supply volumes were 0.7 per cent lower in 2009–10 than in 2008–09. At approximately 26.5 billion litres, petrol supply volumes were approximately 1.2 billion litres (or 4 per cent) less than the petrol volume supplied in 2007–08.

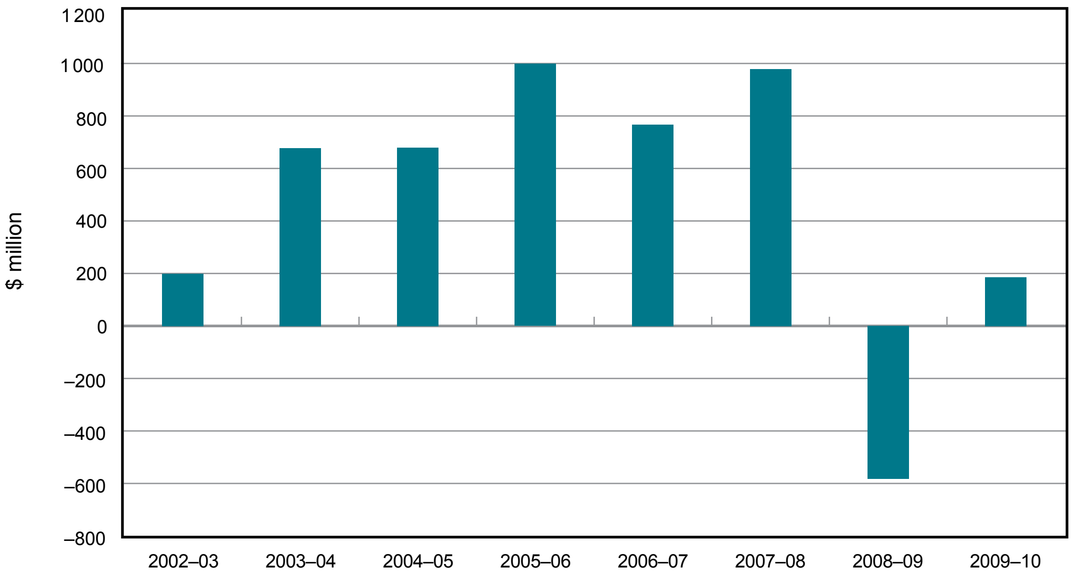
Chart 13.16 Petrol total supply revenues and costs: 2002–03 to 2009–10



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

The ACCC has estimated that petrol total supply profit was $185 million in 2009–10, after a loss of $580 million in 2008–09 (chart 13.17). The average annual net profit of the supply sector for petrol in Australia has been estimated to be $490 million since 2002–03.

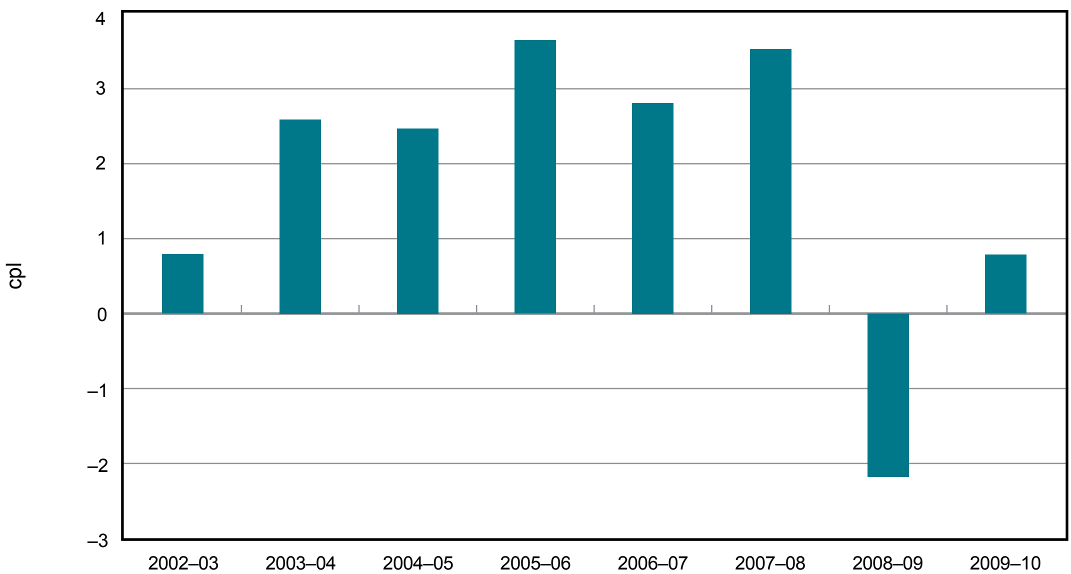
Chart 13.17 Petrol total supply sector net profit (adjusted EBIT): 2002–03 to 2009–10



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

Petrol supply net profit was 0.7 cpl in 2009–10, after negative 2.2 cpl in 2008–09 (chart 13.18). The average annual net profit on supplied petrol in Australia has been estimated to be 1.8 cpl since 2002–03.

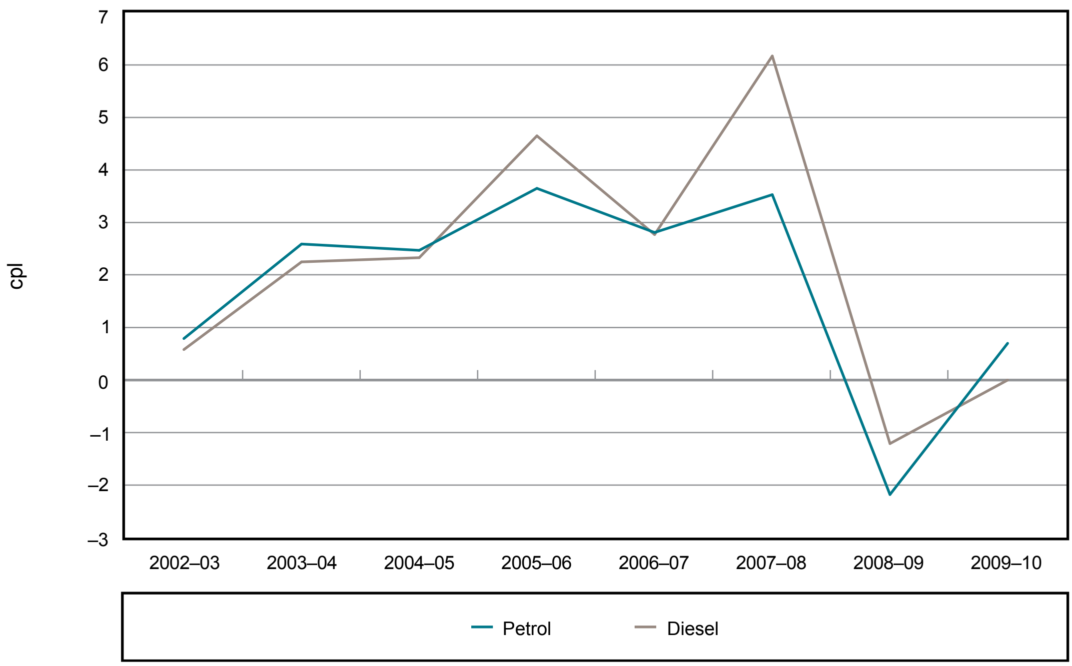
Chart 13.18 Petrol total supply sector net profit (adjusted EBIT): 2002–03 to 2009–10



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

Apart from 2007–08, profits on a cpl basis in the total supply sectors for petrol and diesel have been relatively closely aligned in recent years (chart 13.19). Over the period 2002–03 to 2009–10, the average net profit for diesel in the total supply sector has been 2.2 cpl, whereas petrol total supply net profit was 1.8 cpl.

Chart 13.19 Petrol and diesel total supply sector net profits (adjusted EBIT): 2002–03 to 2009–10



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

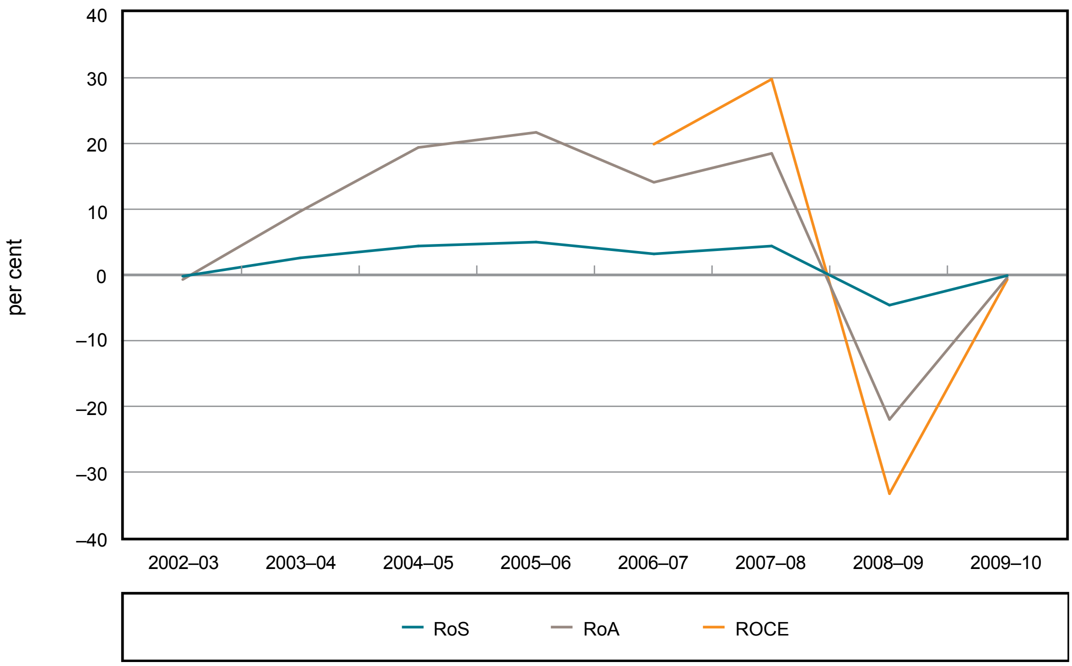
13.10 KPIs for domestic supply sector

The three KPIs (return on sales, return on assets and return on capital employed) for the domestic total supply sector improved marginally in 2009–10 from 2008–09 (chart 13.20).

However, they are lower than the ratios estimated for the years 2003–04 to 2007–08 when EBIT in the supply sector was relatively higher than the one estimated for the past two financial years.

Between 2002–03 and 2009–10, the average for return on sales was 1.8 per cent and the average for return on assets was 7.5 per cent. Return on capital employed has averaged 3.9 per cent between 2006–07 and 2009–10.

Chart 13.20 KPIs for supply sector: 2002–03 to 2009–10



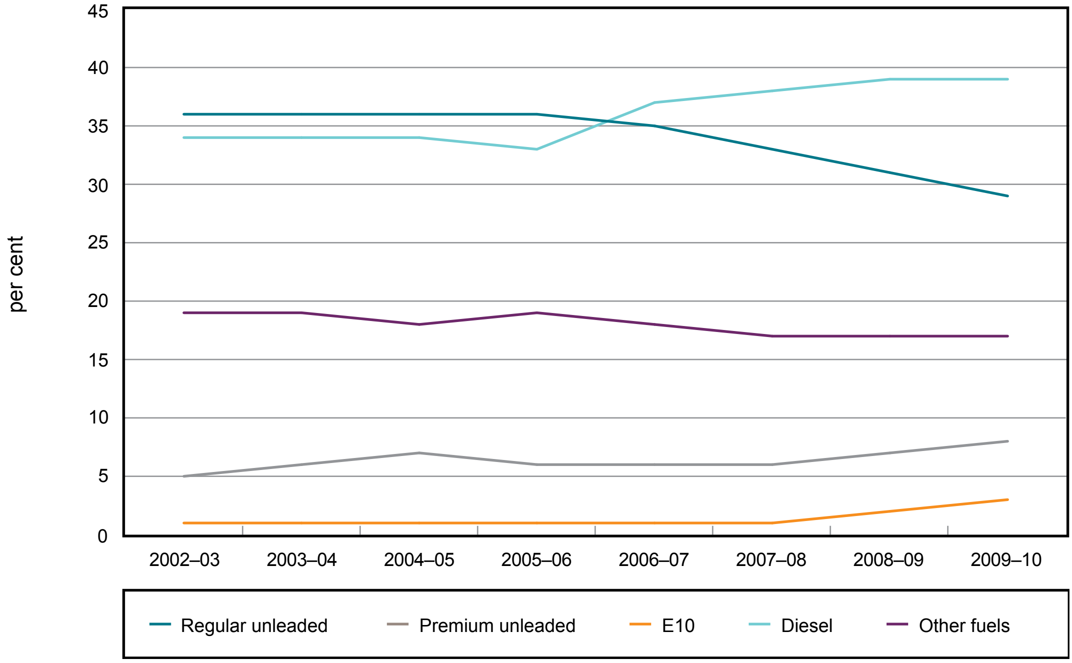
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

13.11 Total supply sector product mix

Earlier in this chapter, it was noted that the product mix at the refinery sector has been relatively stable in recent years. This is not the case at the total supply sector.

As depicted in chart 13.21, diesel volumes, at approximately 39 per cent of total volumes, now exceed regular unleaded petrol volumes in the total supply sector. As a proportion of total volumes, regular unleaded volumes have declined from 36 per cent in 2002–03 to 29 per cent in 2009–10, while premium unleaded petrol and E10 have increased over the past two years from a relatively low base.

Chart 13.21 Product mix at total supply sector: 2002–03 to 2009–10



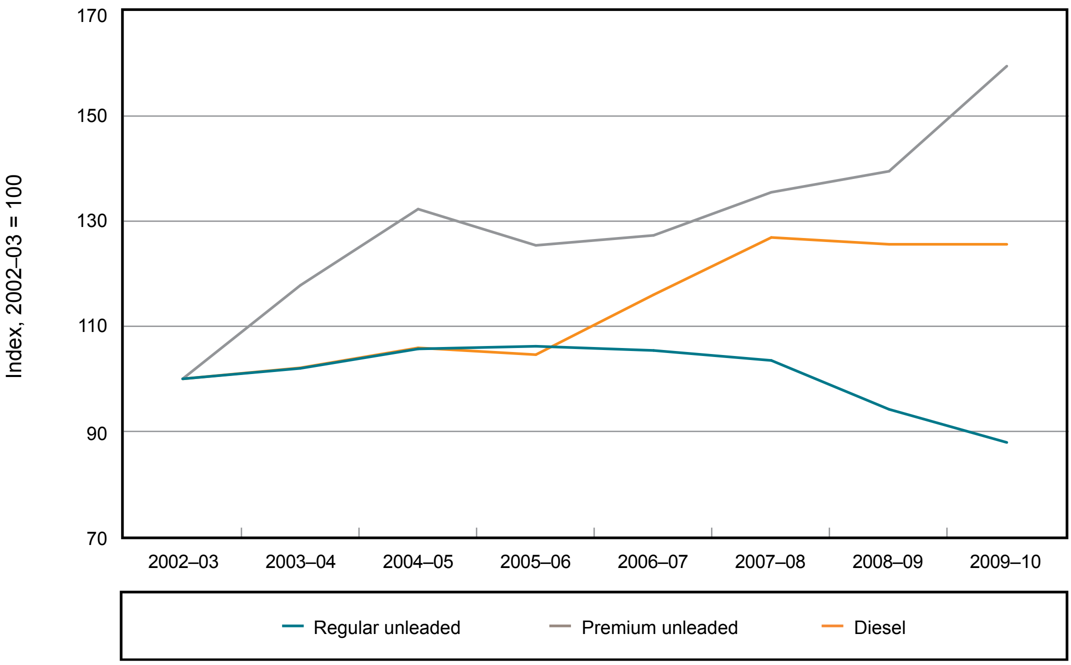
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

While the growth in supply of E10 volumes has increased the most of all retail market fuels in recent years, the growth in volumes at the total supply levels for diesel and premium unleaded petrol has been also relatively strong since 2002–03 (chart 13.22).[163] As domestically refined volumes of diesel and premium petrol have been broadly stable in recent years, the additional demand for these products has been met by imports.[164]

163 An index of the increase in annual E10 volumes in the total supply sector in recent years has not been shown for comparative purposes in chart 13.22, as it has increased considerably more from a low base than the other fuels shown in the chart. E10 volumes are also reported in the wholesale sector for E10, that is, blended at the wholesale level. E10 at the total supply level includes volumes under the buy–sell transactions between the refiner-marketers.

164 See chapters 3 and 7 for a discussion of imports of RULP and PULP fuels.

Chart 13.22 Growth in volumes of petrol grades and diesel in the total supply sector: Index, 2002–03 = 100



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

13.12 Foreign exchange gains and losses

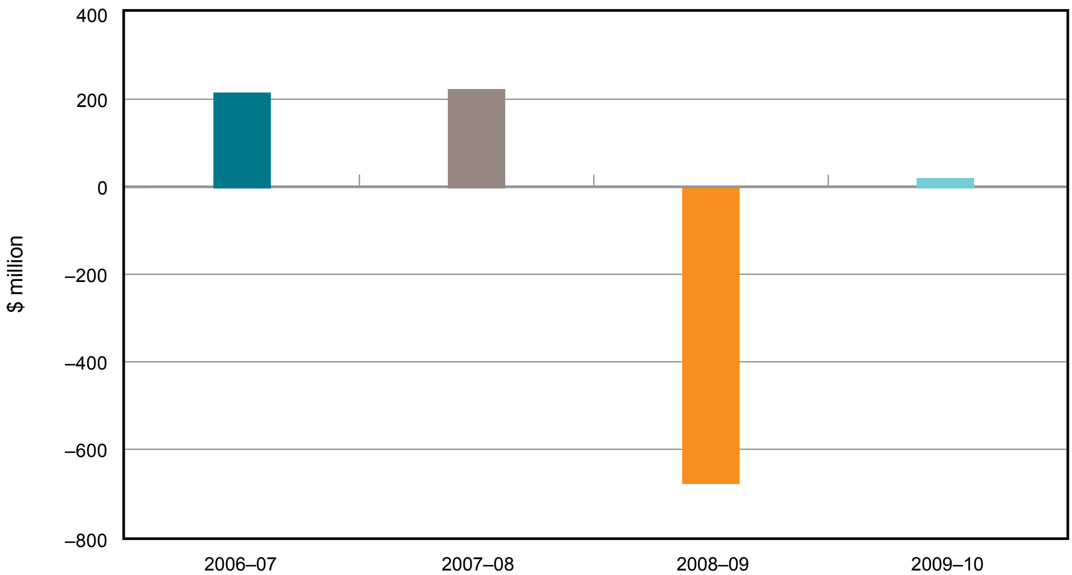
The refiner-marketers purchase the majority of crude oil and refined products in USD. The greater the reliance on imported products the greater is the risk that the AUD–USD exchange rate may impact on prices of these products when converted into domestic currency, assuming no hedging policy is implemented to manage the exchange rate risk. Recently, Caltex has announced that it has decided to implement a policy of hedging 50 per cent of its USD crude oil and product payables exposure with effect from 1 July 2010.[165]

Foreign exchange gains and losses are shown in chart 13.23. The total supply sector made foreign exchange gains of approximately $220 million in 2006–07 and 2007–08. Foreign exchange losses in 2008–09 were significant—at approximately $680 million—and accounted for about one-third of the total loss incurred by total supply.

In 2009–10, the refiner-marketers had an average foreign exchange gain of approximately $25 million. The impacts of a combination of relatively stable, but increasing, international crude oil and refined product prices in 2009–10 and a somewhat stable but increasing AUD–USD exchange rate over the same period, have broadly offset each other, resulting in minimal foreign exchange gains and losses in 2009–10 for the supply sector.

165 Caltex 2010 half year financial report (retrieved 28 October 2010) is available at <http://www.caltex.com.au/InvestorCentre/Documents/2010/2010%20Half%20Year%20Report.pdf>

Chart 13.23 Refining and total supply sectors foreign exchange gains and losses: 2006–07 to 2009–10



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

13.13 Concluding remarks on the financial performance of the refining and total supply sectors

The profitability of the refinery and total supply sectors in 2009-10 has been below the average of recent years. However, these two sectors have improved considerably from the significant financial losses incurred in 2008-09.

Foreign exchange losses – which were a significant contributor to the overall losses incurred at the total supply sector in 2008-09 – were not a notable factor in 2009-10.

In terms of the refining sector:

- Net profit of the refinery sector in 2009–10 was negative $100 million (–0.3 cpl) compared with negative $280 million (–0.8 cpl) in 2008–09. The average net profit for refining over the period 2002–03 to 2009–10 has been 2.1 cpl.
- Petrol refinery net profit was $210 million (1.4 cpl) in 2009–10, after a loss of $55 million (–0.4 cpl) in 2008–09. The average annual net profit on refined petrol in Australia has been estimated to be 2.9 cpl since 2002–03.
- Diesel refinery net profit has been generally higher than petrol refinery net profit. On average, diesel refinery net profits have been 4.6 cpl since 2002–03.

In terms of the total supply sector:

- The net profit of the total supply sector in 2009–10 was approximately negative $50 million (–0.1 cpl) compared with negative $2.2 billion (–3.3 cpl) in 2008–09. The average net profit for the total supply sector over the period 2002–03 to 2009–10 has been 1.1 cpl.
- Petrol total supply profit was $185 million (0.7 cpl) in 2009–10, after a loss of $580 million (–2.2 cpl) in 2008–09. The average annual net profit on supplied petrol in Australia has been estimated to be 1.8 cpl since 2002–03.

14 Financial performance of the wholesale and retail sectors

Key points:

- Profitability of the wholesale petroleum sector in 2009–10 has been broadly unchanged from 2008–09.
  - On a cpl basis, net profit of the petrol wholesale sector was 1.2 cpl in 2009–10, an increase from 0.2 cpl in 2008–09.
- The retail sector made a net profit of approximately $290 million in 2009–10, up on net profit in 2008–09 of $230 million.
  - On a cpl basis, the net profit of the petrol retail sector was 1.1 cpl in 2009–10, an increase from 0.5 cpl in 2008–09.
- Convenience store sales are an important part of retailers' revenues, and hence their profits. Convenience store net profits comprised 39 per cent of total retail net profits in recent years.
- Volumes of fuel sold at the retail level under the various 'shopper docket' schemes have decreased marginally relative to the total volume of fuel sales in recent years.

14.1 Overview

This chapter considers the financial performance of the wholesale and retail sectors in greater detail. In particular, it reports on the revenues, costs and profits in wholesaling and retailing of petroleum products.

The wholesaling of petroleum products involves purchasing and reselling refined product to retail and commercial customers. The wholesale sector supplies fuel and other products to commercial users such as primary producers, aviation and mining companies, as well as to retailers and other wholesalers. Each of the refiner-marketers has a substantial wholesale network. Similarly, independent wholesalers also supply their own retail outlets, independent retailers and other smaller wholesalers. The imports of petroleum products by the independents are included in the wholesale sector.[166]

In the retail sector there are approximately 6400 individual service stations[167] supplied by various wholesalers. These include refiner-marketer owned and operated sites, commission agents and franchisees, refiner-marketer branded sites, supermarket branded sites, and various large and small independents. Retailers generally sell a number of petrol grades, diesel and automotive LPG. Retailers also generate substantial revenue from non-fuel sales such as convenience store products.

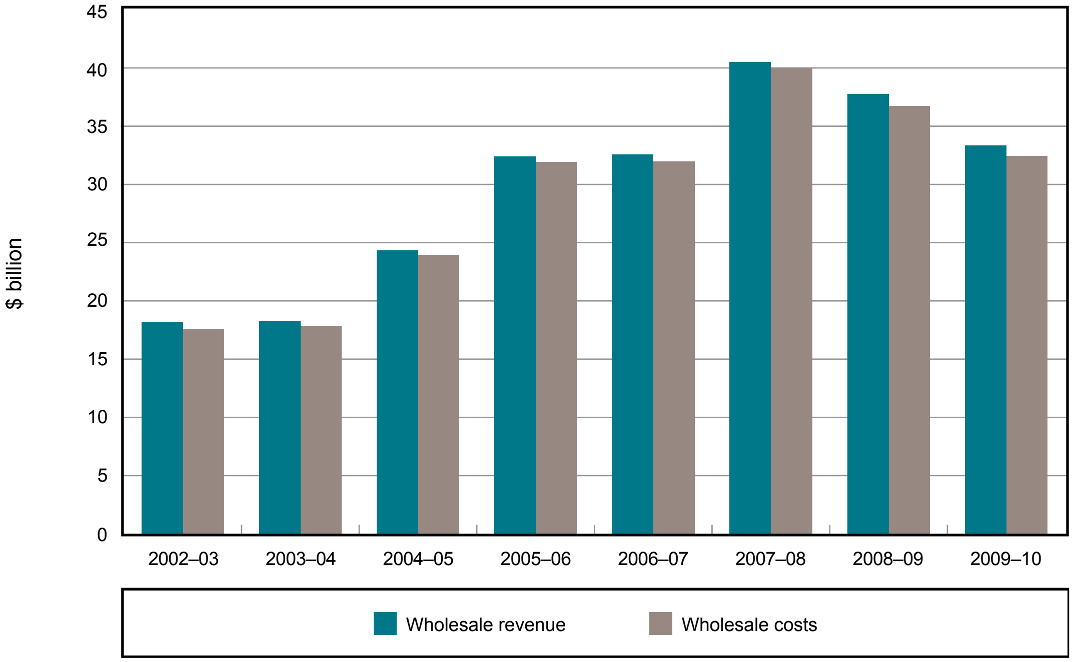
166 It has not been possible to include volumes of independent imports into the total supply sector (as with the refiner-marketers) as the revenues and costs associated with these volumes are included in the independent's wholesale financial data.

167 According to Informed Sources's Netwatch database (October 2010).

14.2 Revenues, costs and profits in the wholesale sector

Total revenues in the wholesale sector in 2009–10 decreased by 11.7 per cent from 2008–09, from approximately $38 billion to approximately $33 billion (chart 14.1). Total costs were also lower from the previous year by approximately 12 per cent. The lower revenues and costs in 2009–10 were largely due to lower revenue from diesel (down by 17.3 per cent from the previous year) and regular unleaded petrol (down by 12.3 per cent from the previous year).

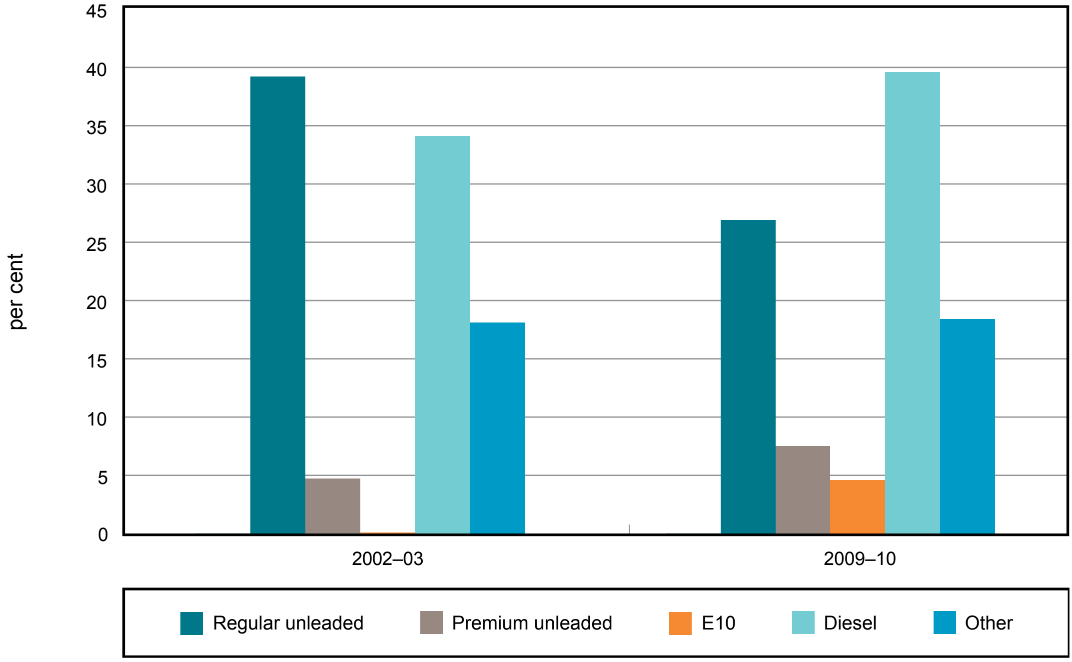
Chart 14.1 Wholesale sector revenues and costs: 2002–03 to 2009–10



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

The share of diesel volumes in the wholesale market, and hence their impact on total revenues, has increased in recent years (chart 14.2). Diesel volumes in 2009–10 were almost 40 per cent of all volumes at the wholesale level. They were approximately 34 per cent in 2002–03. Regular unleaded petrol volumes were approximately 27 per cent of total volumes in 2009–10, a decrease from 39 per cent in 2002–03.

Chart 14.2 Share of wholesale volumes by product: 2002–03 and 2009–10

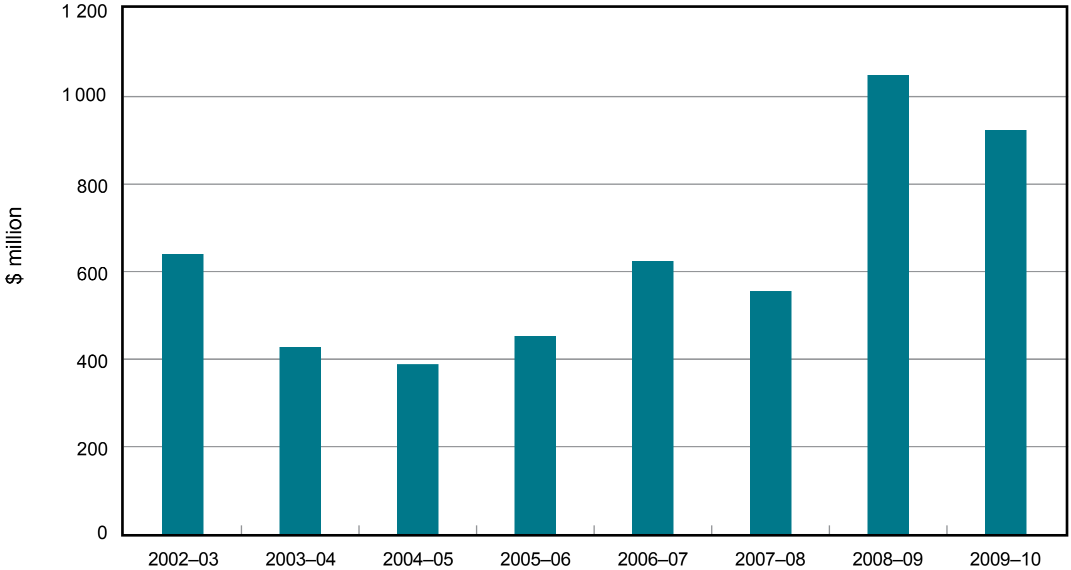


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

Factors influencing the decrease in regular unleaded petrol volumes are a relatively mature RON 91 retail market and growing premium unleaded petrol and E10 retail markets. This is largely a result of greater fleet of vehicles whose manufacturers recommend use of premium petrol and the mandated use of ethanol in petrol in NSW (see chapters 6 and 7 for a discussion of the markets for E10 and PULP).

Taking into account the revenues and costs at the wholesale level, the sector made a net profit of approximately $1 billion in 2009–10, marginally lower than the previous year's net profit (chart 14.3).

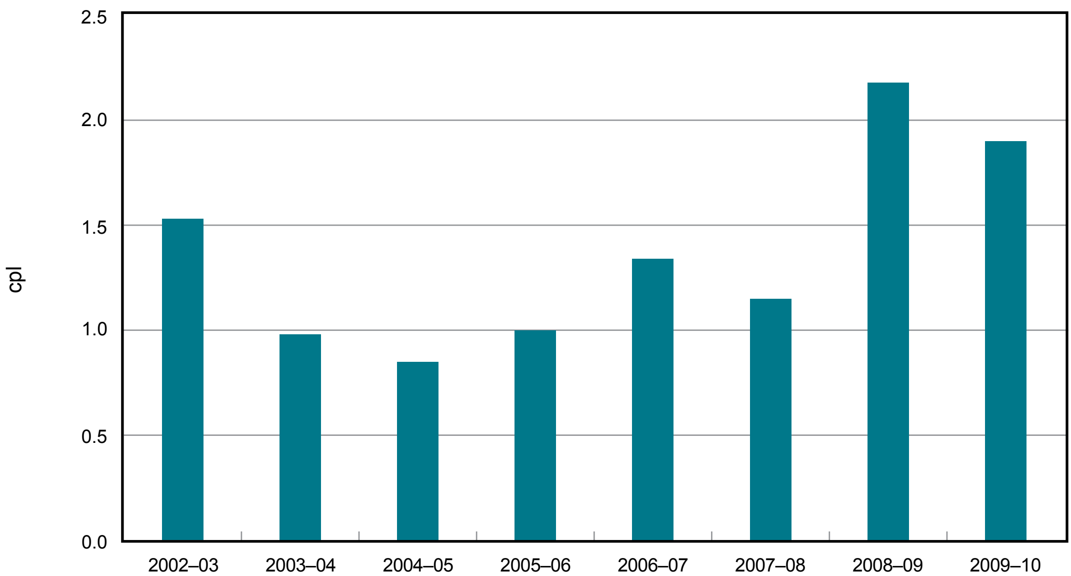
Chart 14.3 Wholesale sector net profit (adjusted EBIT): 2002–03 to 2009–10



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

As shown in chart 14.4, the wholesale sector net profit was 1.9 cpl in 2009–10, or 0.3 cpl lower than the previous year. Over the past two years, profits in the wholesale sector have been higher than the profits earned between 2002–03 and 2007–08.

Chart 14.4 Wholesale sector net profit (adjusted EBIT): 2002–03 to 2009–10

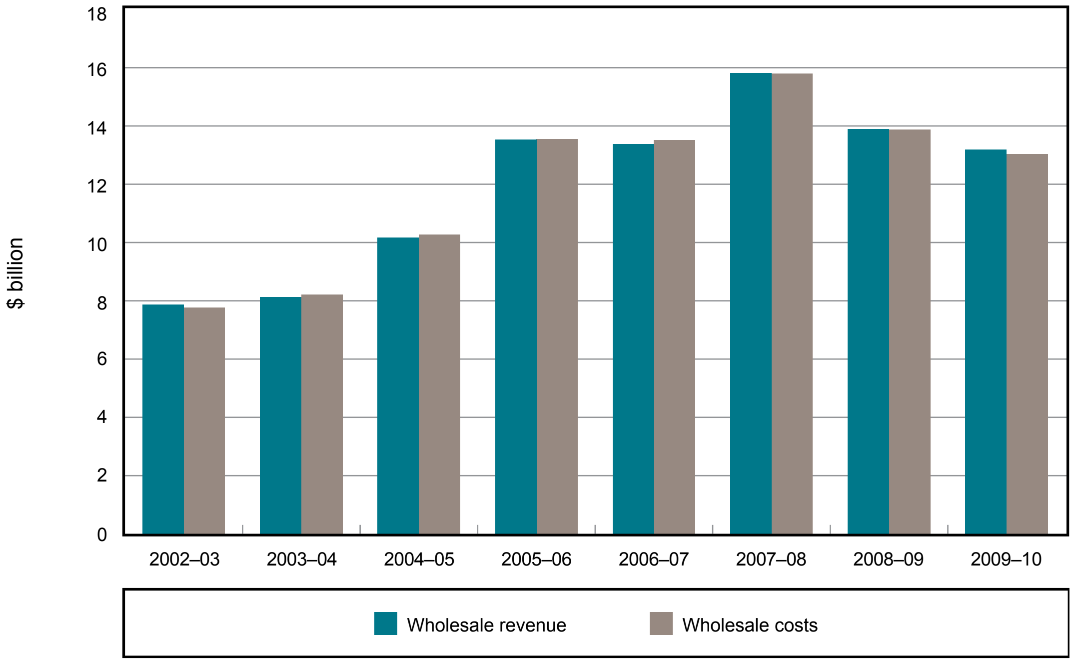


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

14.3 Revenues, costs and profits in the wholesale petrol sector

The previous section analysed the revenues, costs and profits in the overall downstream wholesale sector. In this section, the focus is on the wholesale petrol sector. Petrol (RULP, PULP and E10) revenues and costs are depicted in chart 14.5. Revenues and costs decreased by approximately 5–6 per cent in 2009–10 from the previous year, while volumes were largely unchanged.

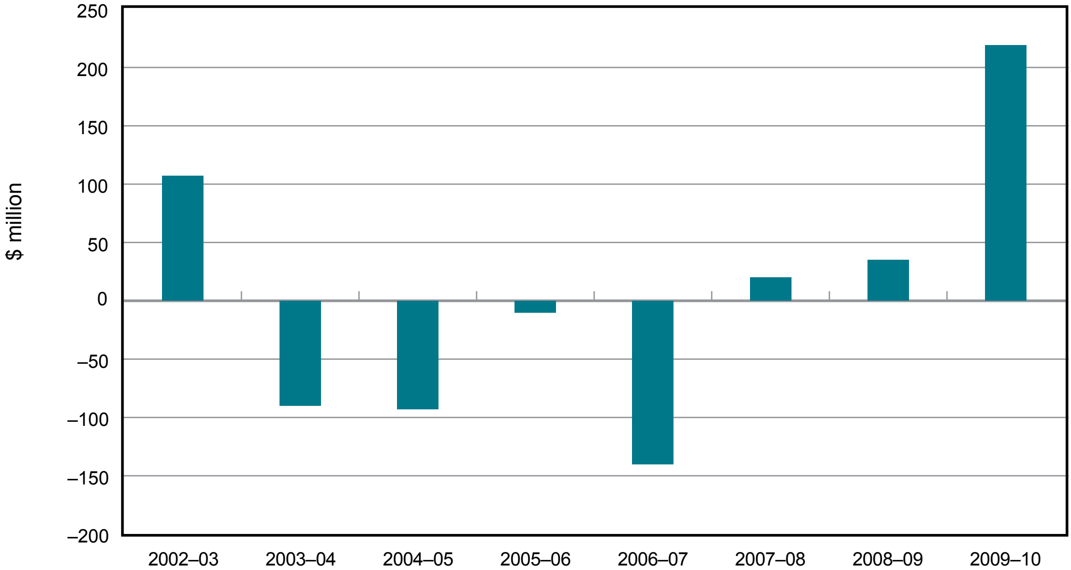
Chart 14.5 Petrol wholesale sector revenues and costs: 2002–03 to 2009–10



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

Taking into account the relevant revenues and costs, the net profit of the wholesale petrol sector was approximately $220 million in 2009–10 compared with $35 million in 2008–09 (chart 14.6). The 2009–10 profitability in the wholesale petrol sector has been estimated to be the highest since 2002–03.

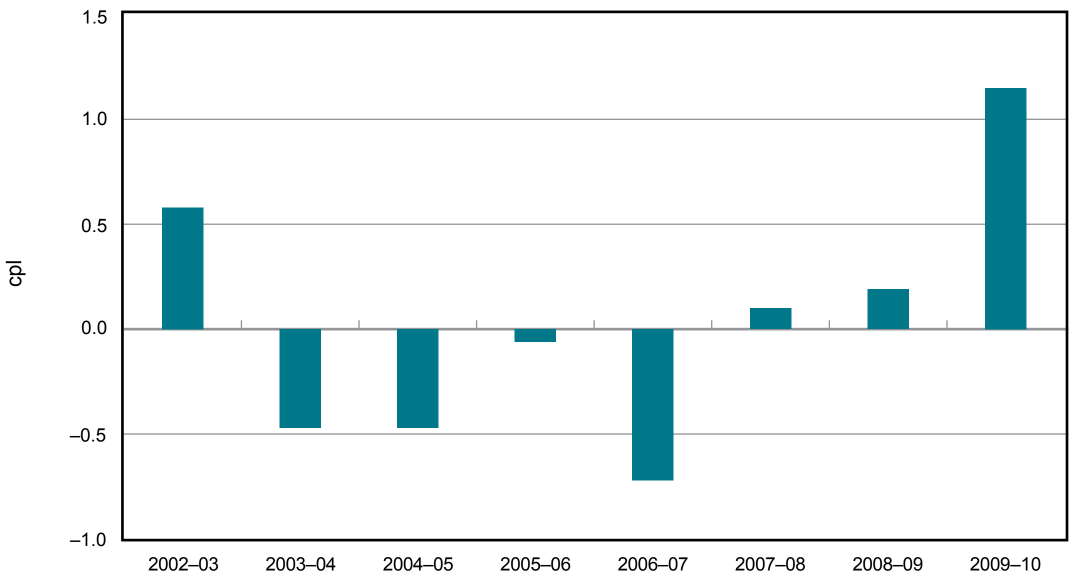
Chart 14.6 Petrol wholesale sector net profit (adjusted EBIT): 2002–03 to 2009–10



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

Net profit of the petrol wholesale sector was 1.2 cpl in 2009–10, an increase from 0.2 cpl in 2008–09 (chart 14.7). Net petrol wholesale sector profits have averaged approximately 0.1 cpl since 2002–03.

Chart 14.7 Petrol wholesale sector net profit (adjusted EBIT): 2002–03 to 2009–10

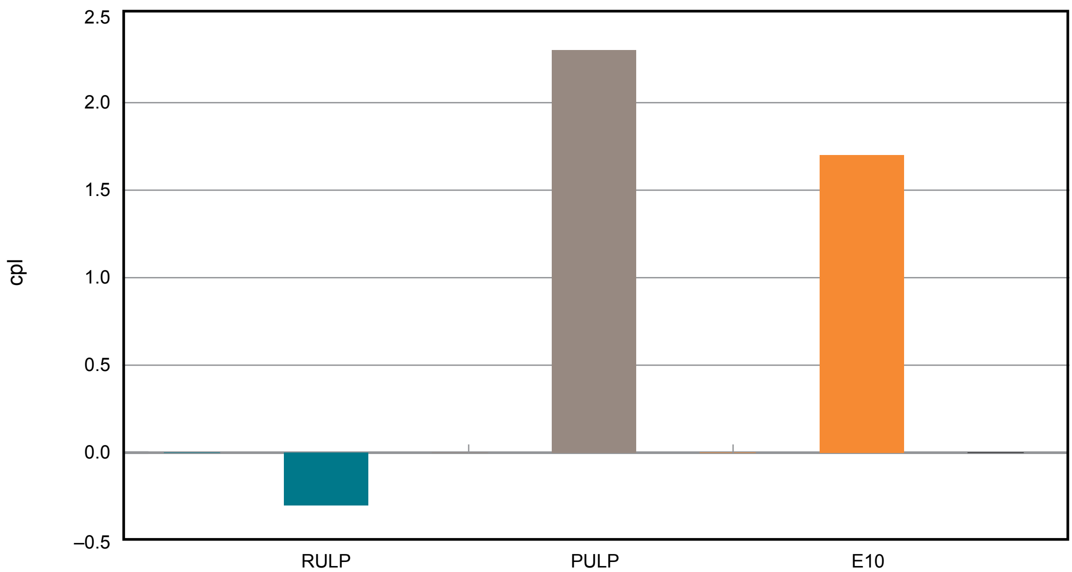


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

One reason for the improved profitability of the wholesale petrol sector in 2009–10 is higher estimated net profits for PULP, especially given the increasing volumes of PULP at the wholesale level. As indicated in chart 14.8 estimated average net profit for PULP between 2005–06 and 2009–10 was 2.2 cpl, while RULP net profit was negative over the same period.

Another factor that may be influencing on the profitability of the wholesale petrol sector is total operating costs. These have increased by an average of approximately 2.1 per cent per annum between 2007–08 and 2009–10. The relatively lower increases in total operating costs (less than the consumer price index over this period) may be due to improved productivity such as relatively lower costs in handling and distributing fuels at the wholesale sector.

Chart 14.8 Estimated petrol wholesale sector average net profits by grade: 2005–06 to 2009–10



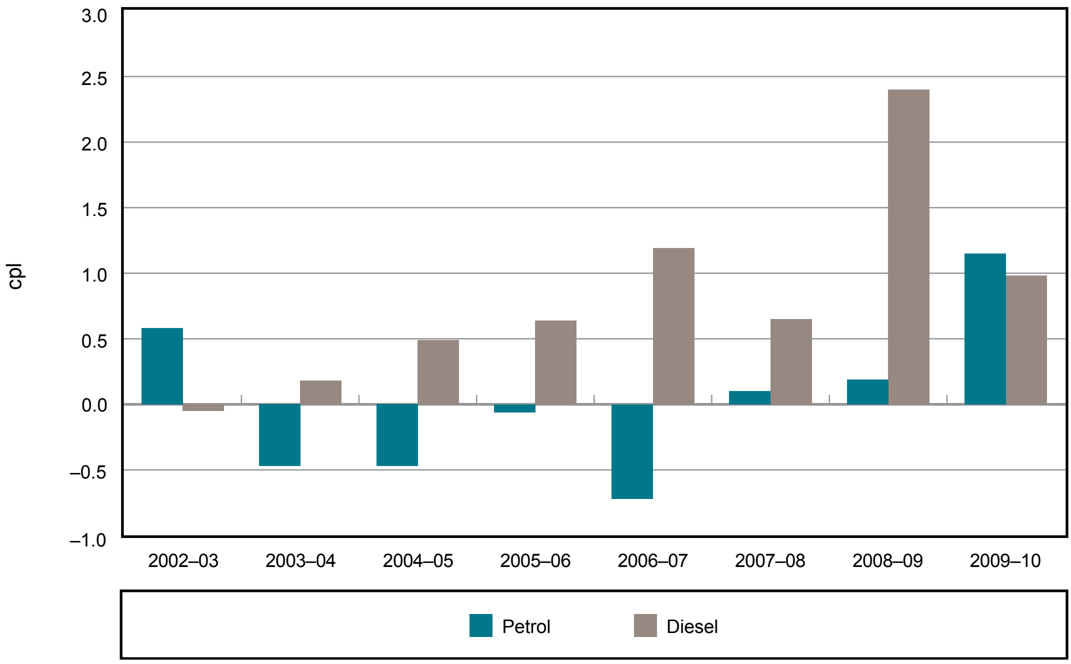
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

14.3.1 Diesel net profits at the wholesale level

Since 2002–03, diesel profitability at the wholesale level has been higher than petrol profitability (chart 14.9). Between 2002–03 and 2009–10, average diesel net profit has been 0.8 cpl, whereas petrol net profit has averaged 0.1 cpl over the same period.

Diesel net profit moderated in 2009–10, at 1.0 cpl, a decrease from 2.4 cpl in 2008–09.

Chart 14.9 Petrol and diesel wholesale sector net profits: 2002–03 to 2009–10



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

14.4 Comparison of KPIs of the wholesale petroleum sector with domestic and international sectors

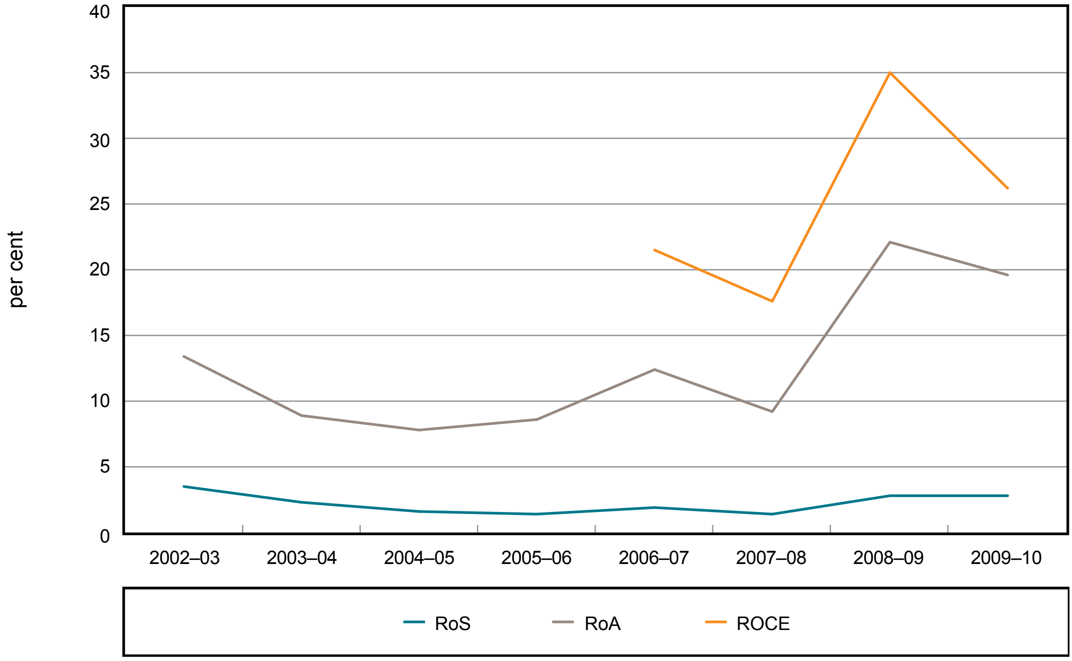
14.4.1 KPIs in the domestic wholesale petroleum sector

The three KPIs (return on sales, return on assets and return on capital employed) for the domestic petroleum wholesale sector are shown in chart 14.10 for the period 2002–03 to 2009–10.

Return on sales was unchanged in 2009–10 from the previous year (2.2 per cent), while return on assets and return on capital employed decreased over the same period.

However, in 2009–10 the KPIs for the wholesale petroleum sector were higher than their long-term averages.

Chart 14.10 KPIs for the domestic petroleum wholesale sector: 2002–03 to 2009–10



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

14.4.2 Comparison of KPIs in the domestic petroleum wholesale sector with other domestic wholesale industries

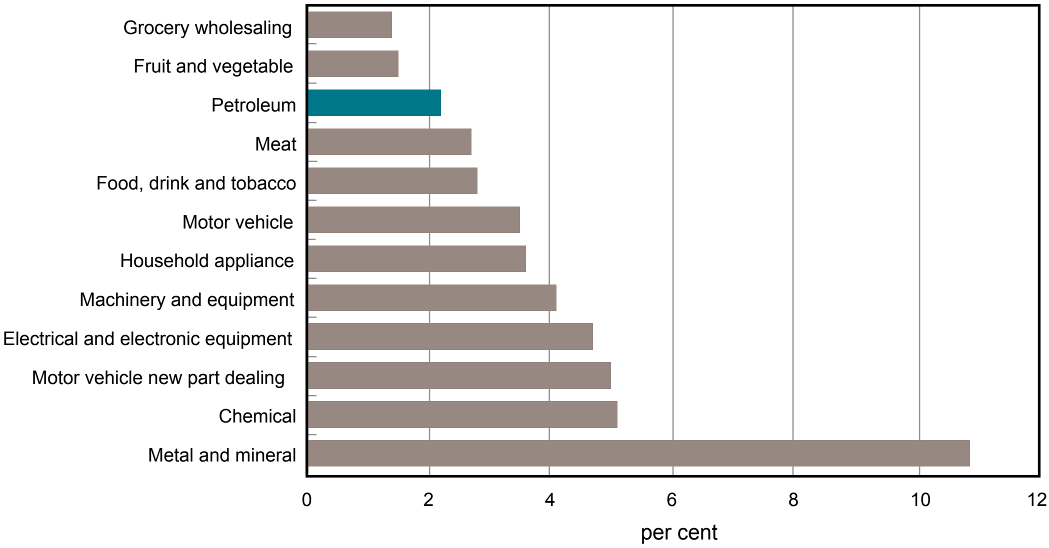
The three KPIs (return on sales, return on assets and return on capital employed) in the domestic wholesale sector are compared with those of other domestic wholesale sectors.

It is estimated that the domestic wholesale sector return on sales between 2002–03 and 2009–10 were, on average, 2.2 per cent. This is lower than most wholesaling industries in Australia, as depicted in chart 14.11.

In terms of return on assets, the domestic wholesale sector average between 2002–03 and 2009–10 has been 12.7 per cent. This is higher than most wholesale industries in Australia, as depicted in chart 14.12.

In terms of return on capital employed, the domestic wholesale sector average between 2006–07 and 2009–10 has been 25.1 per cent. This is higher than wholesale industries in Australia, as depicted in chart 14.13.

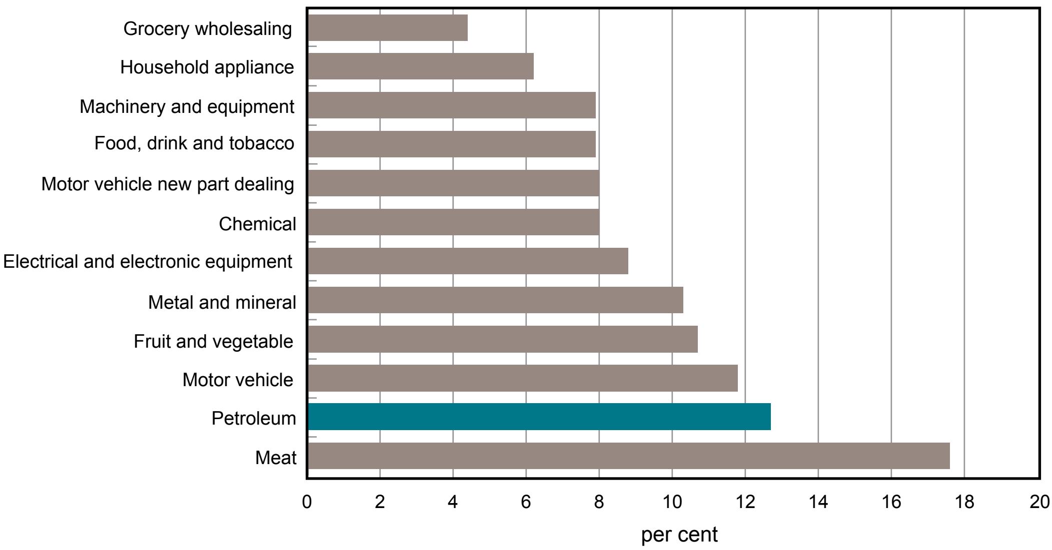
Chart 14.11 Average return on sales of the petroleum wholesale sector and other domestic wholesalers: 2002–03 to 2009–10



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process and Bureau van Dijk Orbis database

Note: Not all companies have data for all years. Some companies report on calendar/other annual basis. Industries have been chosen on the basis of the largest number of firms within each industry (minimum number of firms in each industry is five).

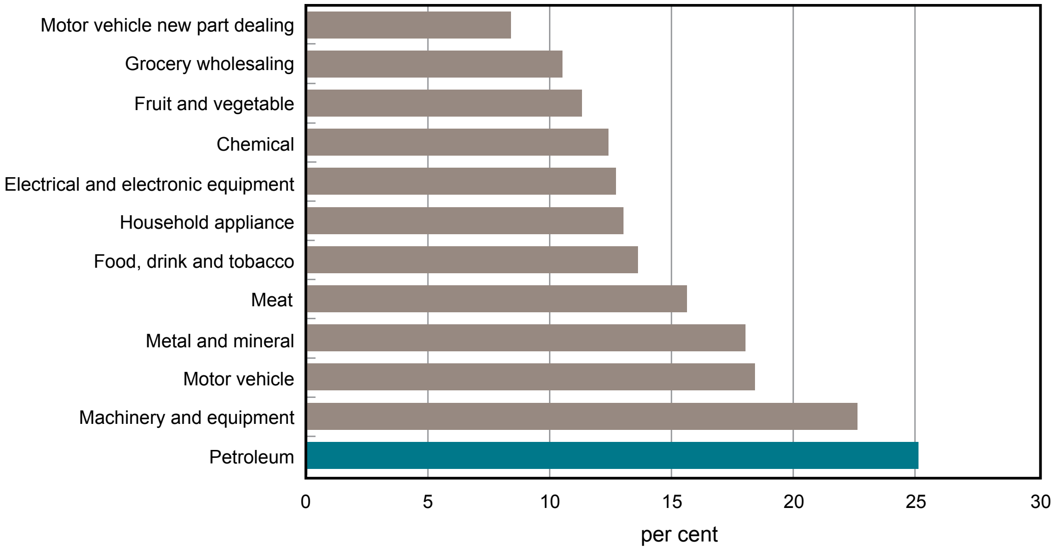
Chart 14.12 Average return on assets of the petroleum wholesale sector and other domestic wholesalers: 2002–03 to 2009–10



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process and Bureau van Dijk Orbis database

Note: Not all companies have data for all years. Some companies report on calendar/other annual basis. Industries have been chosen on the basis of the largest number of firms within each industry (minimum number of firms in each industry is five).

Chart 14.13 Average return on capital employed of the petroleum wholesale sector and other domestic wholesalers: 2006–07 to 2009–10



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process and Bureau van Dijk Orbis database

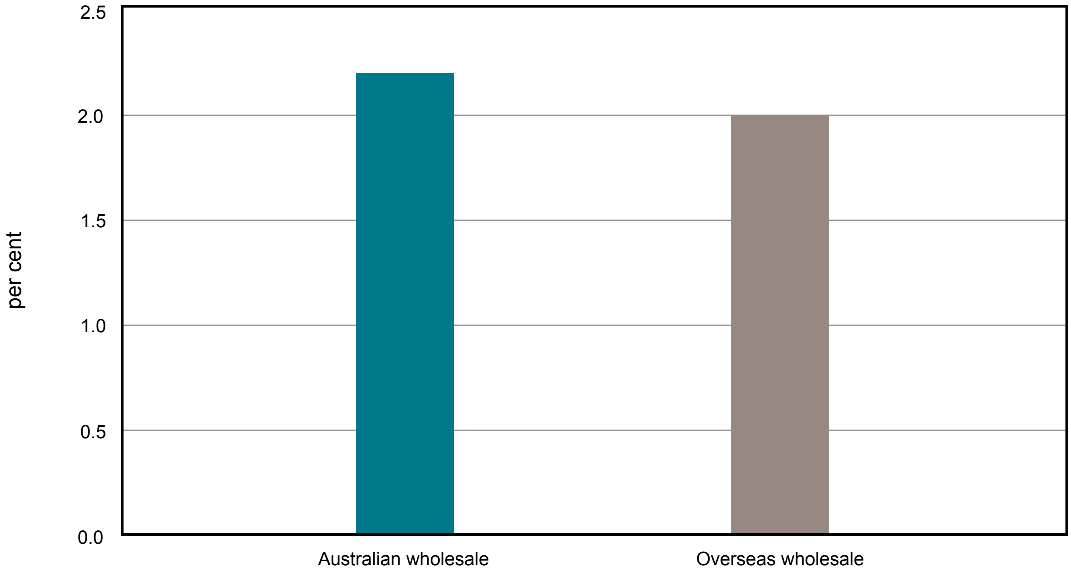
Note: Not all companies have data for all years. Some companies report on calendar/other annual basis. Industries have been chosen on the basis of the largest number of firms within each industry (minimum number of firms in each industry is five).

14.4.3 Comparison of KPIs in the domestic petroleum wholesale sector with international petroleum wholesale sectors

The two common KPIs for Australian and overseas wholesale petroleum sectors—return on sales and return on assets—are analysed below. The comparison is based on averages between 2002–03 and 2009–10.

Chart 14.14 indicates that average return on sales in the wholesale sector in Australia and overseas have been broadly the same between 2002–03 and 2009–10. In terms of return on assets, Australia's wholesale petroleum sector is estimated to have higher returns than the overseas wholesale petroleum sector (chart 14.15).

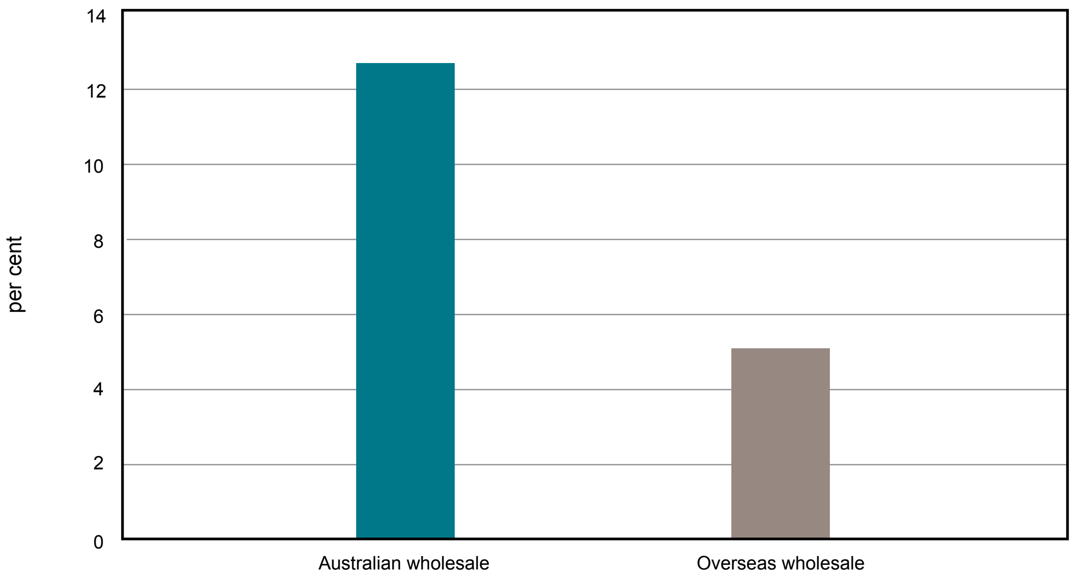
Chart 14.14 Average return on sales of the domestic petroleum wholesale sector and international petroleum wholesale sector: 2002–03 to 2009–10



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process and Bureau van Dijk Orbis database

Note: Not all companies have data for all years. Some companies report on calendar/other annual basis.

Chart 14.15 Average return on assets of the domestic petroleum wholesale sector and international petroleum wholesale sector: 2002–03 to 2009–10



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process and Bureau van Dijk Orbis database

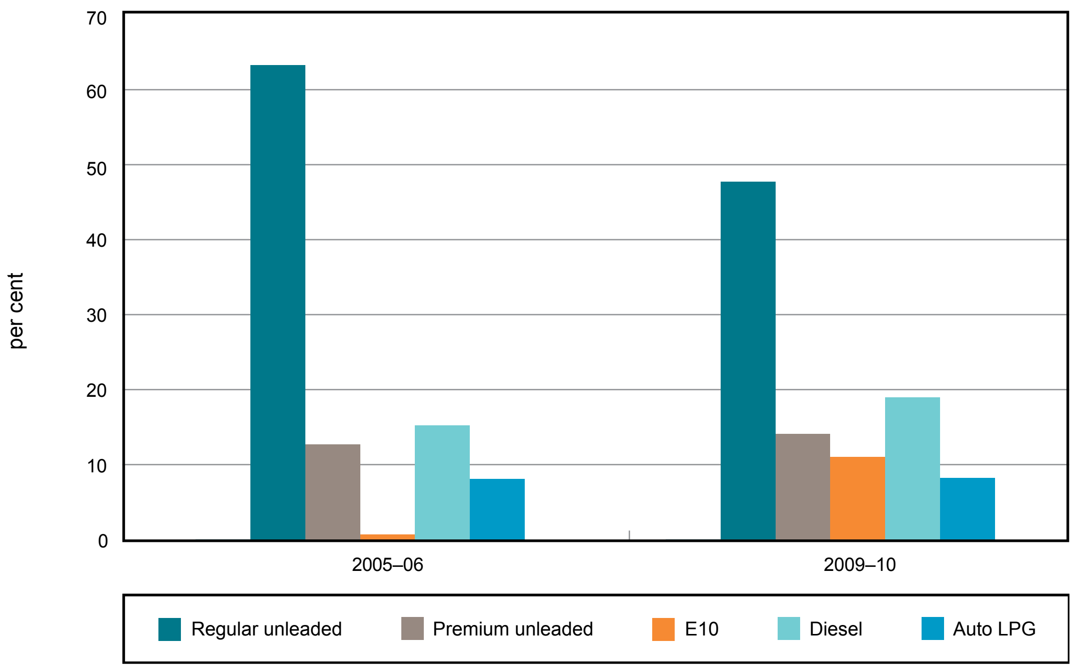
Note: Not all companies have data for all years. Some companies report on calendar/other annual basis.

14.5 Revenues, costs and profits in the retail sector

The retail sector has evolved in recent years in terms of the number of sites and their ownership and control or influence over retail price setting. The share of product volumes at the retail level has also changed.

As noted earlier in the chapter, diesel has the largest volumes sold at the wholesale level. However, petrol dominates in terms of volumes sold at the retail level. Diesel sales at the retail level were approximately 19 per cent of all fuels in 2009–10, an increase from 15 per cent in 2005–06 (chart 14.16). The decrease in volumes of regular unleaded petrol has been matched by a broadly corresponding increase in premium fuels and E10 (the share of all petrol grades volumes has decreased from 77 per cent in 2005–06 to 73 per cent in 2009–10).

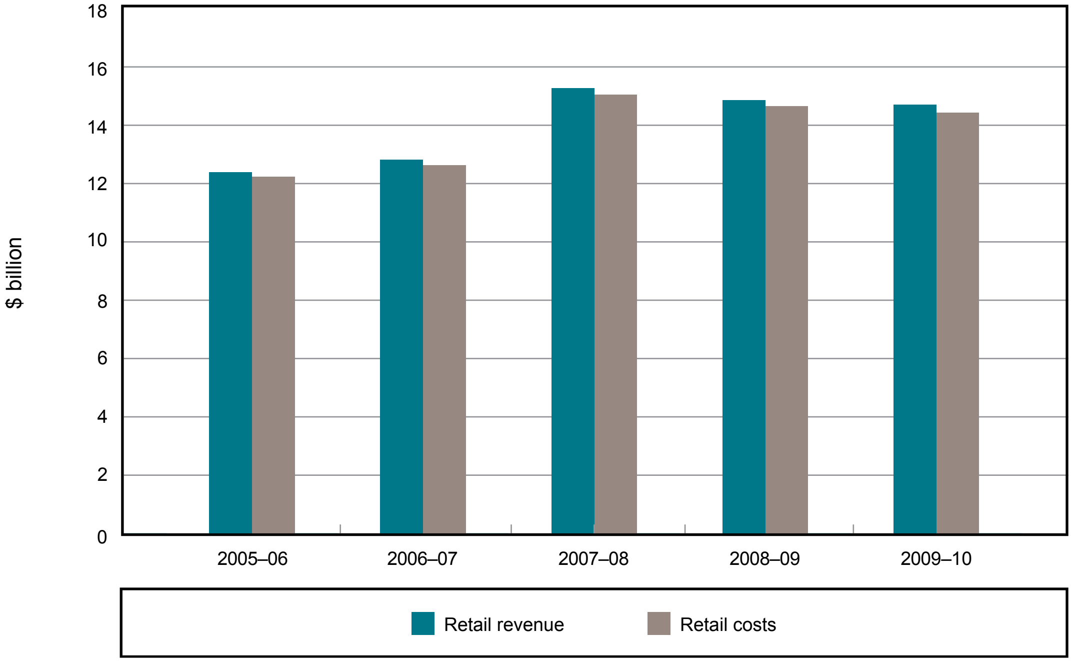
Chart 14.16 Share of retail volumes by product: 2005–06 and 2009–10



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

Total revenues in the retail sector in 2009–10 decreased marginally by 0.8 per cent from 2008–09, from approximately $14.9 billion to approximately $14.7 billion (chart 14.17). Total costs were also lower from the previous year by approximately 1.6 per cent. Regular unleaded petrol revenues and costs were lower by approximately 10 per cent, while diesel revenues and costs decreased by approximately 4 per cent.

Chart 14.17 Retail sector revenues and costs: 2004–05 to 2009–10

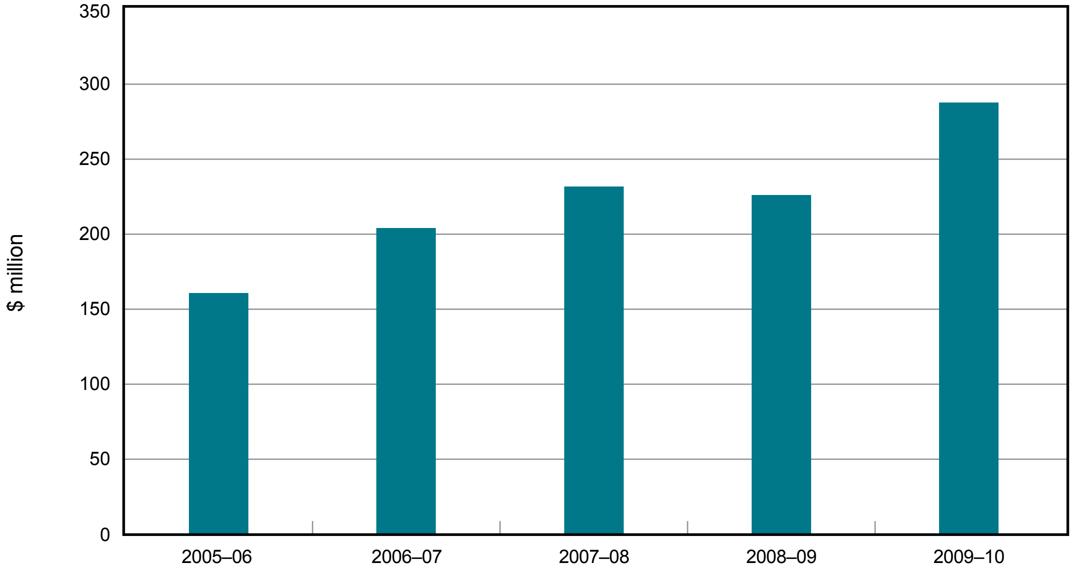


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

Taking into account the revenues and costs at the retail level, the retail sector made a net profit of approximately $290 million in 2009–10, or 27 per cent higher than the profit in the previous year of $230 million (chart 14.18).

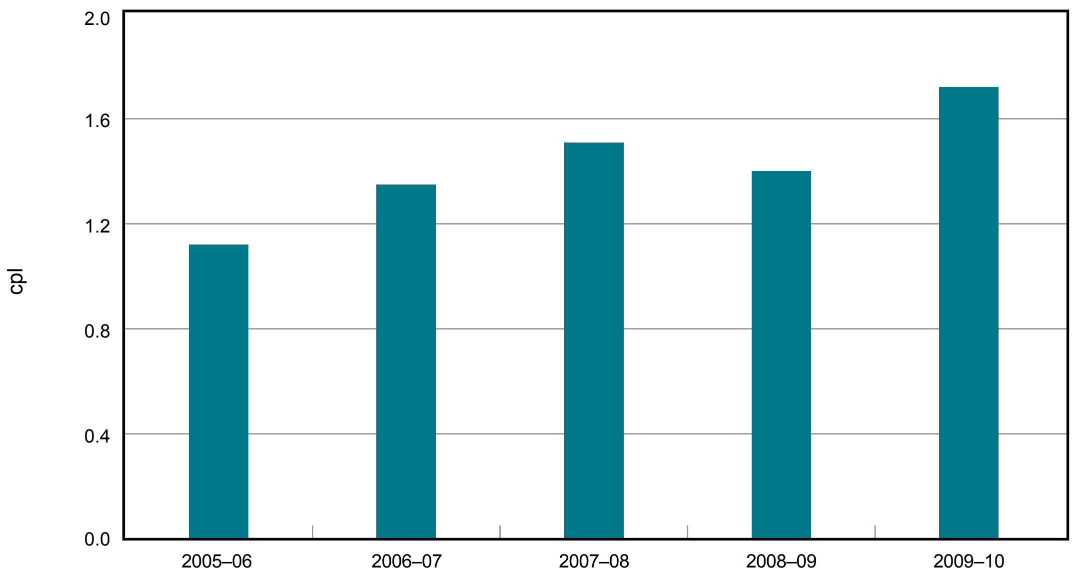
As shown in chart 14.19, the retail sector net profit was 1.7 cpl in 2009–10, or 0.3 cpl higher than the previous year. The retail sector profits in 2009–10 were higher than the average profits estimated between 2005–06 and 2008–09.

Chart 14.18 Retail sector net profit (adjusted EBIT): 2004–05 to 2009–10



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

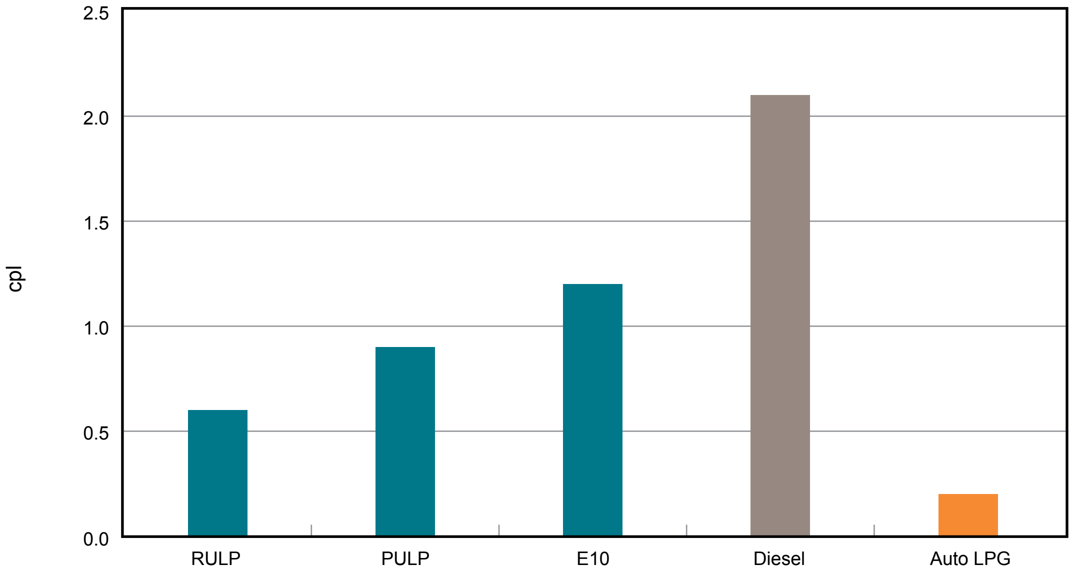
Chart 14.19 Retail sector net profit (adjusted EBIT): 2004–05 to 2009–10



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

In terms of the various fuel products sold at the retail level, the diesel cpl average net profit between 2005–06 and 2009–10 is estimated to have been higher than other types of fuel (see chart 14.20).

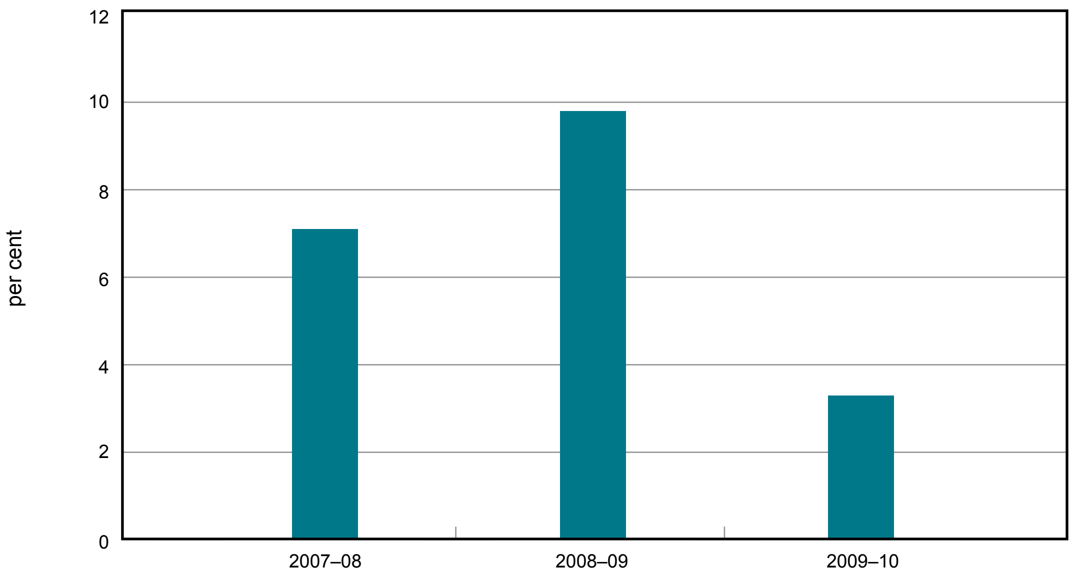
Chart 14.20 Average estimated retail sector net profit by fuel type: 2005–06 to 2009–10



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

The improved profitability at the retail sector in 2009–10 has been partly driven by lower growth in total operating expenses. As indicated in chart 14.21, total operating expenses increased by 3.3 per cent in 2009–10 from 2008–09, much lower than the annual increases in 2007–08 and 2008–09.[168]

Chart 14.21 Total operating expenses in the retail sector: 2007–08 to 2009–10, annual per cent change



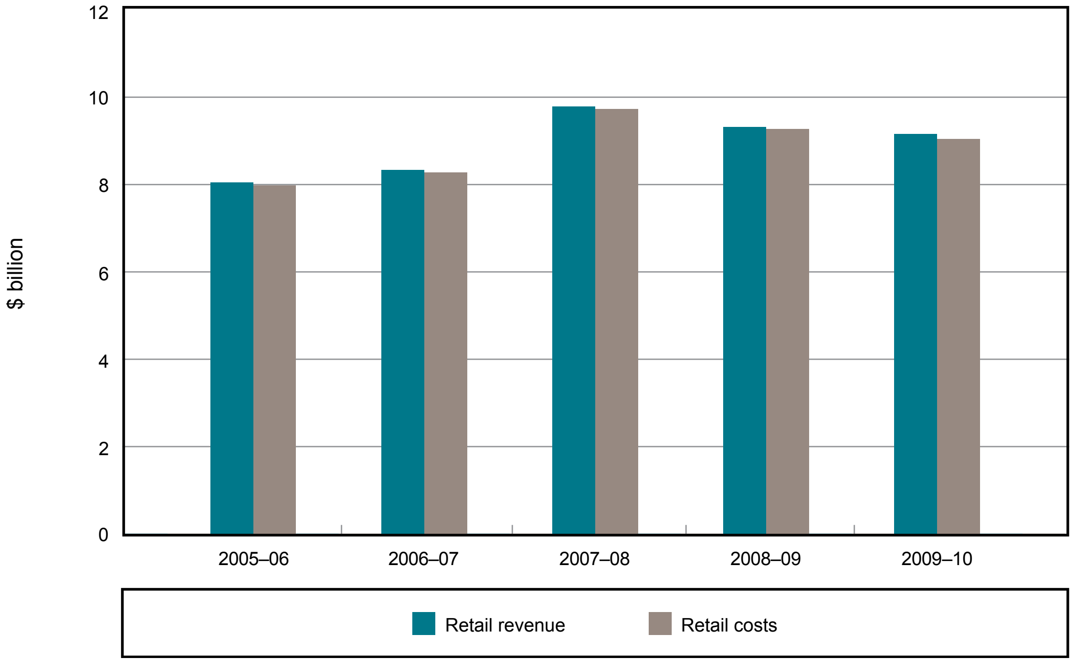
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

168 Total operating expenses may be also influenced by changes in a company's internal accounting policies or procedures.

14.6 Revenues, costs and profits in the retail petrol sector

Petrol (RULP, PULP and E10) revenues and costs are depicted in chart 14.22. Revenues and costs decreased by approximately 2–3 per cent in 2009–10 from the previous year, while volumes increased by 2 per cent.

Chart 14.22 Petrol retail sector revenues and costs: 2004–05 to 2009–10

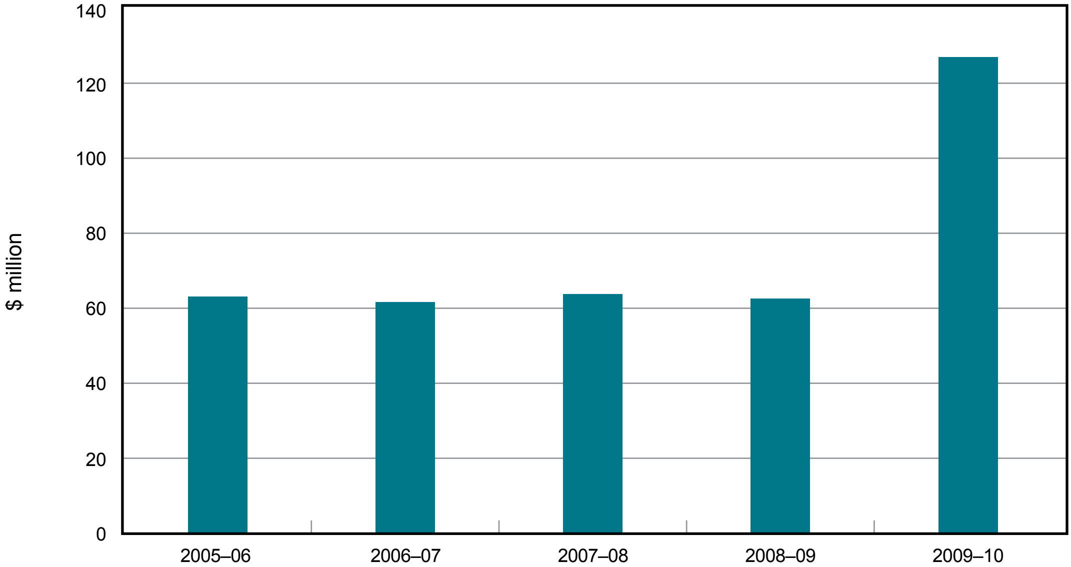


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

Taking into account the relevant revenues and costs, the net profit of the petrol retail sector in 2009–10 was approximately $130 million compared with approximately $60 million in 2008–09 (chart 14.23).

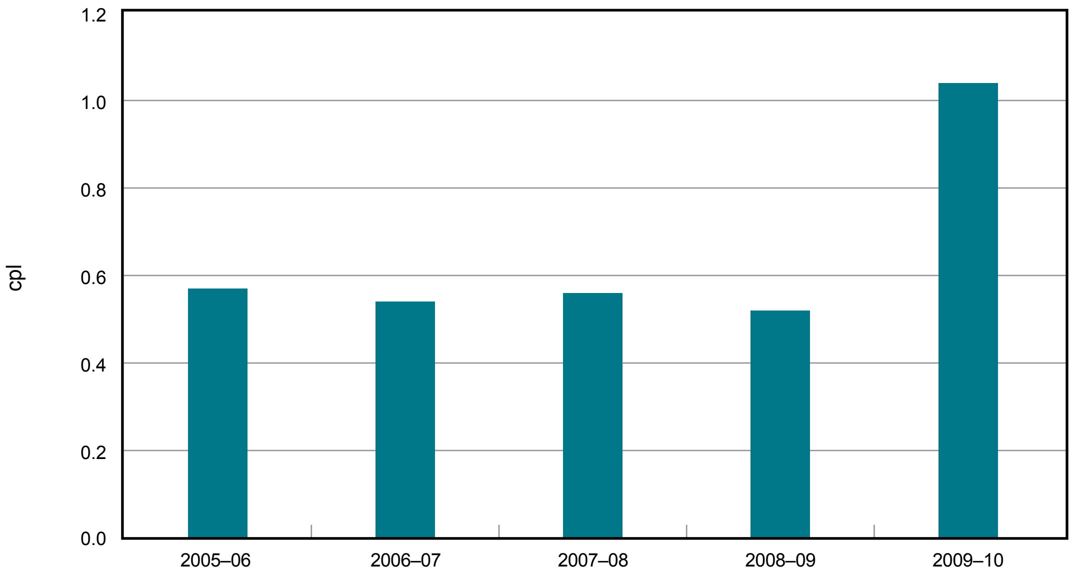
Net profit of the petrol retail sector was 1.1 cpl in 2009–10, an increase from 0.5 cpl in 2008–09 (chart 14.24).

Chart 14.23 Petrol retail sector net profit (adjusted EBIT): 2004–05 to 2009–10



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

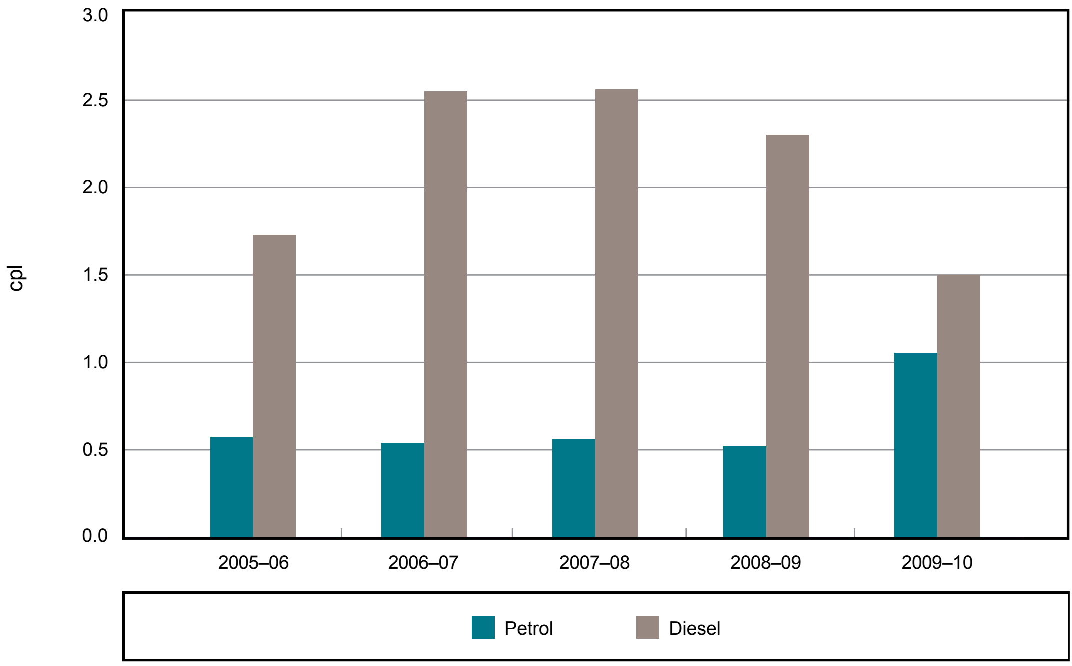
Chart 14.24 Petrol retail sector net profit (adjusted EBIT): 2004–05 to 2009–10



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

Diesel net profit at the retail level moderated in 2009–10 to 1.5 cpl, a decrease from 2.3 cpl in 2008–09 (see chart 14.25). Between 2005–06 and 2009–10, average diesel net profit has been 2.1 cpl, whereas petrol net profit has averaged 0.6 cpl over the same period.

Chart 14.25 Petrol and diesel net retail profits: 2004–05 to 2009–10



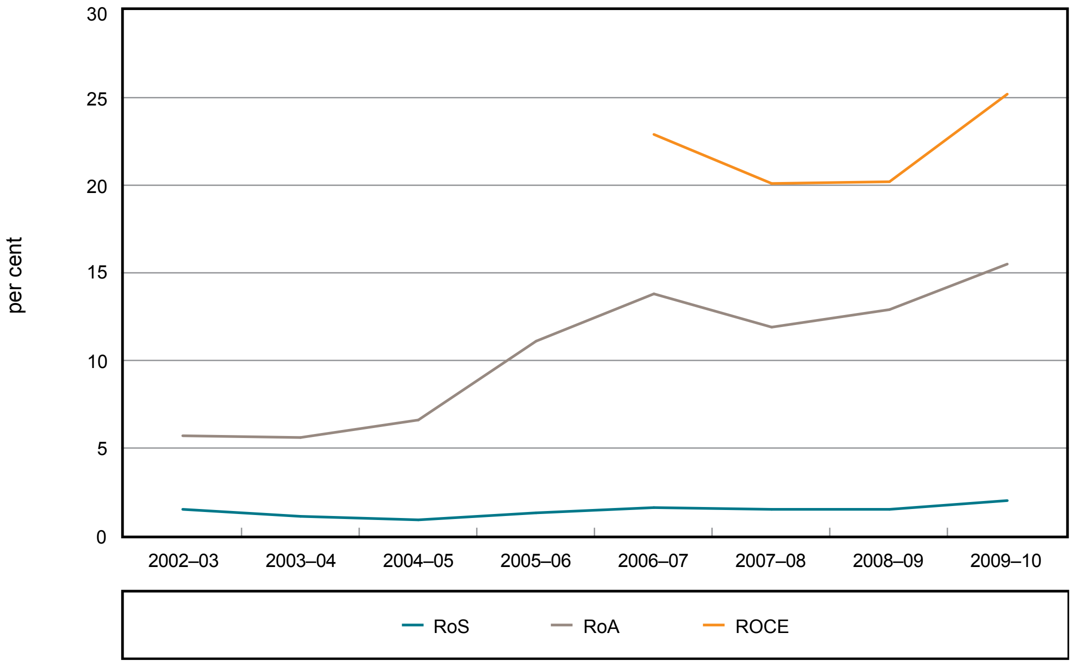
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

14.7 KPIs in the retail sector and domestic and international comparisons

14.7.1 KPIs in the domestic retail sector

The three KPIs (return on sales, return on assets and return on capital employed) improved in 2009–10 from 2008–09 (chart 14.26). The 2009–10 profitability measures for the retail sector were higher than their long-term averages.

Chart 14.26 KPIs for the domestic retail sector: 2002–03 to 2009–10



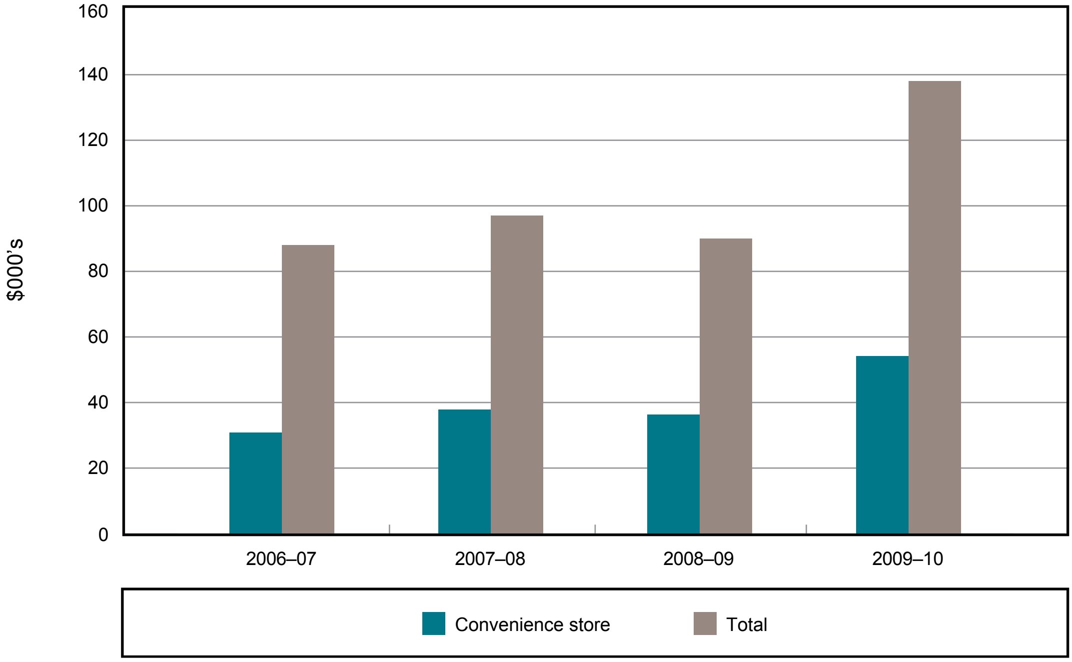
Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process

14.7.2 Average profitability per site

Chart 14.27 provides estimates of the retail sector profitability per site. Total retail sites are based on those provided by the monitored companies. Average net profit per retail site for the monitored firms was $138 000 for 2009–10. This is an increase from the average net profit per site of $90 000 in 2008–09. The average net profit per site from 2006–07 to 2009–10 was approximately $103 000.

Average convenience store sales net profit per site was $54 000 in 2009–10. The average convenience store sales net profit per site between 2006–07 and 2009–10 was $40 000.

Chart 14.27 Estimated total and convenience net profit per site: 2006–07 to 2009–10

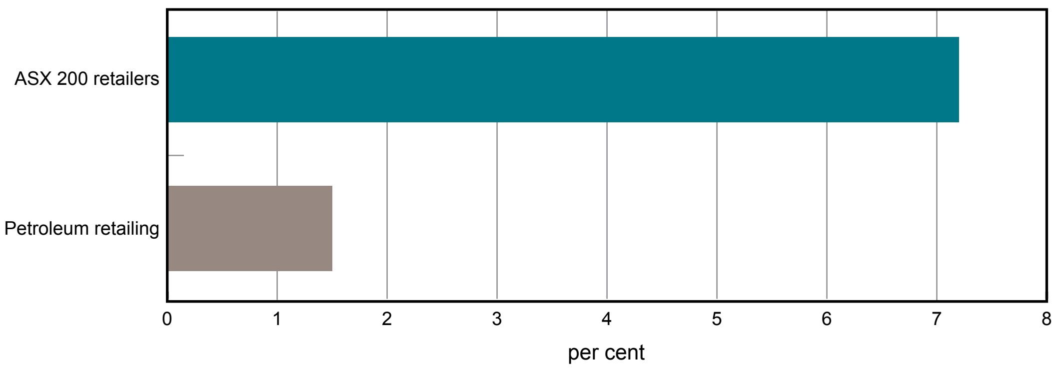


Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process

14.7.3 Domestic retail sector comparisons

The common KPIs of the petroleum retail sector in Australia have been compared with a number of ASX 200 retailers. Between 2002–03 and 2009–10, the return on sales in the domestic petroleum retail sector has been below the return on sales of ASX 200 retailers (chart 14.28).

Chart 14.28 Comparison of average return on sales for domestic retail petroleum sector and ASX 200 retailers: 2002–03 to 2009–10

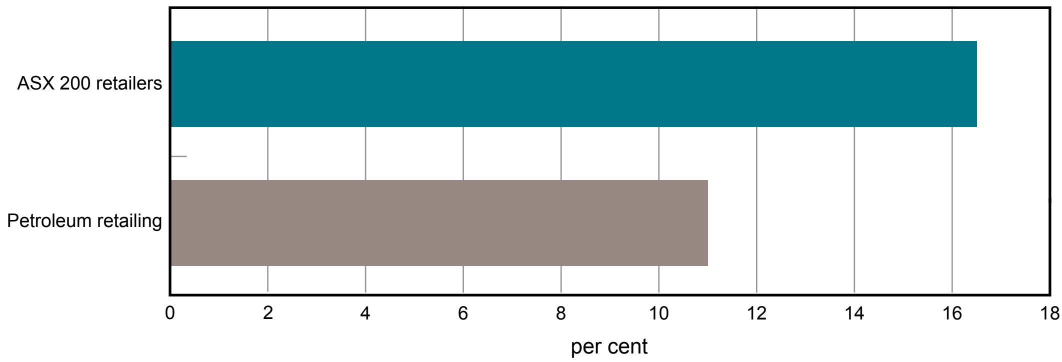


Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

Note: Calculations of return on sales of more than 70 per cent (positive and negative) in any year for any company have been excluded. Not all companies have data for all years. Some companies report on calendar/other annual basis.

The return on assets in the domestic retail petroleum sector have been lower than the average return on assets of a number of ASX 200 retailers over the period 2002–03 and 2009–10 (chart 14.29).

Chart 14.29 Comparison of average return on assets for the domestic retail petroleum sector and ASX retailers: 2002–03 to 2009–10



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

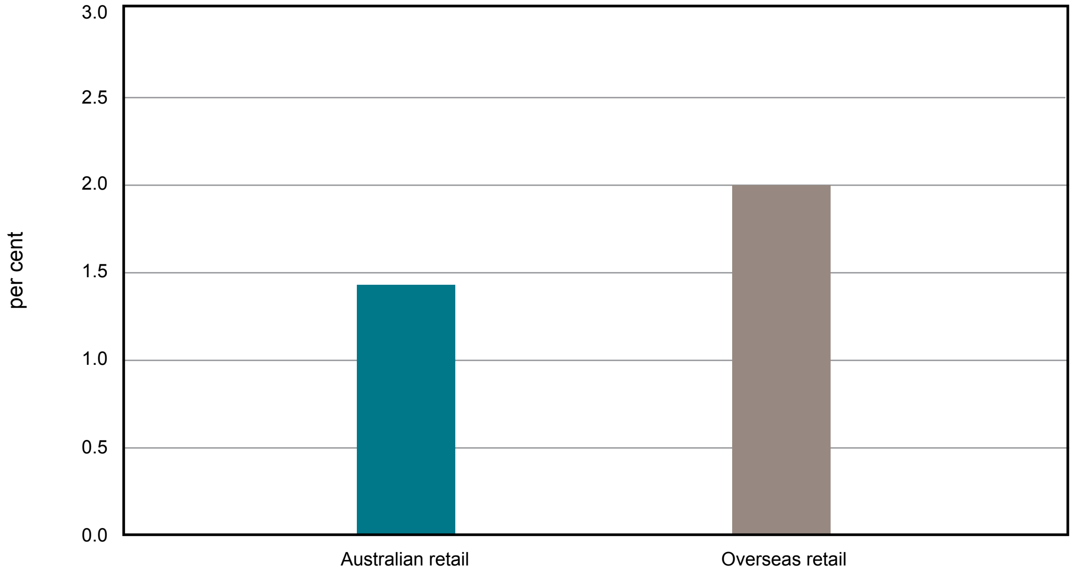
Note: Calculations of return on assets of more than 70 per cent (positive and negative) in any year for any company have been excluded. Not all companies have data for all years. Some companies report on calendar/other annual basis.

14.7.4 International petroleum retail sector comparisons

The common KPIs—return on sales and return on assets —in the domestic petroleum retail sector are compared with a sample of companies operating in international petroleum retail sectors (charts 14.30 and 14.31).

The comparisons suggest that measures of profitability in the domestic petroleum retail sector are broadly in line with measures of profitability in the overseas petroleum retail sectors.

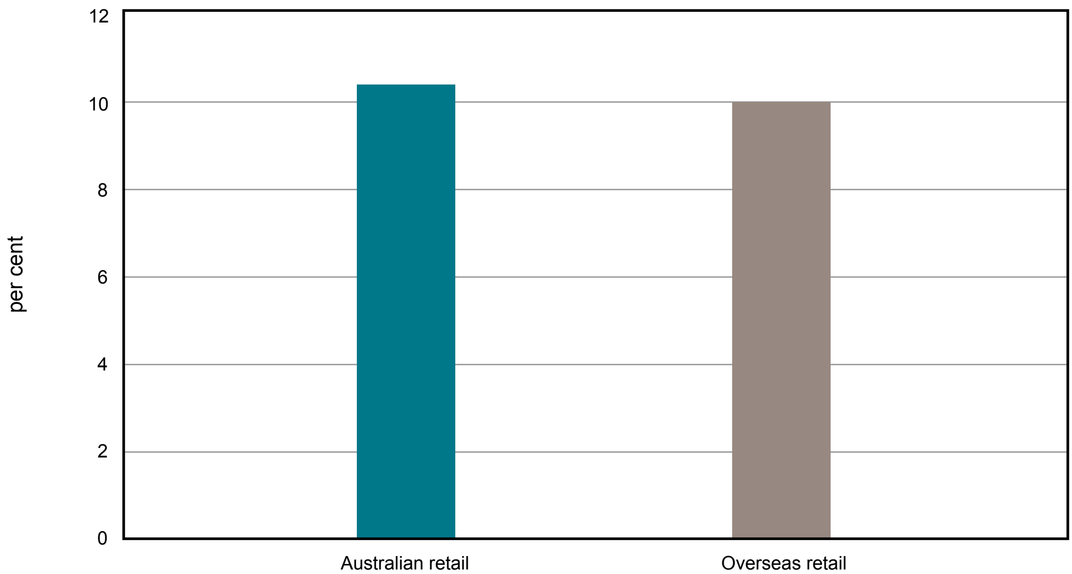
Chart 14.30 Comparison of average return on sales for the domestic retail petroleum sector and overseas: 2002–03 to 2009–10



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

Note: Calculations are based on a sample of 22 international retailers. Not all companies have data for all years. Some companies report on calendar/other annual basis.

Chart 14.31 Comparison of average return on assets for the domestic retail petroleum sector and overseas: 2002–03 to 2009–10



Source: ACCC calculations based on data obtained from firms monitored through the ACCC's monitoring process; Bloomberg and Bureau van Dijk Orbis database

Note: Calculations are based on a sample of 22 international retailers. Not all companies have data for all years. Some companies report on calendar/other annual basis.

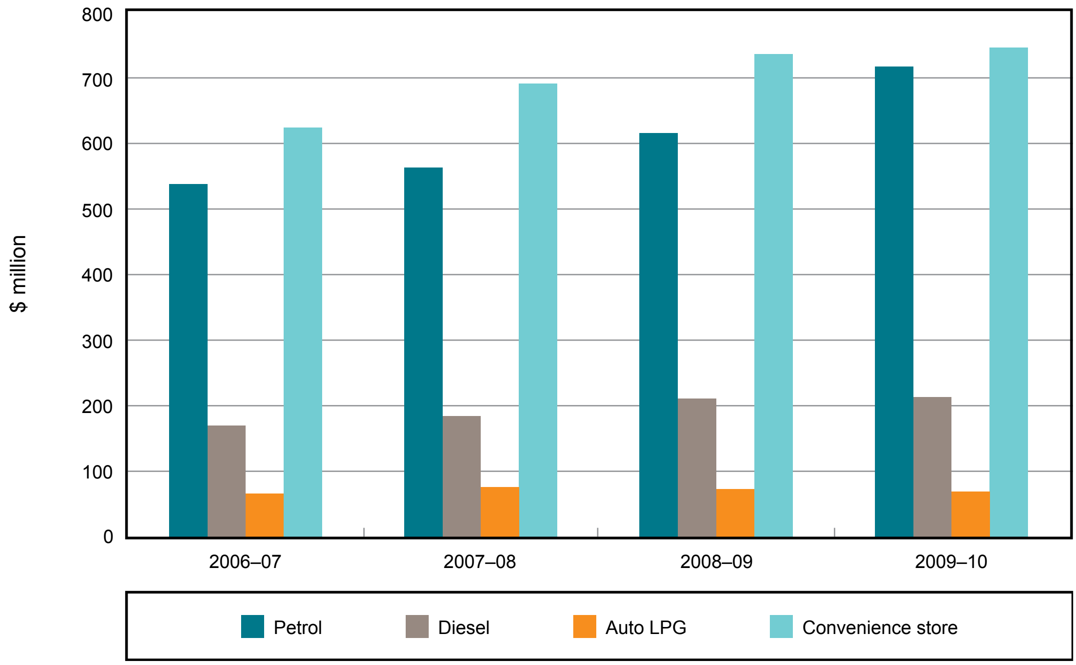
14.8 The importance of convenience store sales in the retail petroleum sector

Convenience store revenues are an important source of revenue for retailers and an important contribution to profits. Chart 14.32 illustrates convenience store estimated gross profits with those of petrol, diesel and automotive LPG.

Convenience store gross profits were approximately $750 million in 2009–10 compared with $620 million in 2006–07 (an increase of 21 per cent).

Convenience store gross profits were approximately 43 per cent of total retail gross profits in 2009–10, broadly stable compared with earlier years. Petrol and diesel combined gross profit has been approximately 50 per cent of total retail gross profits.

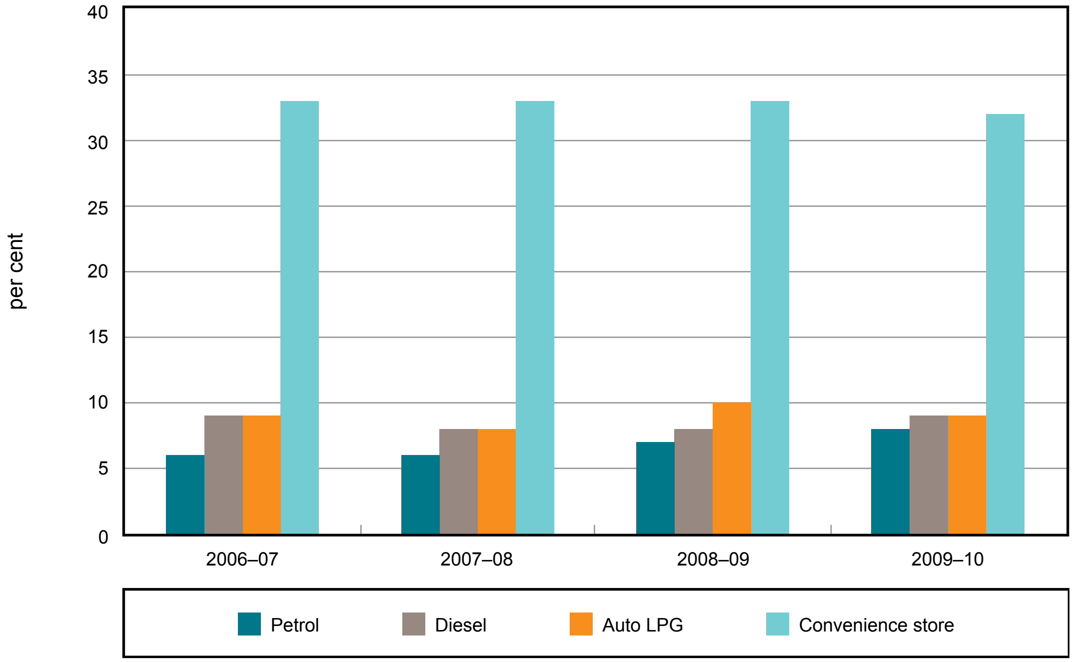
Chart 14.32 Retail petrol, diesel, automotive LPG/other and convenience store sales gross profits: 2006–07 to 2009–10



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

In contrast with gross profits, convenience store gross margins (gross profit as a ratio of sales revenue) are substantially greater than petrol, diesel, and automotive LPG gross margins (chart 14.33).

Chart 14.33 Retail petrol, diesel, automotive LPG/other and convenience store gross margins: 2006–07 to 2009–10

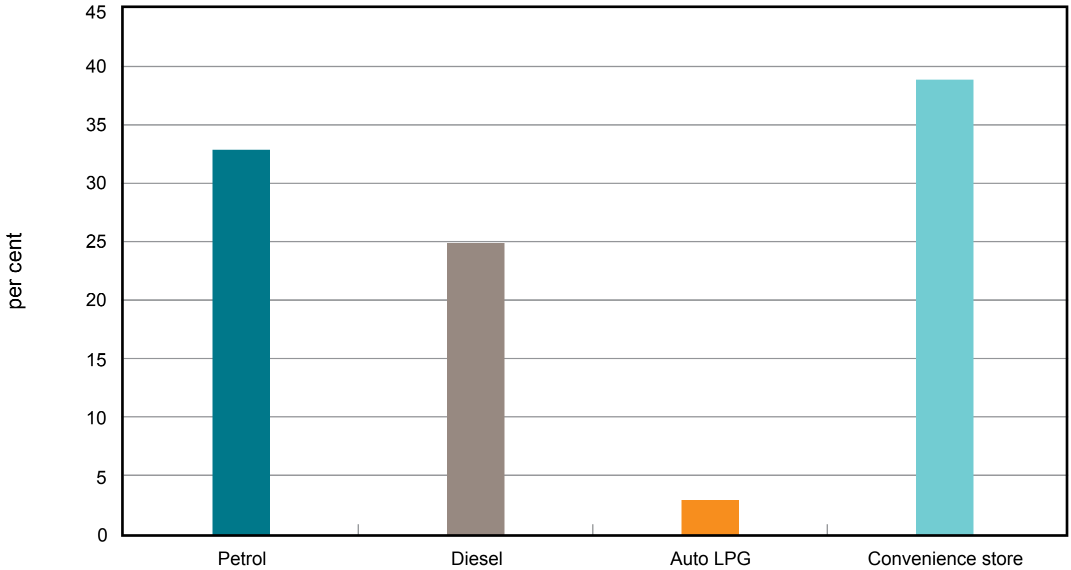


Source: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process

Whereas every fuel sale of one dollar earns approximately 8 cents gross profit, every convenience store sale of one dollar earns 32 cents in gross profits. In recent years, many retailers have increasingly focused on improving convenience store sales and offers to consumers due to the significantly greater gross margins on in-store products.

In terms of total net profits at the retail level, convenience store profits were the strongest contributor at approximately 39 per cent on average between 2006–07 and 2009–10 (chart 14.34). Petrol net profits comprised 33 per cent of total retail net profits over the same period. The retail sector's overall profitability is significantly influenced by convenience store sales. For further discussion on the changing nature of petrol retailing see chapter 15.

Chart 14.34 Retail, petrol, diesel, automotive LPG and convenience store net profits: 2006–07 to 2009–10 average, share of total retail net profit



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

14.9 Recent trends in shopper docket sales

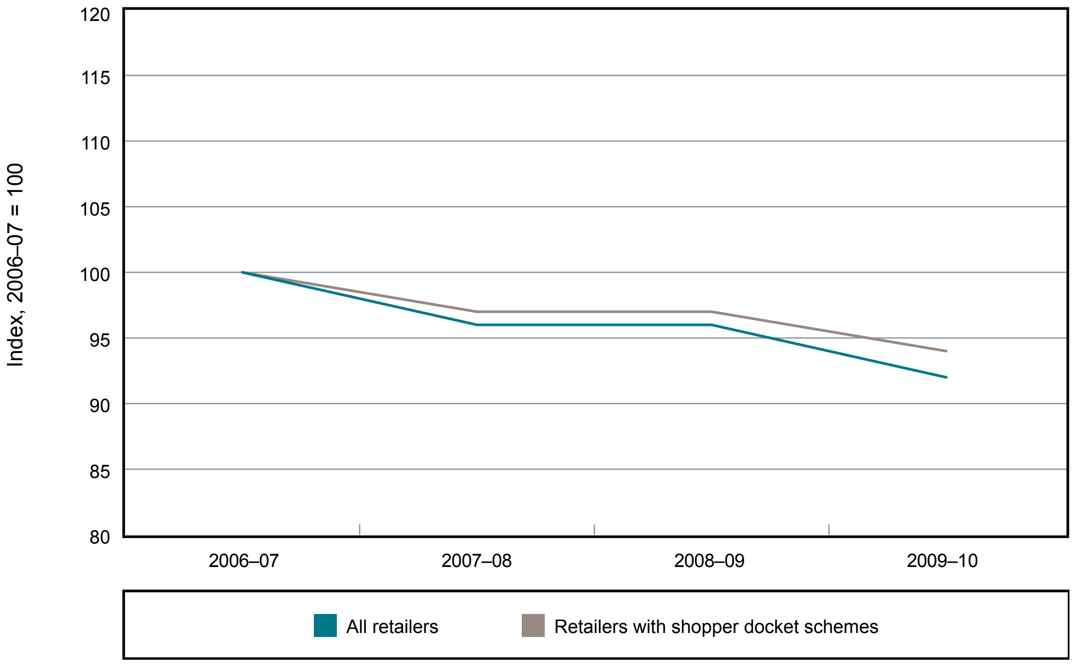
The term 'shopper docket' in the fuel sector generally refers to a discount or offer on fuel for consumers that have purchased a minimum amount of fuel or a product from a fuel retailer. The main shopper docket arrangements involve purchases at Woolworths and Coles Express retail sites. Both of these retailers offer 4 cpl discount on petrol when a shopper docket (with normally minimum spend of $30) is presented from a related Woolworths or Coles Express entity. Some retailers offer fuel discounts if consumers spend a minimum dollar value on instore purchases.

The 2007 ACCC petrol inquiry report analysed in detail the impact of shopper docket arrangements on competition at the retail level. The ACCC concluded that the emergence of shopper docket arrangements had not had an anti-competitive effect but had delivered discounts to the benefit of consumers and promoted competition from other retailers.

Chart 14.35 shows an index of the fuel volumes sold under the various shopper docket schemes as a share of total fuel volumes sold. In terms of fuel sales by all retailers, shopper docket fuel volumes sold have decreased marginally in recent years.

Estimates of the share of shopper docket fuel volumes sold relative to the total volumes sold of fuel for retailers that offer shopper docket schemes are also provided as an index in chart 14.35. These have also decreased marginally in recent years.

Chart 14.35 Index of shopper docket fuel volumes sold as a share of total fuel volumes sold, all retailers and retailers with shopper docket schemes: 2006–07 to 2009–10



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

14.10 Concluding remarks on the financial performance of the wholesale and retail sectors

Profitability of the wholesale petroleum sector in 2009–10 has been broadly unchanged from 2008–09. However, wholesale profits have been higher over the past two years relative to average profits between 2002–03 and 2007–08.

The retail sector's profitability in 2009–10 has improved from 2008–09, including EBIT on petrol sales.

In particular, at the wholesale level:

- The sector made a net profit of approximately $1 billion in 2009–10, marginally lower than the previous year's net profit.
  - On a cpl basis, net profit was 1.9 cpl in 2009–10, or 0.3 cpl lower than the previous year.
- Net profit of the petrol wholesale sector was approximately $220 million in 2009–10 compared with $35 million in 2008–09. The 2009–10 profitability in the petrol wholesale sector has been estimated to be the highest since 2002–03.
  - On a cpl basis, net profit of the petrol wholesale sector was 1.2 cpl in 2009–10, an increase from 0.2 cpl in 2008–09. Net petrol wholesale sector profits have averaged 0.1 cpl since 2002–03.

At the retail level:

- The sector made a net profit of approximately $290 million in 2009–10, higher than the profit in the previous year of $230 million.
  - On a cpl basis, the retail sector net profit was 1.7 cpl in 2009–10, or 0.6 cpl higher than the previous year.
- The net profit of the petrol retail sector in 2009–10 was approximately $130 million compared with $60 million in 2008–09.
  - On a cpl basis, net profit of the petrol retail sector was 1.1 cpl in 2009–10, an increase from 0.5 cpl in 2008–09.
- Convenience store sales are an important part of retailers' revenues, and hence their profits. Convenience store net profits comprised 39 per cent of total retail net profits in recent years.
  - Whereas every fuel sale of one dollar earns approximately 8 cents gross profit, every convenience store sale of one dollar earns 32 cents in gross profits.
- Volumes of fuel sold at the retail level under the various shopper docket schemes have decreased marginally relative to the total fuel volumes sold in recent years.

Comparisons of profitability measures between Australia's wholesale and retail petroleum sectors and overseas wholesale and retail petroleum sectors were undertaken. These suggest that the long-term profitability of Australia's wholesale and retail petroleum sectors are broadly similar to their overseas' counterparts.

15 Analysis of trends in the fuel industry

Key points:

- Australia is likely to become increasingly reliant on imports of refined fuel.
- A small but vibrant independent import capability provides competitive tension in the market.
- Refiner-marketers are reducing their involvement in the retail market as they concentrate on the potentially higher returns in upstream activities.
- Specialist retailers are raising their profile in the retail sector.
- There is an increased reliance on non-fuel sales.
- Alternative fuels, in particular biofuels, hybrids and electric vehicles are starting to become mainstream.

15.1 Trends in the fuel market

A number of trends have become evident in recent years that underline the dynamic and evolving nature of the Australian fuel industry.

The purpose of this chapter is to describe the key aspects of these trends, drawing on the findings presented in this report.

The main trends that are already impacting on the industry, and can be expected to influence the industry into the future include:

- Australian production (both oil extraction and refining) of hydrocarbon fuels is increasingly unlikely to be able to keep pace with demand. Already most of the oil used in Australia is imported; Australia is likely to be increasingly reliant on imports of refined fuels such as RULP, and particularly PULP and diesel.
- Rapidly increasing refining capacity in the Asia–Pacific region, which can cater for Australian fuel standards should ensure adequate supplies of refined fuels for the medium term.
- State government mandates have the potential to put short-term pressure on supplies and prices of EBP as well as PULP.
- Structural shifts in the retail sector are creating new competitive tensions among retailers. These changes are due to:

  Refiner-marketers reducing their involvement in the retail market as they concentrate on the potentially higher returns in upstream activities.

  The growth of specialist retailers (such as supermarkets and convenience store chains) in the retail fuel market and the growth of retail chains of independent wholesalers.

- Emerging signs of the mainstreaming of motor vehicles powered by alternative sources of fuel, particularly biofuels, hybrid electric and full electric cars, which may have the potential in the long term of reducing pressure on supplies and prices of conventional hydrocarbon fuels.

15.2 Domestic production

15.2.1 Unleaded petrol

In recent years, domestic production of refined petroleum products has not kept pace with demand. It is likely that Australia's reliance on imports of refined petrol, particularly increasingly popular diesel and PULP, will grow in the future as demand outstrips a broadly stagnant domestic supply.

The four refiner-marketers are responsible for most of the supply of unleaded petroleum products into the Australian market. They produce Australia's total production of domestically refined petrol and account for the majority of imports.

In recent years, refinery capacity has been affected by unplanned maintenance outages and by the introduction of new fuel standards.

The refiner-marketers do not appear to have plans for major expansions to domestic refinery capacity. Presently, the focus seems to be on investing in and maintaining existing refinery infrastructure in Brisbane, Sydney, Geelong, Melbourne and Perth. Most refineries were built several decades ago and require careful maintenance to operate efficiently. For example, Shell has undertaken extensive maintenance programs at its Clyde refinery in Sydney following major downtimes during 2009.

Anecdotal evidence suggests pressure on incumbent firms to justify continued involvement in refining. Evidence from overseas also points to rationalisation of refining assets by some of the multinational integrated petrol companies.[169]

The construction in Australia of a new refinery by one of the refiner-marketers or a new player is unlikely. The potential for new expanded refinery capacity in Australia is limited by the high cost of the new capital investment and the very small margins that the existing refineries operate on. Domestic production of refined fuel is likely to continue to be increasingly supplemented by imports.

15.2.2 Diesel

There is a more pronounced supply–demand imbalance in the market for diesel than for RULP. Unlike RULP, demand for diesel has been increasing while domestic production of diesel has fallen in six of the past seven years. As with unleaded petrol, the growing gap between demand and domestic production of diesel is being filled with imports. The introduction of tighter Australian standards for diesel in recent years may have limited refiner-marketers' ability to increase production in line with demand, despite investments in new diesel refining facilities.

169 In the last few years, BP and Royal Dutch Shell have divested refinery assets in the USA. In both cases the purchaser was Tesoro Corporation, a US independent refiner-marketer. See <http://www.bp.com/genericarticle.do?categoryId=2012968&contentId=2001997; and http://www.shell.com/home/content/media/news_and_media_releases/archive/2007/shell_agreement_tesoro_29012007.html>.

15.2.3 Biofuels

The emerging biofuels sector, in particular the market for EBP has been boosted by proposed and legislated state mandates, and represents a potential new source of competition in the unleaded petrol market.

However, the rapid growth in demand for ethanol-based products spurred by the current mandates, in combination with the tax treatment of imported fuel ethanol, has the potential to put pressure on domestic ethanol supplies and prices.

The future for the ethanol industry is subject to significant uncertainty. The Global Financial Crisis in 2008 reduced financing opportunities and threatened plant closures. High feedstock prices and volatility of oil prices are also likely to have impacted on investment decisions. Future growth in demand will largely be mandate-driven and thus is subject to regulatory change. The economics of supply may be affected by the future tax treatment of domestic and imported ethanol. This uncertainty has contributed to stalled investment in domestic ethanol capacity.

At the retail and distribution level, the biofuel mandates, being state-based, can also have an impact on retailer distribution chains. Established distribution chains on Australia's eastern seaboard often cut across state boundaries, with retailers being supplied with fuel from outside the state. The biofuel mandates may mean that these businesses will be forced to seek alternative suppliers of the mandated fuels where they are not available in sufficient volumes from their existing suppliers. This may result in higher distribution costs and prices for EBP and other products in those areas.

15.3 Importing fuel

Given capacity constraints in domestic refineries, it is likely that imports will play an increasingly important role in bridging the gap between demand and local production of refined petrol and diesel products.

Information provided to the ACCC for its monitoring program indicates that the refiner-marketers account for a significant share of imports of refined unleaded petrol and diesel.

Independent wholesalers/importers are an alternative source of supplies of refined fuel for Australia.

Obstacles to increased independent importing are not trivial (see chapter 5) but are unlikely to discourage imports if prospective margins are sufficiently strong. The potential for imports by other firms depends on access to sources of fuel, access to import infrastructure (ports, terminals, storage and pipelines) and on the ability to establish secure markets for the product.

At present, the capacity to import by firms such as Gull, United and Neumann is credible enough to suggest that at the margin they can be an important source of competitive discipline in the market. These companies have demonstrated that they have access to sources of fuel, adequate import infrastructure and have a ready-made customer base.

Refining capacity in the Asia–Pacific region for Australian-standard fuels has expanded considerably in recent years. For example, the Reliance refinery in Jamnagar, India, has a nameplate capacity of over 1.2 million barrels per day, which is about twice the combined output of all Australian refineries. The completion of a number of refineries including the Reliance refinery has greatly expanded refining capacity in the region, and notwithstanding regional growth in demand for refined fuel with the rapid expansion of the economies in China and India, regional supplies of Australian-standard refined fuels have become more readily available.

The existence of spare capacity in the region enhances the ability of Australian importers to source Australian-standard refined fuel and generally put pressure on Australian refiner-marketers to be competitive with international suppliers.

Data provided to the ACCC by the monitored companies indicates that total imports by independent wholesalers increased considerably in the past two years. In that time, independent wholesalers' share of total imports has more than doubled.

A number of developments have the potential to improve Australia's import capacity. For example, following proposed new capital expenditures on additional storage capacity and a new pipeline to a deep-water port, Neumann will enhance its ability to import into Brisbane. Vopak has undertaken significant new investments at its terminal at Port Botany in Sydney, expanding common user capacity that can be accessed by independent importers. In Western Australia, Gull has sold its terminal at Kwinana to Coogee Chemicals, owner and operator of an adjacent terminal and manufacturing plant. Both these terminals are connected by pipeline to a nearby import jetty. It is understood that Gull will continue to have access to its formerly owned terminal. It is also understood that the synergies achieved from operating the two terminals jointly will allow Coogee to provide third-party access to spare capacity on a common-user basis. In Victoria, United Petroleum owns an import terminal at Hastings and the necessary infrustructure for large-scale importing.

15.4 Structural changes in the retail industry

The retail sector has witnessed significant structural change in recent years. Evidence considered in chapters 3 and 14 indicates that recent trends in fuel retailing include:

- rationalisation of retail sites
- increase in fuel volume sales per site
- increased reliance on non-fuel sales
- scaling down of retail activities by refiner-marketers
- increasing presence of specialist retailers.

The evolution of the retail landscape in Australia is a reflection of the different business models and strategies taken by the refiner-marketers, independent service stations and chains, supermarkets, and convenience stores in regard to fuel retailing.

As a result of the structural changes that are continuing to affect the retail market, the refiner-marketers are becoming less prominent in fuel retailing. Fuel sold solely under the brand name of the four refiner-marketers now accounts for less than 50 per cent of total retail volume sales (see table 3.8 in chapter 3), and approximately 14 per cent of retail sites are run by the refiner-marketers as either owner–operator or franchised sites (see table 3.9 in chapter 3). In other words, the majority of retail sites are not owned by refiner-marketers but are independently owned and/or operated.

These figures are not surprising given that two of the refiner-marketers are essentially no longer involved in retailing. Apart from its alliance with Coles, Shell has effectively ceased its presence in the Australian retail market. The sale of the Mobil retail site network to 7-Eleven and On the Run can also be seen as part of a broader strategy of moving out of retail fuel market.

These changes may have been spurred by the fact that the business of retailing is very different from the business of refining and wholesaling fuel. Barriers to entry into retailing are less prohibitive than in refining or wholesaling. Ongoing interest in the sale and purchase of retail assets in Australia suggests that difficulties associated with establishing a presence in retail, either as a single or multi-site operator, can be overcome.[170] Entry by purchasing an existing retail business is a common way of establishing a presence in the retail sector. The two most significant obstacles to establishing a new site are the initial capital outlay and the necessary environmental approvals.

In addition, 'local' factors, including convenience of location, are compelling in retail in a way that they are not in wholesaling and refining. Retailers generally compete with their geographically closest rivals and can develop relationships with individual consumers.

The 'local' aspects of petrol retailing are seen in the fact that while over the medium term, retail prices appear to be closely correlated with IPP and TGP, on a day-to-day basis petrol stations respond to local competitive conditions, reflecting the nature of market forces in any given local area. The impact of local competition on retail fuel prices largely explains the often-observed phenomena of neighbouring towns of a similar size having very different retail prices.

These factors have facilitated the emergence of independent operators and specialist retailers who have redefined the nature of petrol retailing.

The entry of specialist retailers has changed the nature of petrol retailing because they often see petrol sales as only part of their retail offering, not as their primary business. For example, Coles and Woolworths are primarily grocery chains that have added fuel to their retail offerings while 7-Eleven appears to position itself as a specialist convenience store retailer that offers fuel to get customers into their stores to make convenience purchases.

Relatively modest returns in petrol retailing may be another reason why refiner-marketers are reconsidering their role in the retail sector. Profits in the fuel retail sector do not appear to be excessive. The evidence considered in chapter 14 suggests that in Australia unit margins in retail fuel sales are relatively modest, with retailers dependent on high volumes to generate adequate returns. Given the relatively high proportion of fixed costs in retailing (for example, rent and staff labour costs), offering higher-margin (non-fuel) products provides another opportunity to augment overall returns at little additional cost.

In summary, it appears reasonably clear that the strategy of some integrated refiner-marketers to scale back their retail businesses is at least in part a response to the emergence of independent retailers with specialist skills in the business of retailing. It is also partly driven by the prospect of superior returns in other elements of their businesses.

170 On the Run commenced in 1974 as a single site operation in SA. Following the recent acquisition of 29 Mobil sites, the On the Run network now consists of around 80 retail sites. More recently, Woolworths started its petrol retail business in 1996 with a single site in Dubbo. Within 11 years, Woolworths had built up a retail market share of around 22 per cent.

The view of some oil companies towards retailing was illustrated by ExxonMobil's Australian chairman, John Dashwood, who was reported as stating that:

> *Filling stations are not our business model. I guess the distinction I make is, are you an oil and gas company or are you a groceries company? We're not in the business of being a shop.*[171]

Evidence from overseas

Similar trends have been observed in other developed countries where evidence also indicates retail site rationalisation. Integrated petrol companies are withdrawing from retail and specialist retailers are emerging to fill a market niche.[172]

One of the major global integrated petrol companies, Royal Dutch Shell, announced in March 2010 plans to rationalise its retail assets worldwide by selling interests in 9 000 petrol stations and exiting from the retail sector in 30 of the 90 countries where it operates retail outlets.[173]

In the UK, data published by the United Kingdom Petrol Industry Association (UKPIA) indicates:[174]

- Supermarkets have increased their share of the retail fuels market from 19 per cent in 1997 to approximately 40 per cent in 2009.
- The number of retail sites has fallen from approximately 18 000 in 1992 to 8 921 in 2009.
- Since 1994 there has been a marked increase in average fuel volumes per retail site.

According to the UKPIA these trends are a response to declining margins in fuel retailing:

> *Increasingly, the slim margin on fuel retailing has prompted the re-development of many sites to boost volume throughput and provide a better standard of service and facilities, with particular emphasis on larger shops or convenience stores which are a vital element in overall site profitability.*[175]

A similar story emerges in Canada where rationalisation of retail sites has seen the number of service stations fall from over 20 000 in 1989 to 12 684 in 2008.[176]

15.4.1 Comparative returns in downstream and upstream operations

The ACCC has not sought data from companies on their upstream operations, as this is an area of inquiry that is outside the scope of the monitoring program. However, the ACCC has analysed data on upstream profits published by multinational integrated petrol companies in order to provide some context to the trends observed in Australia.

Evidence from four major global vertically integrated oil companies indicates that upstream activities, including crude oil exploration and extraction, are currently more profitable than the downstream activities of refining and marketing fuel.

171 'Mobil mum on sale of servos', *The Courier-Mail,* 21 May 2010, p. 41.

172 http://www.downstreamtoday.com/news/article.aspx?a_id=19808&AspxAutoDetectCookieSupport=1.

173 See http://royaldutchshellplc.com/2010/03/17/shell-to-sell-petrol-stations-around-the-world/.

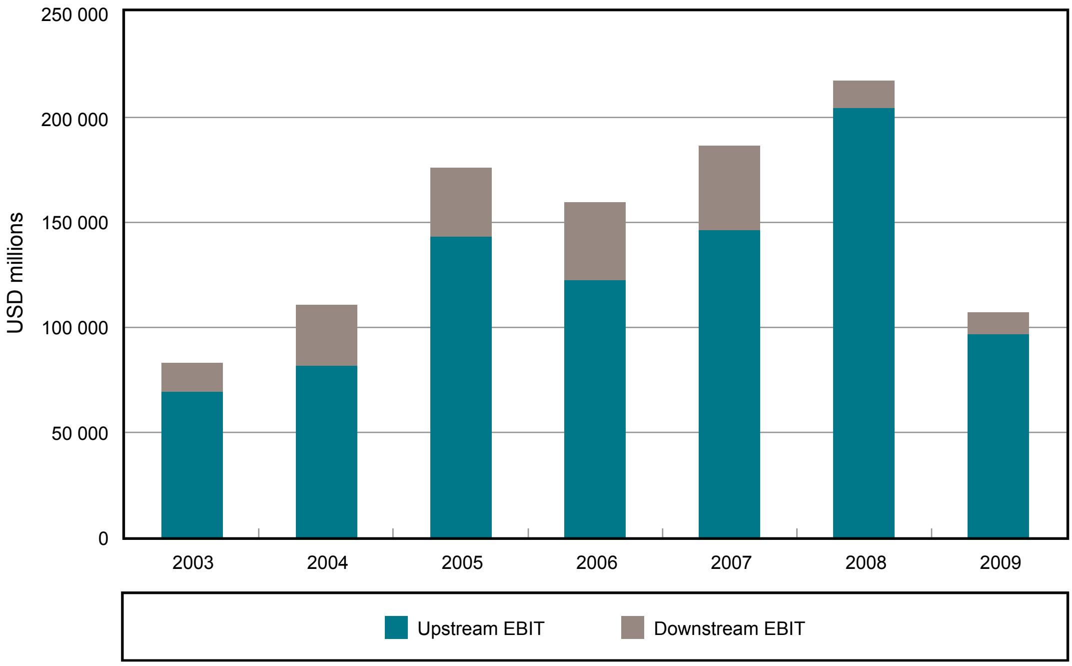
174 United Kingdom Petrol Industry Association at: http://www.ukpia.com/industry_information/marketing.aspx.

175 See United Kingdom Petrol Industry Association at: http://www.ukpia.com/industry_information/marketing.aspx. See also the 2010 UKPIA Statistical Review at: http://www.ukpia.com/files/pdf/ukpia-statistical-review-2010.pdf.

176 See MJ Ervin & Associates, 'Number of Gas Stations in Canada Continues to Decline', May 7 2009, at http://www.canadianbusiness.com/markets/marketwire/article.jsp?content=20090507_083504_3_ccn_ccn.

Chart 15.1 shows that while the contributions of upstream and downstream activities to total earnings differ across the four companies, the vast majority of their net revenues are generated in oil exploration and extraction.

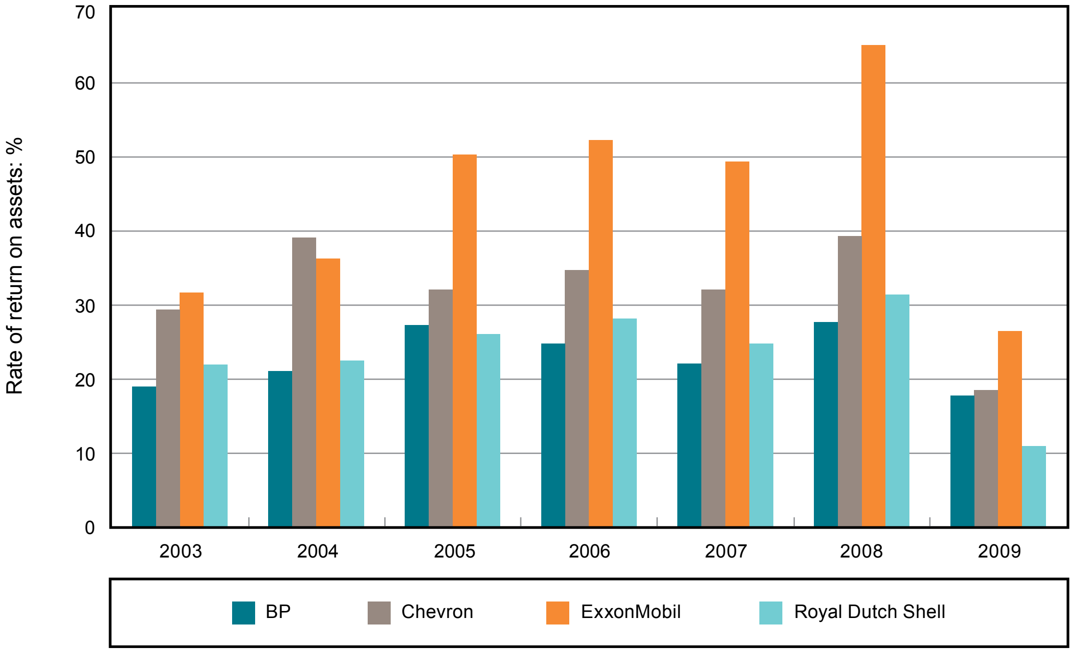
Chart 15.1 Upstream and downstream earnings, BP, Chevron, ExxonMobil and Royal Dutch Shell combined: 2003 to 2009



Source: ACCC calculations based on data from companies' annual reports

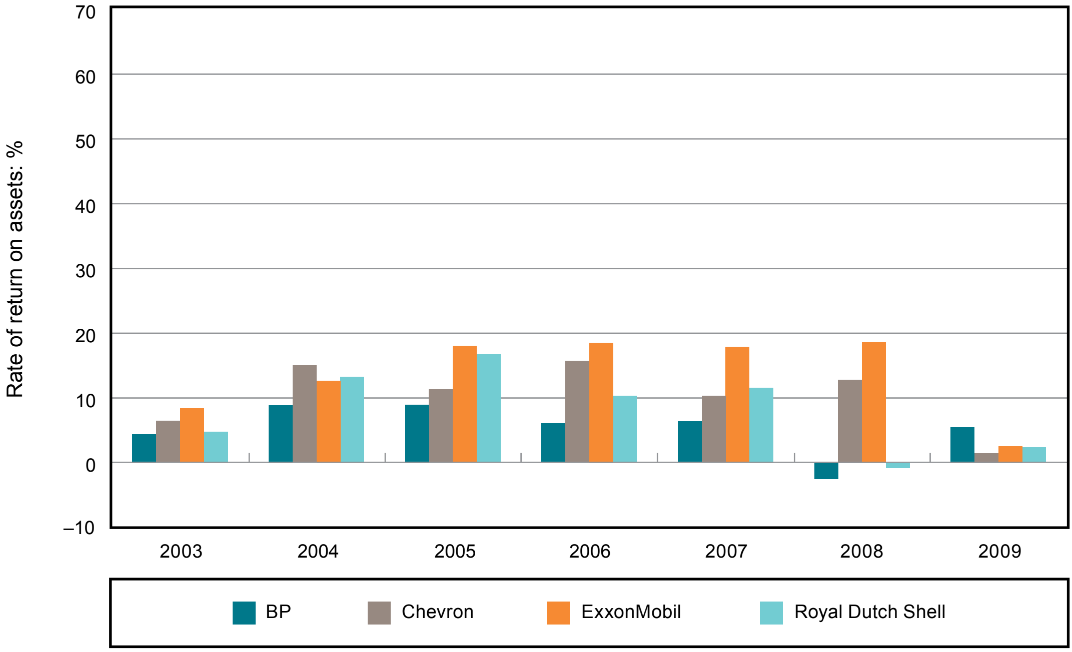
Rates of return on assets are also consistently higher in upstream than downstream activities. Data in charts 15.2 and 15.3 show rates of return on assets for upstream and downstream activities of the four major global petrol companies since 2003.

Chart 15.2 Upstream rates of return on assets, BP, Chevron, ExxonMobil and Royal Dutch Shell: 2003 to 2009



Source: ACCC calculations based on data from companies' annual reports

Chart 15.3 Downstream rates of return on assets, BP, Chevron, ExxonMobil and Royal Dutch Shell: 2003 to 2009



Source: ACCC calculations based on data from companies' annual reports

It is clear from charts 15.2 and 15.3 that since 2003 rates of return on assets in the upstream operations of the four major global petrol companies have been consistently, and considerably, higher than rates in the downstream businesses.

It is generally prudent to exercise care when comparing profits of activities as diverse as crude oil exploration and extraction and petrol retailing. Thus, it may not be possible to fully explain the decisions by integrated oil companies to divert resources from downstream to upstream operations purely on the basis of accounting indicators of profitability over a period of seven years. This data must be considered in the context of other pertinent strategic and economic issues such as relative skills profiles, barriers to entry and exit, risk and perceptions of future crude oil prices.

Nevertheless, this evidence provides an indication of the possible reasons why global integrated petrol companies might be seeking to move their businesses out of retailing and free up resources to concentrate on oil exploration and extraction. Royal Dutch Shell, for example, has described its strategy to reduce its exposure in the retail sector as 'part of a focus on more profitable markets and on exploration and production'.[177]

The data also seems to provide context for the decision by some refiner-marketers in Australia to scale back their retailing businesses.

177 See http://royaldutchshellplc.com/2010/03/17/shell-to-sell-petrol-stations-around-the-world/.

15.5 Alternative transport fuels

Rising oil prices and anxiety over future supplies, combined with a growing concern for the environment, have focused attention on alternative sources of energy for transport vehicles. These do not currently have a significant presence in the Australian market and are thus not central to this report. However, the future price of conventional transport fuels such as petrol and diesel will be significantly impacted by the increasing market penetration of alternative sources of energy for domestic transport vehicles.

For a number of years manufacturers have been developing prototypes of vehicles designed to be powered by cleaner, more efficient alternatives to conventional hydrocarbon fuels. Alternatives considered have included biofuels, compressed or liquefied natural gas, hydrogen combustion and fuel cells, batteries, and hybrid vehicles using varying combinations of these technologies.

Natural gas

Natural gas can be used as fuel in an internal combustion engine, either as compressed natural gas or as liquefied natural gas. Natural gas is considered a cleaner alternative to petrol. Its relatively high energy/carbon ratio means that it produces less carbon dioxide per unit of energy than petrol. Natural gas is used to power vehicles in many countries, particularly natural gas rich countries in the developing world. Pakistan, Argentina and Brazil have been leaders in the use of natural gas. South America accounts for approximately 35 per cent of all vehicles operating on natural gas in the world.[178]

However, despite its early promise as a low cost and low emission alternative to petrol, comparatively few manufacturers have produced natural gas vehicles on a mass scale. The Honda Civic GX is understood to be the only mass-produced car in the US market.[179] Most vehicles using natural gas are public transport vehicles, and natural gas fuelled buses are used in a number of Australia cities.

The main factor that has deterred the development of natural gas as a domestic transport fuel has been the difficulty in establishing the infrastructure for delivery and distribution of natural gas to the motorist.

Hydrogen

One advantage of hydrogen as a fuel for vehicles is that its combustion does not emit carbon dioxide. However, the technology to produce hydrogen from non-fossil fuel sources such as wind, solar, geothermal and microbial waste products, is still not sufficiently developed to produce economically viable results. As a result, with the exception of Iceland where an abundance of geothermal energy permits economic production of hydrogen[180], most hydrogen is produced from natural gas.

Hydrogen can be used to power vehicles either by burning it in internal combustion engines or by combining it with other chemical elements in fuel cells to run electric motors.

178 See International Association for Natural Gas Vehicles, at: http://www.iangv.org/tools-resources/statistics.html.

179 C and S Gable, "Natural Gs Vehicles Available", at: http://alternativefuels.about.com/od/2008ngvavailable/a/2008CNGvehicles.htm.

180 See http://www.abc.net.au/news/stories/2008/01/23/244774.htm.

As with natural gas, there are a number of issues that may slow down the widespread use of hydrogen as an alternative fuel. First, costs associated with establishing storage and distribution infrastructure and producing fuel cells are high. Second, it is not clear at this stage that hydrogen can be produced economically from non-fossil fuels and there are significant doubts about the environmental benefits of natural gas sourced hydrogen. Despite claims that hydrogen fuel cells can be more fuel-efficient than petrol, the driving range of hydrogen cars is still limited.[181] While many car manufacturers are currently experimenting with prototypes, Honda, seems to be among the few considering hydrogen fuel cell cars as a serious long-term strategy.[182] On the other hand, many manufacturers appear to have either postponed or scaled back current plans to do so in view of cost, technical and infrastructure issues.

Biofuels

Biofuels, in particular ethanol, are becoming more commonly used in Australia. In addition to the 10 per cent ethanol mix in E10 that can be used by most vehicles, Saab has offered flex-fuel models with the capacity to run on E85 petrol since 1996 and in 2010 Holden released a locally built flex-fuel Commodore model that can run on any ethanol blend up to 85 per cent. See chapter 6 for a detailed discussion of biofuels.

Hybrid and full electric cars

The manufacture of electric motor vehicles is becoming mainstream. Hybrid electric motor vehicles incorporating both internal combustion engines and electric propulsion motors powered by batteries have been selling for some time.

The running costs of hybrid electric and full electric cars tend to be lower than petrol cars.[183] Because electric cars have fewer moving mechanical parts, it is possible that they will last longer and be less costly to maintain than conventional petrol cars. Key issues for the future of electric cars at this stage include the up-front battery costs, and the smaller driving range per recharge.[184]

Increasingly, however, manufacturers are pushing ahead with plans to manufacture motor vehicles powered entirely by an electric motor, typically using lithium-ion batteries. Electric cars have the potential to significantly reduce pollution regardless of the source of electricity by virtue of their more efficient engines. They also reduce local pollution by having zero tail pipe emissions.[185]

Many global car companies including Mitsubishi, Nissan, Toyota, General Motors, Ford and Renault either already offer or are about to release electric hybrids or cars that run solely on electricity. Nissan and Renault Chief Executive Officer, Carlos Ghosn, has predicted that by the year 2020, one in 10 cars will run on battery power alone.[186] This process has been given renewed impetus by governments around the world as they implement initiatives designed to cut carbon emissions.

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181 For specifications relating to the Honda FCX Clarity, see http://world.honda.com/news/2008/4080616First-FCX-Clarity/.

182 Ibid.

183 See ACCC, *Monitoring of the Australian petrol industry*, December 2009, p. 265. See also, CSIRO, *Fuel for thought—the future of transport fuels: Challenges and opportunities*, June 2008; and CSIRO, *Modelling of the future of transport fuels in Australia*, June 2008.

184 The typical distance range for a battery is about 160 km; however, the Tesla Roadster is understood to have achieved 500 km in a recent driving test in outback Australia.

185 The net benefit to the environment depends on the source of the electricity as well as the overall impact of the manufacture and maintenance of the car (including the large battery banks) over the life of the vehicle.

186 'Electric Cars', *Financial Times*, 25 October 2010, see: http://search.ft.com/search?queryText=carlos+ghosn&ftsearchType=on.

Examples of hybrid electric cars include the Toyota Prius, Toyota Camry Hybrid, Ford Escape Hybrid, Honda Civic Hybrid and the Lexus RX 400h. Total worldwide sales of hybrid vehicles are approximately three million units, with Toyota, the world's market leader, accounting for sales of 2.7 million.[187] In Australia, Mitsubishi was the first car-maker to release a large-scale electric car. In March 2010, the Mitsubishi i-Miev was imported from Japan for the local market.[188] Toyota, Nissan and Holden plan to release electric cars in 2012. Chinese car-makers Great Wall Motors and BYD are reported to be planning the launch of an electric car in Australia in 2012.[189]

Governments around the world continue to commit funds towards research and development of electric cars. The US government has committed US$2.5 billion towards this end.[190] In addition, the US Senate has recently passed the *Promoting Electric Vehicle Act of 2010*. When enacted, the legislation provides for incentives for the development of an electric car industry to electrify half of America's cars and trucks by the year 2030.[191] In China, the government has announced funding of US$15 billion for seed investment in car and battery manufacturing.[192]

In May 2010, the German government launched an initiative designed to promote the manufacture of electric cars by creating incentives for German car-makers. The objective of the initiative is to have one million electric cars on Germany's roads by 2020 (compared with the current number of less than two thousand).[193]

The manufacture of cars with swappable battery packs could promote the emergence of electric vehicle infrastructure designed to achieve quick battery replacements. California-based start-up company Better Place, in partnership with Renault-Nissan, is investing in the establishment of networks of electric vehicle stations where drivers can swap batteries in less time than it takes to fill a petrol tank. In March 2010 the RACV announced that it had invested in the Australian subsidiary, Better Place Australia.

In the final analysis, the pace of consumer acceptance of electric and other alternative fuel cars will be heavily influenced by the relative costs of conventional fuels such as petrol and diesel. In principle, demand for alternative fuels is likely to grow as the price of hydrocarbon fuels increases and that of alternative fuels falls with improved technology and greater scale. Ultimately, if demand for alternative fuels gathers momentum this will likely reduce demand for conventional fuels and relieve pressure on supplies (and prices) of hydrocarbon fuels.

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187 See US Department of Energy at: http://www.afdc.energy.gov/afdc/data/vehicles.html. See also Toyota press release, 5 August 2010, at: http://www2.toyota.co.jp/en/news/10/08/0805.html.

188 See 'Mitsubishi Electric Car Lands in Australia', 12 March 2010, at: http://www.caradvice.com.au/60591/mitsubishi-i-miev-preview-electric-cars-land-in-australia/.

189 *Sydney Morning Herald,* 'Chinese electric car for Australia', 3 February 2010, at: http://smh.drive.com.au/motor-news/chinese-electric-car-for-australia-20100203-nc8i.html.

190 See 'Obama pushes electric cars, battery power this week', 14 July 2010, *USA Today*, at: http://content.usatoday.com/communities/driveon/post/2010/07/obama-pushes-electric-cars-battery-power-this-week-/1.

191 See US IEEE at: http://www.todaysengineer.org/2010/Aug/electric-vehicles.asp.

192 TL Freidman, 'Their Moonshot and Ours', *New York Times*, 25 September 2010, at: http://www.nytimes.com/2010/09/26/opinion/26friedman.html?_r=2&emc=eta1.

193 For details of the initiative see *USA Today* at: http://www.usatoday.com/money/autos/2009-08-19-electric-germany_N.htm.

15.6 Carbon pricing

Petrol, diesel and automotive LPG are all hydrocarbons and emit carbon dioxide when combusted to power a car. Leaving aside the possibility of governments alleviating the effects on consumers, any carbon pricing system, whether it is a carbon tax, an emissions trading scheme or some other mechanism for pricing carbon emissions, is likely to increase the price of conventional fuels. It seems reasonable to surmise that in the long run, increases in costs are likely to encourage greater fuel efficiency, reduced driving and a switch to less carbon-intensive fuels.

15.7 Conclusions

This chapter has considered some of the key issues that can potentially impact the shape and performance of the Australian petrol industry in the years ahead.

In summary, the main issues include the following:

- Australia is likely to increase its reliance on imports of both petrol (particularly PULP) and diesel. Potential capacity constraints faced by Australian refineries should not affect supplies provided alternative sources of Australian-standard fuel are available in the region.
- The independent wholesale/import sector, while small, is viable and active. Competition from independent importers works at the margin, although it is likely to be strongest in those markets where they are most active, usually those markets in which they have significant retail networks. The competitive threat from independent operators is credible and appears capable of providing additional competitive tension in the market.
- The retail sector continues to undergo significant structural changes as the refiner-marketers reduce their involvement and specialist retail operators increase their presence. The emergence of large independent retail operators, such as Coles, Woolworths, 7-Eleven, On the Run and the retail networks of the independent wholesalers, has resulted in a diminished role for the refiner-marketers in the retail sector.
- The refiner-marketers in Australia have scaled back their retail operations to concentrate on the pursuit of more attractive returns in upstream petroleum activities, such as oil and gas exploration and extraction.
- In the longer term, higher petrol prices are likely to continue to stimulate greater fuel efficiency and demand for cars powered by non-hydrocarbon fuels. At the same time, government initiatives and incentives to reduce carbon emissions are likely to directly benefit alternative fuels and the manufacturers of vehicles that use those fuels.
- State government ethanol mandates are affecting the range of fuels available to consumers. The likely effect of the NSW mandate in the short to medium term is increased pressure on supplies and prices of EBP and PULP.
- The relative costs of petrol compared with alternative fuels will determine the pace at which motorists switch to vehicles running on diesel, automotive LPG and alternative fuels. In the longer term, pressure on supplies (and prices) of traditional hydrocarbon fuels should lessen as supplies and consumer acceptance of alternative fuels grow.

Appendix A: Minister's letter and direction

Letter and direction from the former Assistant Treasurer and Minister for Competition Policy and Consumer Affairs to the ACCC establishing the formal monitoring of the prices, costs and profits of unleaded petrol in Australia

ASSISTANT TREASURER
AND MINISTER FOR COMPETITION POLICY
AND CONSUMER AFFAIRS

PO BOX 6022
PARLIAMENT HOUSE
CANBERRA ACT 2600

Telephone: 02 6277 7360
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http://assistant.treasurer.gov.au

Mr G Samuel AO
Chairman
Australian Competition and Consumer Commission (ACCC)
GPO Box 520J
MELBOURNE VIC 3001

Dear Mr Samuel

I am writing to direct the ACCC to undertake formal price monitoring pursuant to section 95ZE of Part VIIA of the *Trade Practices Act 1974*. Attached is a direction to the ACCC to monitor the prices, costs and profits relating to the supply of unleaded petrol products in the petroleum industry in Australia.

When monitoring, you may wish to focus on those parts of the industry where your report on the price of unleaded petrol (December 2007) indicated that competition is less than fully effective.

I also direct the ACCC to give me a report on the monitoring once a year, for 3 years, no later than the anniversary of the date of this letter.

Once the Government has had the opportunity to fully consider the recommendations of the ACCC's report into the price of unleaded petrol, I will write to you again with additional follow-up actions.

Yours sincerely

CHRIS BOWEN
17/12/09.

Commonwealth of Australia

Trade Practices Act 1974

MONITORING OF THE PRICES OF UNLEADED PETROLEUM PRODUCTS

I, CHRIS BOWEN, Minister for Competition Policy and Consumer Affairs, pursuant to section 95ZE of the *Trade Practice Act 1974*, hereby direct:

(1) the Australian Competition and Consumer Commission ('the Commission') to monitor prices, costs and profits relating to the supply of unleaded petroleum products in the petroleum industry.

(2) the Commission to report to me on its monitoring activities in paragraph (1) for a period of three years commencing from the date of this direction.

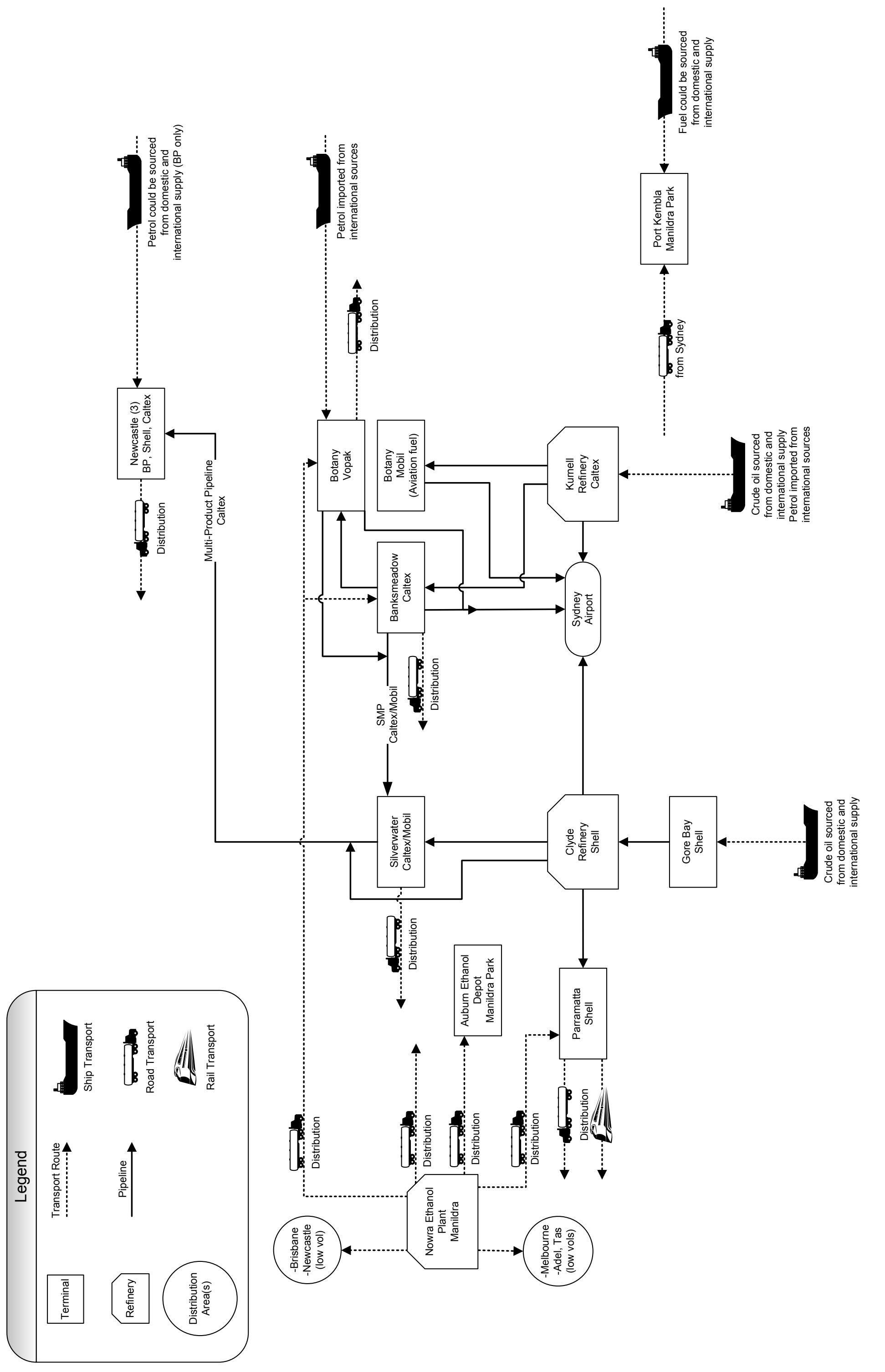
(3) the reports of the Commission to be provided annually, no later than the anniversary of the date of this direction.

Dated this Seventeenth day of December 2007

CHRIS BOWEN
Minister for Competition Policy and Consumer Affairs

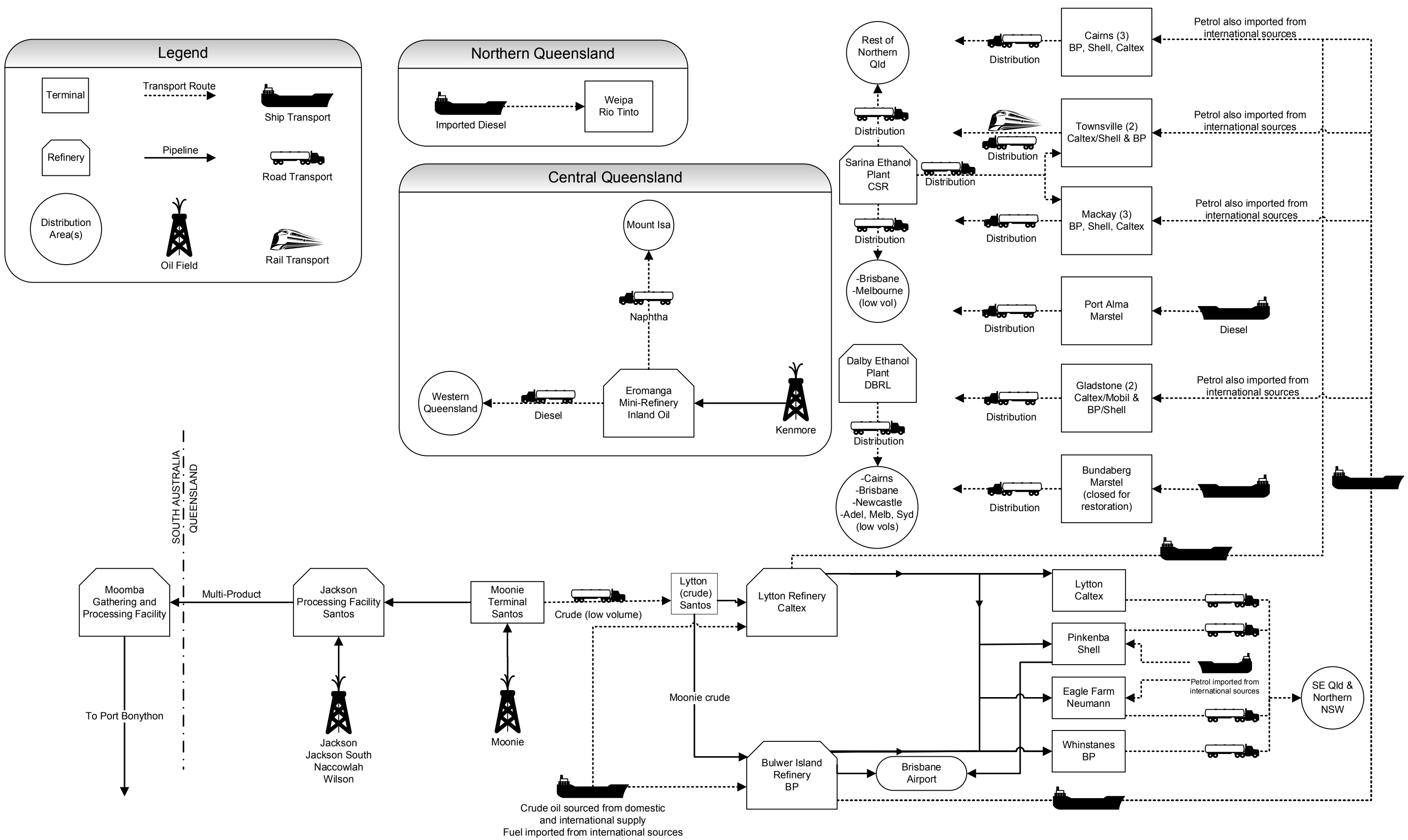
Appendix B: Major infrastructure schematics

Figure B.1 New South Wales oil flow schematic



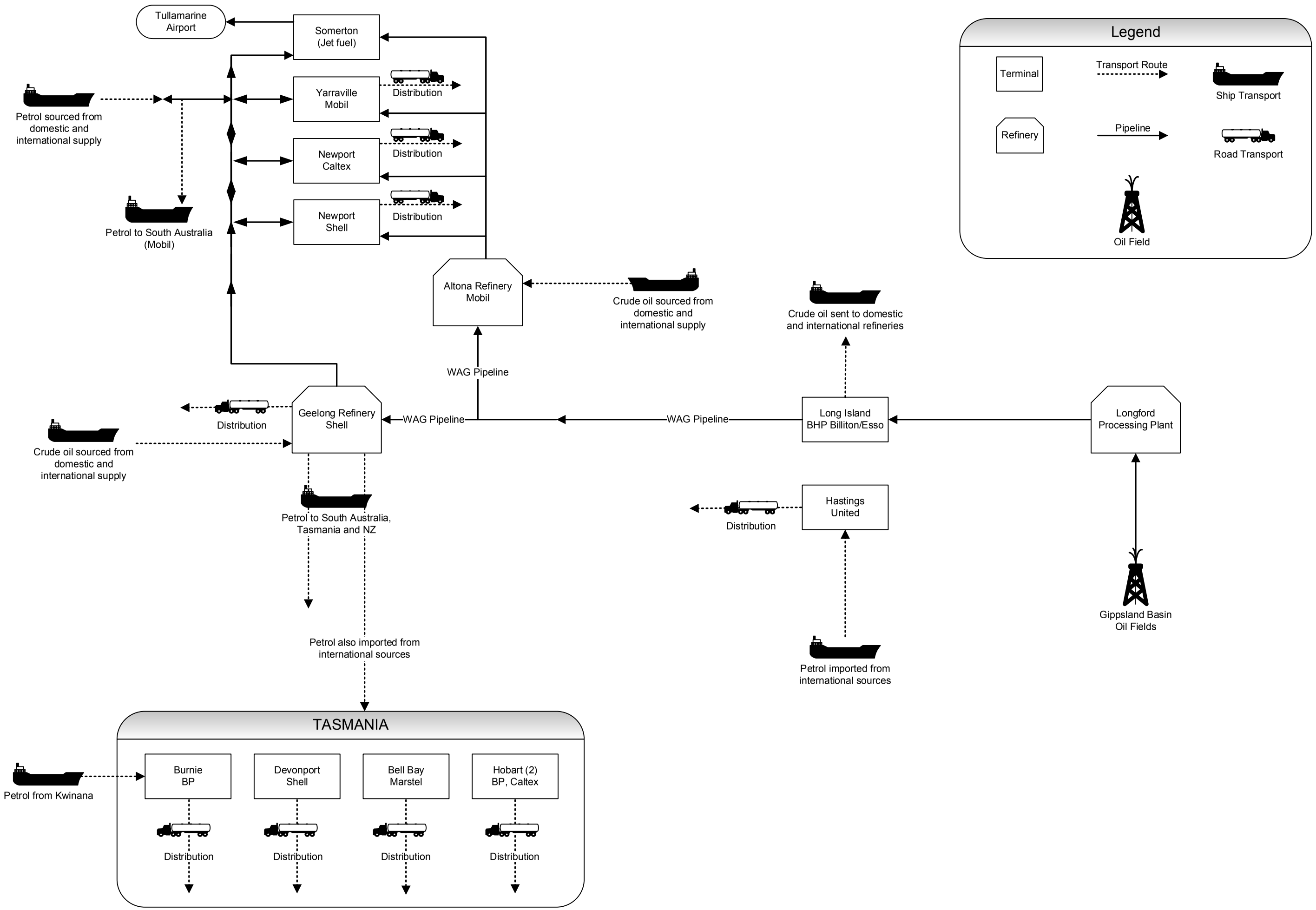
Source: Prepared by the ACCC and RLMS Pty Ltd

Figure B.2 Queensland oil flow schematic



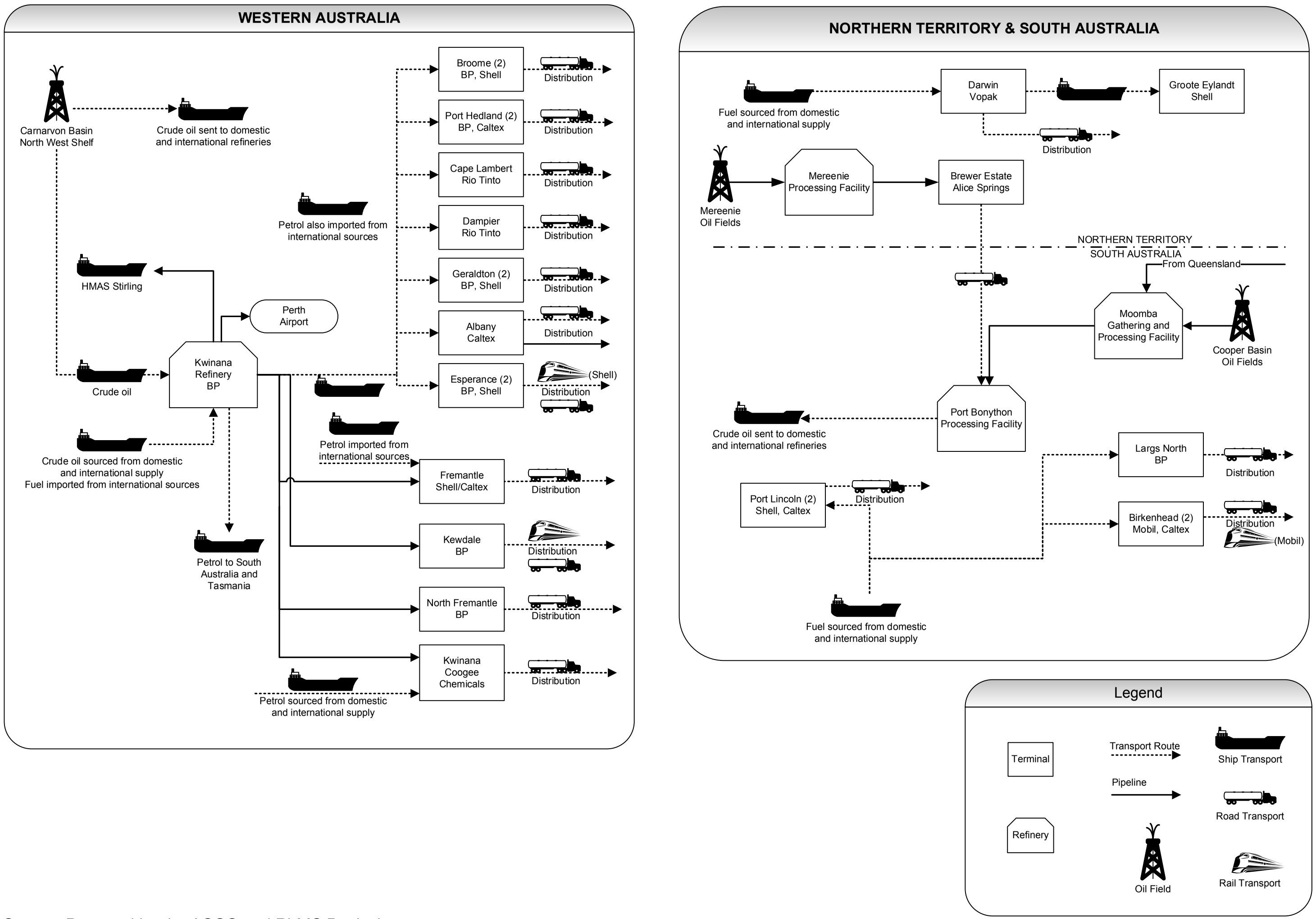
Source: Prepared by the ACCC and RLMS Pty Ltd; Ethanol flows, source: *Australian Biofuels 2009*, APAC Biofuel Consultants, August 2009.

Figure B.3 Victoria and Tasmania oil flow schematic



Source: Prepared by the ACCC and RLMS Pty Ltd

Figure B.4 Western Australia, Northern Territory and South Australia oil flow schematics



Source: Prepared by the ACCC and RLMS Pty Ltd

Appendix C: Major Australian terminals

Table C.1 Major terminals: New South Wales[194]

Location	Owner(s)	Operator	User(s) (type of arrangement)	Import access
Banksmeadow (Sydney)	Caltex	Caltex	Caltex Mobil	Indirectly through Kurnell refinery or Vopak Botany by pipeline.
Parramatta (Sydney)	Shell	Shell	Shell BP (JTA)	Indirectly via Gore Bay terminal, which connects by pipeline to Clyde refinery. Terminal is a gantry at the refinery.
Silverwater (Sydney)	Caltex/Mobil (SMP)	Mobil	Caltex Mobil	Indirectly through Kurnell refinery or Vopak Botany then via pipeline.
Botany (Sydney)	Mobil	Mobil	BP (JTA)	Direct from Port Botany. Used solely for aviation fuel.
Botany (Sydney)	Vopak	Vopak	BP, Mobil, Shell and independent wholesalers (co-mingled leases)	Direct from Port Botany.
Botany (Sydney)	Terminals Pty Ltd	Terminals Pty Ltd	Independent wholesaler (lease)	Direct from Port Botany. No petrol throughput, primarily diesel.
Newcastle	BP	BP	BP	Direct from Port of Newcastle. Indirect through Sydney terminals and/or refineries.
Newcastle	Caltex	Caltex	Caltex	Indirect through Sydney terminals and/or refineries.
Newcastle	Shell	Shell	Shell Mobil (JTA)	Indirect through Sydney terminals and/or refineries.
Port Kembla	Manildra Park	Manildra Park	Manildra Park	Direct from Port Kembla. Could be used to import petrol, although currently only bunker fuel.

Table C.2 Major terminals: Northern Territory

Location	Owner(s)	Operator	User(s) (type of arrangement)	Import access
Darwin	Vopak	Vopak	BP, Caltex, Shell and independent wholesaler (co-mingled leases)	Direct from Port Darwin.
Gove	Rio Tinto/Alcan	Rio Tinto/Alcan	Rio Tinto/Alcan	Direct from port. Serves local mines; primarily diesel throughput.
Groote Eylandt	BHP Billiton	BHP Billiton	BHP Billiton	Direct from port. Serves local mines; primarily diesel throughput.
McArthur River	Xstrata	McArthur River Mine	McArthur River Mine	Direct from port. Serves local mines; primarily diesel throughput.

Sources: ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring process; and *Petroleum Infrastructure in Australia*, ACIL Tasman, prepared for RET, 2009, pp. 11, 90–2.

194 Unless otherwise stated, the source for tables in this chapter is ACCC analysis based on data obtained from firms monitored through the ACCC's monitoring terminal.

Table C.3 Major terminals: Queensland

Location	Owner(s)	Operator	User(s) (type of arrangement)	Import access
Lytton (Brisbane)	Caltex	Caltex	Caltex	Indirect through Lytton refinery.
Pinkenba (Brisbane)	Shell	Shell	Shell	Direct from own port. Indirect through both Brisbane refineries.
Whinstanes (Brisbane)	BP	BP	BP Mobil (JTA)	Indirect through Bulwer Island refinery.
Eagle Farm (Brisbane)	Neumann	Neumann	Neumann Independent wholesalers (hosted)	Direct from own port. Indirect through both Brisbane refineries. Planning deeper water port to enhance import capacity.
Bundaberg	Marstel	Marstel	To be refurbished	Will have direct port access.
Cairns	BP	BP	BP Mobil (hosted)	Direct from port.
Cairns	Caltex	Caltex	Caltex	Direct from port.
Cairns	Shell	Shell	Shell	Direct from port.
Gladstone	BP/Shell	BP	BP Shell	Direct from port.
Gladstone	Caltex/ Mobil	Caltex	Caltex Mobil	Direct from port.
Mackay	BP	BP	BP Mobil (hosted) Caltex (infrequent)	Direct from port.
Mackay	Caltex	Caltex	Caltex	Direct from port.
Mackay	Shell	Shell	Shell Caltex (infrequent)	Direct from port.
Port Alma	Marstel	Marstel	Independent wholesaler	Direct from port.
Townsville	BP	BP	BP Mobil (hosted)	Direct from port.
Townsville	Caltex/ Shell	Shell	Caltex Shell	Direct from port.
Weipa	Rio Tinto	BP	BP	Direct from port. Serves local mines, primarily diesel throughput.

Table C.4 Major terminals: South Australia

Location	Owner(s)	Operator	User(s) (type of arrangement)	Import access
Birkenhead (Adelaide)	Caltex	Caltex	Caltex	Direct from port.
Birkenhead (Adelaide)	Mobil	Mobil	Mobil Caltex Shell (JTA)	Direct from port.
Largs North (Adelaide)	BP	BP	BP	Direct from port.
Port Lincoln	Caltex	Caltex	Caltex	Direct from port.
Port Lincoln	Shell	Shell	Shell Mobil (hosted)	Direct from port.

Table C.5 Major terminals: Tasmania

Location	Owner(s)	Operator	User(s) (type of arrangement)	Import access
Hobart	BP	BP	BP Mobil (hosted)	Direct from port.
Hobart	Caltex	Caltex	Caltex Shell (hosted)	Direct from port.
Bell Bay	Marstel	Marstel	Independent wholesalers (leases)	Direct from port.
Burnie	BP	BP	BP Caltex and Mobil (hosted)	Direct from port.
Devonport	Shell	Shell	Shell Caltex (JTA)	Direct from port.

Table C.6 Major terminals: Victoria

Location	Owner(s)	Operator	User(s) (type of arrangement)	Import access
Newport (Melbourne)	Caltex	Caltex	Caltex	Direct from Holden Dock.
Newport (Melbourne)	Shell	Shell	Shell	Direct from Holden Dock.
Yarraville (Melbourne)	Mobil	Mobil	Mobil BP (JTA)	Direct from Holden Dock.
Coode Island (Melbourne)	Terminals Pty Ltd	Terminals Pty Ltd	Third party (lease)	Direct from port. No petrol throughput; has ethanol capacity.
Corio (Geelong)	Shell	Shell	Shell Caltex	Indirect through refinery. Terminal is truck gantry at Geelong refinery.
Hastings	United	United	United	Direct from port.

Table C.7 Major terminals: Western Australia

Location	Owner(s)	Operator	User(s) (type of arrangement)	Import access
Fremantle (Perth)	Shell/Caltex	Shell	Caltex Shell	Indirect through Kwinana refinery.
Kewdale (Perth)	BP	BP	BP Mobil and Caltex (hosted)	Indirect through Kwinana refinery.
North Fremantle (Perth)	BP	BP	BP	Indirect through Kwinana refinery. Minimal petrol throughput.
Kwinana (Perth)	Coogee	Coogee	Caltex Mobil and Gull (hosted)	Direct from port.
Albany	Caltex	Caltex	Caltex	Direct from port.
Broome	BP	BP	BP	Direct from port.
Broome	Shell	Shell	Shell	Direct from port.
Cape Lambert	Rio Tinto	BP	BP	Direct from port. Serves local mines, primarily diesel throughput.
Dampier	Rio Tinto	BP	BP	Direct from port. Serves local mines, primarily diesel throughput.
Esperance	BP	BP	BP	Direct from port.
Esperance	Shell	Shell	Shell Caltex (hosted)	Direct from port.
Geraldton	BP	BP	BP Caltex (hosted)	Direct from port.
Geraldton	Shell	Shell	Shell	Direct from port.
Port Hedland	BP	BP	BP Caltex Mobil (hosted)	Direct from port.
Port Hedland	Caltex	Caltex	Caltex	Direct from port. No petrol throughput.

Appendix D: E10 petrol price monitoring

This appendix presents information on the ACCC's E10 petrol price monitoring program for the period October 2009 to September 2010.[195]

E10 petrol is unleaded petrol that includes up to 10 per cent ethanol. The prices monitored are those for regular unleaded petrol (RULP) and regular E10 unleaded petrol (E10). The monitoring therefore excludes premium E10 petrol, E5 petrol, and E85 petrol. E10 prices have been collected from various service stations in a particular location and compared with the RULP prices at those service stations.

Methodological issues relating to the collection and reporting of this price data are discussed at the end of this appendix.

Monthly and quarterly aggregates

Table D.1 shows monthly and quarterly differentials between RULP and E10 prices across all of the locations included in the ACCC's E10 price monitoring program for the period October 2009 to September 2010.

Table D.1 Monthly and quarterly average E10 differentials: October 2009 to September 2010—all locations monitored

Month	Differential cpl
October 2009	2.6
November 2009	2.5
December 2009	2.6
Average	**2.6**
January 2010	2.6
February 2010	2.6
March 2010	2.6
Average	**2.6**
April 2010	2.5
May 2010	2.6
June 2010	2.5
Average	**2.5**
July 2010	2.6
August 2010	2.6
September 2010	2.6
Average	**2.6**

Table D.1 shows that the average differential between RULP and E10 prices across all the locations in the ACCC's E10 price monitoring program has been broadly stable over the past four quarters.

195 E10 price monitoring quarterly reports for the December 2006 quarter and the March, June and September 2007 quarters are available from the ACCC website. Information from October 2007 onwards was included in the 2008 and 2009 petrol monitoring reports. The source for all data is ACCC and Informed Sources. Note that some figures in the tables may not add exactly due to rounding.

Capital cities and regional centres and country towns

Table D.2 shows, for the capital cities (Sydney, Melbourne, Brisbane, Adelaide and Canberra), and regional centres and country towns across Australia, in aggregate, average monthly prices for RULP and E10 and the differential between the two for the period October 2009 to September 2010.

Table D.2 Monthly and quarterly average RULP and E10 prices: October 2009 to September 2010—broad aggregates

Location	Month	RULP cpl	E10 cpl	Differential cpl
Capital cities	October 2009	119.3	116.5	2.8
	November 2009	121.8	119.1	2.7
	December 2009	122.3	119.6	2.7
	Average	**121.1**	**118.4**	**2.7**
	January 2010	127.1	124.3	2.8
	February 2010	123.3	120.5	2.8
	March 2010	128.3	125.5	2.8
	Average	**126.2**	**123.4**	**2.8**
	April 2010	128.0	125.2	2.8
	May 2010	129.5	126.7	2.8
	June 2010	127.7	124.9	2.8
	Average	**128.4**	**125.6**	**2.8**
	July 2010	124.7	121.9	2.8
	August 2010	123.5	120.7	2.8
	September 2010	120.6	117.9	2.7
	Average	**122.9**	**120.2**	**2.8**
Regional centres and country towns	October 2009	121.9	119.4	2.5
	November 2009	122.4	119.9	2.5
	December 2009	122.8	120.2	2.6
	Average	**122.4**	**119.8**	**2.5**
	January 2010	128.0	125.5	2.5
	February 2010	127.7	125.1	2.6
	March 2010	128.6	126.0	2.6
	Average	**128.1**	**125.5**	**2.6**
	April 2010	128.7	126.2	2.5
	May 2010	131.1	128.5	2.6
	June 2010	130.3	127.8	2.5
	Average	**130.0**	**127.5**	**2.5**
	July 2010	129.3	126.8	2.5
	August 2010	127.6	125.1	2.5
	September 2010	125.1	122.5	2.6
	Average	**127.3**	**124.8**	**2.5**

Specific locations

Tables D.3 and D.4 show the same data as in table D.2 for each of the 48 locations across Australia currently included in the monitoring program. Table D.3 includes the five capital cities and table D.4 includes 43 regional centres and country towns (26 in New South Wales, 15 in Queensland and two in Victoria).

Table D.3 Monthly and quarterly average RULP and E10 prices: October 2009 to September 2010—capital cities

Location	Month	RULP cpl	E10 cpl	Differential cpl
Sydney	October 2009	117.0	114.1	2.9
	November 2009	120.1	117.2	2.9
	December 2009	120.4	117.4	3.0
	Average	**119.2**	**116.2**	**2.9**
	January 2010	125.1	122.1	3.0
	February 2010	121.4	118.5	2.9
	March 2010	126.6	123.6	3.0
	Average	**124.4**	**121.4**	**3.0**
	April 2010	123.2	120.3	2.9
	May 2010	129.2	126.3	2.9
	June 2010	126.7	123.7	3.0
	Average	**126.4**	**123.4**	**2.9**
	July 2010	123.9	120.8	3.1
	August 2010	122.1	118.9	3.2
	September 2010	118.0	115.0	3.0
	Average	**121.3**	**118.2**	**3.1**
Melbourne	October 2009	118.2	115.1	3.1
	November 2009	121.8	118.8	3.0
	December 2009	121.4	118.4	3.0
	Average	**120.5**	**117.4**	**3.0**
	January 2010	125.5	122.4	3.1
	February 2010	121.2	118.1	3.1
	March 2010	128.6	125.5	3.1
	Average	**125.1**	**122.0**	**3.1**
	April 2010	129.3	126.2	3.1
	May 2010	129.7	126.7	3.0
	June 2010	128.4	125.4	3.0
	Average	**129.1**	**126.1**	**3.0**
	July 2010	126.3	123.2	3.1
	August 2010	123.2	120.2	3.0
	September 2010	120.2	117.3	2.9
	Average	**123.2**	**120.2**	**3.0**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Brisbane	October 2009	120.1	117.3	2.8
	November 2009	122.6	119.9	2.7
	December 2009	123.3	120.5	2.8
	Average	**122.0**	**119.2**	**2.8**
	January 2010	127.7	124.9	2.8
	February 2010	124.0	121.2	2.8
	March 2010	130.6	127.7	2.9
	Average	**127.4**	**124.6**	**2.8**
	April 2010	130.6	127.8	2.8
	May 2010	131.2	128.5	2.7
	June 2010	129.2	126.5	2.7
	Average	**130.3**	**127.6**	**2.7**
	July 2010	127.3	124.5	2.8
	August 2010	124.7	122.0	2.7
	September 2010	122.3	119.5	2.8
	Average	**124.8**	**122.0**	**2.8**
Adelaide	October 2009	117.8	115.8	2.0
	November 2009	118.5	116.5	2.0
	December 2009	120.4	118.4	2.0
	Average	**118.9**	**116.9**	**2.0**
	January 2010	125.9	123.5	2.4
	February 2010	123.3	120.9	2.4
	March 2010	128.0	125.6	2.4
	Average	**125.7**	**123.3**	**2.4**
	April 2010	128.4	126.0	2.4
	May 2010	126.1	123.7	2.4
	June 2010	126.8	124.5	2.3
	Average	**127.1**	**124.7**	**2.4**
	July 2010	123.9	121.7	2.2
	August 2010	121.4	119.3	2.1
	September 2010	119.0	117.1	1.9
	Average	**121.4**	**119.4**	**2.1**
Canberra	October 2009	123.1	120.4	2.7
	November 2009	125.8	123.1	2.7
	December 2009	126.1	123.4	2.7
	Average	**125.0**	**122.3**	**2.7**
	January 2010	131.5	128.8	2.7
	February 2010	126.4	123.6	2.8
	March 2010	127.9	125.2	2.7
	Average	**128.6**	**125.9**	**2.7**
	April 2010	128.6	125.9	2.7
	May 2010	131.2	128.4	2.8
	June 2010	127.2	124.4	2.8
	Average	**129.0**	**126.2**	**2.8**
	July 2010	121.9	119.1	2.8
	August 2010	126.0	123.1	2.9
	September 2010	123.5	120.6	2.9
	Average	**123.8**	**120.9**	**2.9**

Table D.4 Monthly and quarterly average RULP and E10 prices: October 2009 to September 2010—regional centres and country towns

Location	Month	RULP cpl	E10 cpl	Differential cpl
New South Wales regional centres and country towns				
Albury	October 2009	113.1	110.1	3.0
	November 2009	110.3	107.4	2.9
	December 2009	116.2	113.2	3.0
	Average	**113.2**	**110.2**	**3.0**
	January 2010	126.8	123.8	3.0
	February 2010	127.8	124.9	2.9
	March 2010	125.1	122.1	3.0
	Average	**126.6**	**123.6**	**3.0**
	April 2010	123.2	120.2	3.0
	May 2010	126.6	123.6	3.0
	June 2010	125.3	122.3	3.0
	Average	**125.0**	**122.0**	**3.0**
	July 2010	124.5	121.5	3.0
	August 2010	122.8	119.8	3.0
	September 2010	119.6	116.6	3.0
	Average	**122.3**	**119.3**	**3.0**
Armidale	October 2009	129.9	127.7	2.2
	November 2009	129.9	127.8	2.1
	December 2009	129.6	127.3	2.3
	Average	**129.8**	**127.6**	**2.2**
	January 2010	129.9	127.9	2.0
	February 2010	129.9	127.6	2.3
	March 2010	130.1	127.9	2.2
	Average	**130.0**	**127.8**	**2.2**
	April 2010	130.6	128.7	1.9
	May 2010	130.2	127.9	2.3
	June 2010	131.0	128.8	2.2
	Average	**130.6**	**128.5**	**2.1**
	July 2010	130.0	127.9	2.1
	August 2010	129.8	127.8	2.0
	September 2010	129.9	127.9	2.0
	Average	**129.9**	**127.9**	**2.0**
Bathurst	October 2009	120.1	117.0	3.1
	November 2009	119.5	116.5	3.0
	December 2009	120.8	117.8	3.0
	Average	**120.1**	**117.1**	**3.0**
	January 2010	127.2	124.1	3.1
	February 2010	127.9	124.9	3.0
	March 2010	127.5	124.4	3.1
	Average	**127.5**	**124.5**	**3.1**
	April 2010	127.5	124.6	2.9
	May 2010	127.9	125.1	2.8
	June 2010	127.1	124.1	3.0
	Average	**127.5**	**124.6**	**2.9**
	July 2010	126.9	123.9	3.0
	August 2010	126.1	123.1	3.0
	September 2010	125.1	122.1	3.0
	Average	**126.0**	**123.0**	**3.0**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Bega	October 2009	125.3	123.2	2.1
	November 2009	126.8	124.7	2.1
	December 2009	na	na	na
	Average	**126.1**	**124.0**	**2.1**
	January 2010	na	na	na
	February 2010	na	na	na
	March 2010	na	na	na
	Average	**—**	**—**	**—**
	April 2010	na	na	na
	May 2010	na	na	na
	June 2010	na	na	na
	Average	**—**	**—**	**—**
	July 2010	na	na	na
	August 2010	na	na	na
	September 2010	na	na	na
	Average	**—**	**—**	**—**
Bulahdelah	October 2009	115.8	113.1	2.7
	November 2009	121.9	119.1	2.8
	December 2009	122.0	119.3	2.7
	Average	**119.9**	**117.2**	**2.7**
	January 2010	126.2	123.5	2.7
	February 2010	125.0	122.3	2.7
	March 2010	125.2	122.5	2.7
	Average	**125.5**	**122.8**	**2.7**
	April 2010	125.1	122.4	2.7
	May 2010	127.4	124.7	2.7
	June 2010	127.6	124.9	2.7
	Average	**126.7**	**124.0**	**2.7**
	July 2010	126.3	123.5	2.8
	August 2010	122.5	119.8	2.7
	September 2010	116.7	114.0	2.7
	Average	**121.8**	**119.1**	**2.7**
Casino	October 2009	121.6	119.0	2.6
	November 2009	121.4	118.9	2.5
	December 2009	120.0	117.5	2.5
	Average	**121.0**	**118.5**	**2.5**
	January 2010	128.4	125.9	2.5
	February 2010	129.9	127.4	2.5
	March 2010	127.5	125.0	2.5
	Average	**128.6**	**126.1**	**2.5**
	April 2010	127.7	125.2	2.5
	May 2010	132.1	129.6	2.5
	June 2010	132.9	130.4	2.5
	Average	**130.9**	**128.4**	**2.5**
	July 2010	131.3	128.8	2.5
	August 2010	na	na	na
	September 2010	na	na	na
	Average	**131.3**	**128.8**	**2.5**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Central Coast	October 2009	120.4	117.5	2.9
	November 2009	124.7	121.8	2.9
	December 2009	124.4	121.6	2.8
	Average	**123.2**	**120.3**	**2.9**
	January 2010	129.4	126.7	2.7
	February 2010	123.5	120.8	2.7
	March 2010	129.4	126.6	2.8
	Average	**127.4**	**124.7**	**2.7**
	April 2010	127.8	125.0	2.8
	May 2010	131.6	128.9	2.7
	June 2010	129.4	126.8	2.6
	Average	**129.6**	**126.9**	**2.7**
	July 2010	125.8	123.1	2.7
	August 2010	126.1	123.3	2.8
	September 2010	121.4	118.6	2.8
	Average	**124.4**	**121.7**	**2.8**
Coffs Harbour	October 2009	127.1	124.4	2.7
	November 2009	126.6	124.0	2.6
	December 2009	126.8	124.1	2.7
	Average	**126.8**	**124.2**	**2.7**
	January 2010	128.8	126.1	2.7
	February 2010	127.3	124.7	2.6
	March 2010	127.2	124.5	2.7
	Average	**127.8**	**125.1**	**2.7**
	April 2010	128.1	125.4	2.7
	May 2010	132.1	129.4	2.7
	June 2010	130.2	127.6	2.6
	Average	**130.1**	**127.5**	**2.7**
	July 2010	129.7	127.0	2.7
	August 2010	128.0	125.4	2.6
	September 2010	124.1	121.4	2.7
	Average	**127.3**	**124.6**	**2.7**
Dubbo	October 2009	122.3	119.8	2.5
	November 2009	122.2	119.7	2.5
	December 2009	121.0	118.5	2.5
	Average	**121.8**	**119.3**	**2.5**
	January 2010	126.2	123.7	2.5
	February 2010	126.8	124.3	2.5
	March 2010	127.5	125.0	2.5
	Average	**126.8**	**124.3**	**2.5**
	April 2010	129.3	126.7	2.6
	May 2010	131.3	128.7	2.6
	June 2010	129.8	127.3	2.5
	Average	**130.1**	**127.6**	**2.6**
	July 2010	129.8	127.2	2.6
	August 2010	129.7	127.2	2.5
	September 2010	128.5	126.0	2.5
	Average	**129.3**	**126.8**	**2.5**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Forster	October 2009	115.9	113.4	2.5
	November 2009	115.3	112.8	2.5
	December 2009	116.0	113.6	2.4
	Average	**115.7**	**113.3**	**2.5**
	January 2010	126.0	123.7	2.3
	February 2010	124.3	121.9	2.4
	March 2010	128.8	126.3	2.5
	Average	**126.4**	**124.0**	**2.4**
	April 2010	128.4	125.9	2.5
	May 2010	na	na	na
	June 2010	na	na	na
	Average	**128.4**	**125.9**	**2.5**
	July 2010	na	na	na
	August 2010	na	na	na
	September 2010	na	na	na
	Average	**—**	**—**	**—**
Goulburn	October 2009	117.1	113.6	3.5
	November 2009	117.2	113.7	3.5
	December 2009	121.5	118.0	3.5
	Average	**118.6**	**115.1**	**3.5**
	January 2010	125.9	122.7	3.2
	February 2010	125.2	121.7	3.5
	March 2010	129.2	126.1	3.1
	Average	**126.8**	**123.5**	**3.3**
	April 2010	129.9	126.9	3.0
	May 2010	129.5	126.7	2.8
	June 2010	na	na	na
	Average	**129.7**	**126.8**	**2.9**
	July 2010	na	na	na
	August 2010	na	na	na
	September 2010	na	na	na
	Average	**—**	**—**	**—**
Grafton	October 2009	127.3	125.4	1.9
	November 2009	125.9	123.9	2.0
	December 2009	125.9	123.9	2.0
	Average	**126.4**	**124.4**	**2.0**
	January 2010	126.2	124.3	1.9
	February 2010	125.0	123.0	2.0
	March 2010	125.4	123.4	2.0
	Average	**125.5**	**123.6**	**2.0**
	April 2010	125.8	123.8	2.0
	May 2010	na	na	na
	June 2010	na	na	na
	Average	**125.8**	**123.8**	**2.0**
	July 2010	na	na	na
	August 2010	na	na	na
	September 2010	na	na	na
	Average	**—**	**—**	**—**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Gunnedah	October 2009	128.1	125.6	2.5
	November 2009	126.9	124.4	2.5
	December 2009	126.9	124.4	2.5
	Average	**127.3**	**124.8**	**2.5**
	January 2010	127.1	124.6	2.5
	February 2010	128.6	126.1	2.5
	March 2010	129.6	127.1	2.5
	Average	**128.4**	**125.9**	**2.5**
	April 2010	131.0	128.4	2.6
	May 2010	131.8	129.1	2.7
	June 2010	131.7	129.3	2.4
	Average	**131.5**	**128.9**	**2.6**
	July 2010	132.9	130.4	2.5
	August 2010	132.9	130.4	2.5
	September 2010	131.6	129.0	2.6
	Average	**132.5**	**129.9**	**2.5**
Kempsey	October 2009	122.0	119.5	2.5
	November 2009	123.2	120.7	2.5
	December 2009	123.8	121.2	2.6
	Average	**123.0**	**120.5**	**2.5**
	January 2010	128.2	125.7	2.5
	February 2010	128.6	126.1	2.5
	March 2010	129.6	127.0	2.6
	Average	**128.8**	**126.3**	**2.5**
	April 2010	129.8	127.3	2.5
	May 2010	129.7	127.4	2.3
	June 2010	129.6	127.3	2.3
	Average	**129.7**	**127.3**	**2.4**
	July 2010	129.6	127.0	2.6
	August 2010	128.7	126.2	2.5
	September 2010	127.4	124.9	2.5
	Average	**128.6**	**126.0**	**2.5**
Lismore	October 2009	122.3	120.0	2.3
	November 2009	122.4	120.2	2.2
	December 2009	122.0	119.7	2.3
	Average	**122.2**	**120.0**	**2.3**
	January 2010	128.2	126.0	2.2
	February 2010	128.9	126.5	2.4
	March 2010	128.8	126.4	2.4
	Average	**128.6**	**126.3**	**2.3**
	April 2010	129.7	127.3	2.4
	May 2010	132.6	130.1	2.5
	June 2010	132.4	129.9	2.5
	Average	**131.6**	**129.1**	**2.5**
	July 2010	131.7	129.3	2.4
	August 2010	131.9	129.7	2.2
	September 2010	131.3	129.1	2.2
	Average	**131.6**	**129.4**	**2.3**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Moree	October 2009	125.8	123.3	2.5
	November 2009	125.2	122.7	2.5
	December 2009	125.2	122.7	2.5
	Average	**125.4**	**122.9**	**2.5**
	January 2010	129.6	127.1	2.5
	February 2010	129.9	127.4	2.5
	March 2010	130.2	127.7	2.5
	Average	**129.9**	**127.4**	**2.5**
	April 2010	130.2	127.7	2.5
	May 2010	133.6	131.1	2.5
	June 2010	na	na	na
	Average	**131.9**	**129.4**	**2.5**
	July 2010	na	na	na
	August 2010	na	na	na
	September 2010	na	na	na
	Average	**—**	**—**	**—**
Moruya	October 2009	124.0	121.0	3.0
	November 2009	126.0	123.1	2.9
	December 2009	126.4	123.5	2.9
	Average	**125.5**	**122.5**	**2.9**
	January 2010	130.9	127.9	3.0
	February 2010	131.0	127.6	3.4
	March 2010	132.3	129.1	3.2
	Average	**131.4**	**128.2**	**3.2**
	April 2010	134.4	131.4	3.0
	May 2010	134.7	132.2	2.5
	June 2010	132.7	130.4	2.3
	Average	**133.9**	**131.3**	**2.6**
	July 2010	132.3	129.6	2.7
	August 2010	130.6	127.9	2.7
	September 2010	128.2	125.6	2.6
	Average	**130.4**	**127.7**	**2.7**
Moss Vale	October 2009	121.8	118.7	3.1
	November 2009	124.4	121.3	3.1
	December 2009	125.0	121.8	3.2
	Average	**123.7**	**120.6**	**3.1**
	January 2010	129.4	126.4	3.0
	February 2010	125.5	122.5	3.0
	March 2010	130.7	127.6	3.1
	Average	**128.5**	**125.5**	**3.0**
	April 2010	132.1	129.1	3.0
	May 2010	133.4	130.4	3.0
	June 2010	132.3	129.4	2.9
	Average	**132.6**	**129.6**	**3.0**
	July 2010	129.8	126.8	3.0
	August 2010	128.6	125.6	3.0
	September 2010	120.5	117.5	3.0
	Average	**126.3**	**123.3**	**3.0**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Muswellbrook	October 2009	128.6	126.1	2.5
	November 2009	127.0	124.5	2.5
	December 2009	126.9	124.4	2.5
	Average	**127.5**	**125.0**	**2.5**
	January 2010	129.2	126.7	2.5
	February 2010	129.9	127.4	2.5
	March 2010	129.9	127.4	2.5
	Average	**129.7**	**127.2**	**2.5**
	April 2010	130.0	127.5	2.5
	May 2010	130.1	127.8	2.3
	June 2010	129.9	127.6	2.3
	Average	**130.0**	**127.6**	**2.4**
	July 2010	129.9	127.4	2.5
	August 2010	129.8	127.3	2.5
	September 2010	124.0	121.5	2.5
	Average	**127.9**	**125.4**	**2.5**
Newcastle	October 2009	121.0	118.2	2.8
	November 2009	125.7	122.9	2.8
	December 2009	125.5	122.7	2.8
	Average	**124.1**	**121.3**	**2.8**
	January 2010	130.1	127.3	2.8
	February 2010	124.8	122.1	2.7
	March 2010	129.1	126.3	2.8
	Average	**128.0**	**125.2**	**2.8**
	April 2010	126.9	124.1	2.8
	May 2010	130.6	127.8	2.8
	June 2010	128.7	126.2	2.5
	Average	**128.7**	**126.0**	**2.7**
	July 2010	125.4	122.8	2.6
	August 2010	125.3	122.7	2.6
	September 2010	121.3	118.7	2.6
	Average	**124.0**	**121.4**	**2.6**
Nowra	October 2009	na	na	na
	November 2009	na	na	na
	December 2009	123.8	121.4	2.4
	Average	**123.8**	**121.4**	**2.4**
	January 2010	na	na	na
	February 2010	na	na	na
	March 2010	130.6	128.3	2.3
	Average	**130.6**	**128.3**	**2.3**
	April 2010	129.1	126.9	2.2
	May 2010	na	na	na
	June 2010	na	na	na
	Average	**129.1**	**126.9**	**2.2**
	July 2010	na	na	na
	August 2010	na	na	na
	September 2010	na	na	na
	Average	**—**	**—**	**—**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Port Macquarie	October 2009	121.3	119.5	1.8
	November 2009	119.1	117.3	1.8
	December 2009	122.6	121.0	1.6
	Average	**121.0**	**119.3**	**1.7**
	January 2010	125.0	123.4	1.6
	February 2010	124.4	122.9	1.5
	March 2010	128.2	126.8	1.4
	Average	**125.9**	**124.4**	**1.5**
	April 2010	129.1	127.6	1.5
	May 2010	132.3	131.0	1.3
	June 2010	130.1	128.6	1.5
	Average	**130.5**	**129.1**	**1.4**
	July 2010	128.8	127.0	1.8
	August 2010	126.2	124.5	1.7
	September 2010	125.7	123.9	1.8
	Average	**126.9**	**125.1**	**1.8**
Singleton	October 2009	122.6	119.6	3.0
	November 2009	126.7	123.7	3.0
	December 2009	127.9	124.9	3.0
	Average	**125.7**	**122.7**	**3.0**
	January 2010	131.6	128.6	3.0
	February 2010	132.5	129.5	3.0
	March 2010	131.9	128.9	3.0
	Average	**132.0**	**129.0**	**3.0**
	April 2010	130.6	127.6	3.0
	May 2010	133.7	130.9	2.8
	June 2010	na	na	na
	Average	**132.2**	**129.3**	**2.9**
	July 2010	na	na	na
	August 2010	na	na	na
	September 2010	na	na	na
	Average	**—**	**—**	**—**
Tamworth	October 2009	127.9	125.7	2.2
	November 2009	126.8	124.5	2.3
	December 2009	124.7	122.5	2.2
	Average	**126.5**	**124.2**	**2.2**
	January 2010	128.7	126.5	2.2
	February 2010	126.7	124.5	2.2
	March 2010	128.1	125.8	2.3
	Average	**127.8**	**125.6**	**2.2**
	April 2010	129.1	126.9	2.2
	May 2010	132.5	130.3	2.2
	June 2010	133.9	131.8	2.1
	Average	**131.8**	**129.7**	**2.2**
	July 2010	132.8	130.5	2.3
	August 2010	130.1	127.6	2.5
	September 2010	127.9	125.2	2.7
	Average	**130.3**	**127.8**	**2.5**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Taree	October 2009	116.9	114.6	2.3
	November 2009	118.5	116.3	2.2
	December 2009	118.1	115.9	2.2
	Average	**117.8**	**115.6**	**2.2**
	January 2010	127.9	125.6	2.3
	February 2010	129.7	127.4	2.3
	March 2010	129.5	127.2	2.3
	Average	**129.0**	**126.7**	**2.3**
	April 2010	129.1	126.8	2.3
	May 2010	129.6	127.5	2.1
	June 2010	128.6	126.5	2.1
	Average	**129.1**	**126.9**	**2.2**
	July 2010	128.0	125.8	2.2
	August 2010	124.7	122.5	2.2
	September 2010	120.7	118.5	2.2
	Average	**124.5**	**122.3**	**2.2**
Wollongong	October 2009	120.3	117.5	2.8
	November 2009	123.0	120.3	2.7
	December 2009	123.9	121.1	2.8
	Average	**122.4**	**119.6**	**2.8**
	January 2010	128.7	126.0	2.7
	February 2010	126.5	123.8	2.7
	March 2010	129.4	126.7	2.7
	Average	**128.2**	**125.5**	**2.7**
	April 2010	127.7	125.0	2.7
	May 2010	132.5	129.6	2.9
	June 2010	129.9	127.0	2.9
	Average	**130.0**	**127.2**	**2.8**
	July 2010	128.1	124.9	3.2
	August 2010	127.0	124.1	2.9
	September 2010	122.3	118.6	3.7
	Average	**125.8**	**122.5**	**3.3**
Queensland regional centres and country towns				
Bowen	October 2009	128.9	125.9	3.0
	November 2009	127.7	125.0	2.7
	December 2009	125.9	123.4	2.5
	Average	**127.5**	**124.8**	**2.7**
	January 2010	129.3	126.6	2.7
	February 2010	129.9	126.9	3.0
	March 2010	129.9	127.0	2.9
	Average	**129.7**	**126.8**	**2.9**
	April 2010	130.5	127.5	3.0
	May 2010	132.5	129.9	2.6
	June 2010	133.0	130.2	2.8
	Average	**132.0**	**129.2**	**2.8**
	July 2010	132.9	129.9	3.0
	August 2010	131.6	128.6	3.0
	September 2010	126.7	123.7	3.0
	Average	**130.4**	**127.4**	**3.0**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Bundaberg	October 2009	120.5	118.0	2.5
	November 2009	122.8	120.3	2.5
	December 2009	123.0	120.5	2.5
	Average	**122.1**	**119.6**	**2.5**
	January 2010	na	na	na
	February 2010	na	na	na
	March 2010	na	na	na
	Average	**—**	**—**	**—**
	April 2010	na	na	na
	May 2010	na	na	na
	June 2010	na	na	na
	Average	**—**	**—**	**—**
	July 2010	na	na	na
	August 2010	na	na	na
	September 2010	na	na	na
	Average	**—**	**—**	**—**
Cairns	October 2009	123.0	120.7	2.3
	November 2009	123.4	121.1	2.3
	December 2009	123.4	121.0	2.4
	Average	**123.3**	**120.9**	**2.3**
	January 2010	128.3	126.0	2.3
	February 2010	128.9	126.4	2.5
	March 2010	129.2	126.7	2.5
	Average	**128.8**	**126.4**	**2.4**
	April 2010	129.4	126.9	2.5
	May 2010	130.7	128.4	2.3
	June 2010	129.6	127.3	2.3
	Average	**129.9**	**127.5**	**2.4**
	July 2010	128.7	126.2	2.5
	August 2010	127.7	125.2	2.5
	September 2010	126.9	124.3	2.6
	Average	**127.8**	**125.2**	**2.5**
Dalby	October 2009	118.9	116.2	2.7
	November 2009	119.1	116.4	2.7
	December 2009	119.1	116.3	2.8
	Average	**119.0**	**116.3**	**2.7**
	January 2010	126.1	123.3	2.8
	February 2010	126.9	124.2	2.7
	March 2010	126.5	123.8	2.7
	Average	**126.5**	**123.8**	**2.7**
	April 2010	126.6	123.9	2.7
	May 2010	127.8	125.2	2.6
	June 2010	127.1	124.4	2.7
	Average	**127.2**	**124.5**	**2.7**
	July 2010	126.1	123.4	2.7
	August 2010	125.9	123.3	2.6
	September 2010	125.5	122.8	2.7
	Average	**125.8**	**123.2**	**2.7**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Gladstone	October 2009	na	na	na
	November 2009	na	na	na
	December 2009	na	na	na
	Average	**—**	**—**	**—**
	January 2010	na	na	na
	February 2010	na	na	na
	March 2010	131.4	129.5	1.9
	Average	**131.4**	**129.5**	**1.9**
	April 2010	131.9	129.9	2.0
	May 2010	132.1	130.1	2.0
	June 2010	131.2	129.1	2.1
	Average	**131.7**	**129.7**	**2.0**
	July 2010	130.9	128.9	2.0
	August 2010	129.7	127.7	2.0
	September 2010	126.5	124.5	2.0
	Average	**129.0**	**127.0**	**2 .0**
Gympie	October 2009	119.7	117.6	2.1
	November 2009	121.9	119.9	2.0
	December 2009	122.2	120.1	2.1
	Average	**121.3**	**119.2**	**2.1**
	January 2010	126.8	124.8	2.0
	February 2010	127.4	125.4	2.0
	March 2010	129.7	127.7	2.0
	Average	**128.0**	**126.0**	**2.0**
	April 2010	131.0	129.0	2.0
	May 2010	130.5	128.5	2.0
	June 2010	128.6	126.6	2.0
	Average	**130.0**	**128.0**	**2.0**
	July 2010	127.6	125.7	1.9
	August 2010	127.0	125.0	2.0
	September 2010	124.3	122.4	1.9
	Average	**126.3**	**124.4**	**1.9**
Hervey Bay	October 2009	123.8	121.3	2.5
	November 2009	124.4	121.8	2.6
	December 2009	124.6	122.1	2.5
	Average	**124.3**	**121.7**	**2.5**
	January 2010	128.6	126.1	2.5
	February 2010	129.2	126.7	2.5
	March 2010	129.3	126.8	2.5
	Average	**129.0**	**126.5**	**2.5**
	April 2010	129.4	126.9	2.5
	May 2010	130.8	128.3	2.5
	June 2010	128.6	126.0	2.6
	Average	**129.6**	**127.1**	**2.5**
	July 2010	128.5	126.1	2.4
	August 2010	128.1	125.7	2.4
	September 2010	126.9	124.4	2.5
	Average	**127.8**	**125.4**	**2.4**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Ingham	October 2009	120.6	117.6	3.0
	November 2009	119.9	117.2	2.7
	December 2009	117.6	114.9	2.7
	Average	**119.4**	**116.6**	**2.8**
	January 2010	127.0	124.0	3.0
	February 2010	128.9	125.9	3.0
	March 2010	128.9	125.9	3.0
	Average	**128.3**	**125.3**	**3.0**
	April 2010	129.8	126.7	3.1
	May 2010	132.4	129.7	2.7
	June 2010	132.9	130.2	2.7
	Average	**131.7**	**128.9**	**2.8**
	July 2010	132.8	129.8	3.0
	August 2010	128.8	125.8	3.0
	September 2010	125.0	122.0	3.0
	Average	**128.9**	**125.9**	**3.0**
Mackay	October 2009	120.2	117.9	2.3
	November 2009	119.2	116.8	2.4
	December 2009	119.2	116.7	2.5
	Average	**119.5**	**117.1**	**2.4**
	January 2010	128.7	126.3	2.4
	February 2010	128.8	126.5	2.3
	March 2010	128.5	126.2	2.3
	Average	**128.7**	**126.3**	**2.3**
	April 2010	128.4	126.1	2.3
	May 2010	132.3	129.9	2.4
	June 2010	132.8	130.5	2.3
	Average	**131.2**	**128.8**	**2.3**
	July 2010	130.3	128.0	2.3
	August 2010	124.4	122.2	2.2
	September 2010	123.0	120.8	2.2
	Average	**125.9**	**123.7**	**2.2**
Maryborough	October 2009	120.3	118.3	2.0
	November 2009	121.5	119.5	2.0
	December 2009	122.7	120.7	2.0
	Average	**121.5**	**119.5**	**2.0**
	January 2010	127.2	125.2	2.0
	February 2010	126.9	124.9	2.0
	March 2010	127.9	125.9	2.0
	Average	**127.3**	**125.3**	**2.0**
	April 2010	129.4	127.3	2.1
	May 2010	131.2	129.0	2.2
	June 2010	130.2	128.0	2.2
	Average	**130.3**	**128.1**	**2.2**
	July 2010	128.7	126.8	1.9
	August 2010	127.9	125.9	2.0
	September 2010	126.6	124.6	2.0
	Average	**127.7**	**125.8**	**2.0**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Rockhampton	October 2009	126.5	124.4	2.1
	November 2009	127.1	125.0	2.1
	December 2009	127.6	125.4	2.2
	Average	**127.1**	**124.9**	**2.1**
	January 2010	131.9	129.7	2.2
	February 2010	133.2	131.0	2.2
	March 2010	131.7	129.6	2.1
	Average	**132.3**	**130.1**	**2.2**
	April 2010	132.0	129.9	2.1
	May 2010	133.0	130.9	2.1
	June 2010	132.9	130.8	2.1
	Average	**132.6**	**130.5**	**2.1**
	July 2010	133.0	130.9	2.1
	August 2010	133.0	130.9	2.1
	September 2010	129.7	127.6	2.1
	Average	**131.9**	**129.8**	**2.1**
Roma	October 2009	na	na	na
	November 2009	na	na	na
	December 2009	na	na	na
	Average	**–**	**–**	**–**
	January 2010	na	na	na
	February 2010	na	na	na
	March 2010	126.2	124.0	2.2
	Average	**126.2**	**124.0**	**2.2**
	April 2010	126.8	124.8	2.0
	May 2010	na	na	na
	June 2010	na	na	na
	Average	**126.8**	**124.8**	**2.0**
	July 2010	na	na	na
	August 2010	na	na	na
	September 2010	na	na	na
	Average	**–**	**–**	**–**
Toowoomba	October 2009	116.3	113.6	2.7
	November 2009	112.6	109.9	2.7
	December 2009	115.5	112.7	2.8
	Average	**114.8**	**112.1**	**2.7**
	January 2010	125.2	122.4	2.8
	February 2010	124.9	122.1	2.8
	March 2010	123.3	120.5	2.8
	Average	**124.5**	**121.7**	**2.8**
	April 2010	123.1	120.3	2.8
	May 2010	130.1	127.4	2.7
	June 2010	128.3	125.6	2.7
	Average	**127.2**	**124.4**	**2.7**
	July 2010	125.5	122.7	2.8
	August 2010	123.4	120.6	2.8
	September 2010	119.7	116.9	2.8
	Average	**122.9**	**120.1**	**2.8**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Townsville	October 2009	117.6	114.8	2.8
	November 2009	115.5	112.9	2.6
	December 2009	118.6	116.1	2.5
	Average	**117.2**	**114.6**	**2.6**
	January 2010	127.4	124.7	2.7
	February 2010	125.6	122.8	2.8
	March 2010	125.0	122.2	2.8
	Average	**126.0**	**123.2**	**2.8**
	April 2010	125.3	122.5	2.8
	May 2010	131.7	129.0	2.7
	June 2010	130.6	128.0	2.6
	Average	**129.2**	**126.5**	**2.7**
	July 2010	128.5	125.7	2.8
	August 2010	126.2	123.4	2.8
	September 2010	123.4	120.6	2.8
	Average	**126.0**	**123.2**	**2.8**
Warwick	October 2009	119.0	116.3	2.7
	November 2009	119.0	116.3	2.7
	December 2009	118.7	116.0	2.7
	Average	**118.9**	**116.2**	**2.7**
	January 2010	125.7	123.1	2.6
	February 2010	127.0	124.3	2.7
	March 2010	127.0	124.3	2.7
	Average	**126.6**	**123.9**	**2.7**
	April 2010	127.8	125.1	2.7
	May 2010	132.1	129.4	2.7
	June 2010	132.6	130.0	2.6
	Average	**130.8**	**128.2**	**2.7**
	July 2010	131.4	128.7	2.7
	August 2010	129.1	126.5	2.6
	September 2010	126.6	124.0	2.6
	Average	**129.0**	**126.4**	**2.6**
Victoria regional centres and country towns				
Bairnsdale	October 2009	118.3	115.3	3.0
	November 2009	na	na	na
	December 2009	na	na	na
	Average	**118.3**	**115.3**	**3.0**
	January 2010	na	na	na
	February 2010	na	na	na
	March 2010	na	na	na
	Average	**—**	**—**	**—**
	April 2010	123.5	120.5	3.0
	May 2010	125.9	122.9	3.0
	June 2010	na	na	na
	Average	**124.7**	**121.7**	**3.0**
	July 2010	na	na	na
	August 2010	121.3	118.3	3.0
	September 2010	na	na	na
	Average	**121.3**	**118.3**	**3.0**

Location	Month	RULP cpl	E10 cpl	Differential cpl
Traralgon	October 2009	122.8	119.9	2.9
	November 2009	na	na	na
	December 2009	na	na	na
	Average	**122.8**	**119.9**	**2.9**
	January 2010	na	na	na
	February 2010	na	na	na
	March 2010	na	na	na
	Average	**–**	**–**	**–**
	April 2010	130.1	126.9	3.2
	May 2010	130.1	126.8	3.3
	June 2010	129.0	126.0	3.0
	Average	**129.7**	**126.6**	**3.2**
	July 2010	127.5	124.6	2.9
	August 2010	125.7	122.7	3.0
	September 2010	na	na	na
	Average	**126.6**	**123.7**	**3.0**

Methodology

Coverage

The ACCC obtains petrol price data from Informed Sources. Informed Sources currently monitors fuel prices at approximately 4250 service stations in Australia. There are currently approximately 6400 service stations in Australia. Therefore, the Informed Sources monitoring covers approximately two-thirds of the total number of service stations. All of the capital cities and most of the major metropolitan towns are included in the monitoring program, as are a representative sample of regional centres and country towns.

Informed Sources collects **E10 petrol** price data from all states, the Northern Territory, and the Australian Capital Territory, except Western Australia where E10 petrol is not commercially available.

As at early October 2010 Informed Sources collected E10 petrol prices from approximately 1430 service stations across Australia. Of this total, approximately 41 per cent of these service stations are included in the 48 locations included in this appendix.

The proportion of sites included in the E10 monitoring program has decreased significantly since last year because service stations in New South Wales and Queensland are increasingly selling only E10 petrol.

In table D.3 there are a number of locations where price data has ceased to be available. These include: Bega, Casino, Forster, Goulburn, Grafton, Moree, Nowra and Singleton in New South Wales and Bundaberg in Queensland. In these locations service stations have been moving to sell only E10 petrol.

From July 2012 RULP petrol will no longer available in New South Wales and therefore locations in that state will no longer be included in this monitoring.

Data collection

Informed Sources obtains daily average E10 petrol and RULP prices for the locations included in this appendix. The monthly averages are derived from the daily average prices. E10 petrol prices collected are for regular E10 unleaded petrol. They do not include premium E10 petrol, E5 petrol, or E85 petrol.

The daily E10 petrol price for these locations is the average price at service stations selling E10 petrol that are monitored by Informed Sources. The daily RULP price is the average price at those service stations. Therefore, the average RULP price for a particular location included in this report may be different from the overall average RULP price in that location.

Locations are only included in the tables where Informed Sources obtains daily E10 petrol prices from two or more services stations in that location. This is to ensure the robustness of the price data.

Daily price data is only included in the monthly average where both E10 petrol and RULP prices for that day are available. To derive a monthly average price, daily average prices need to be available for at least fourteen days in that month.

Informed Sources may exclude data from some service stations that sell E10 petrol in these locations where it has concerns about the robustness and accuracy of the E10 petrol or RULP price data.

In table D.2, the average monthly price in the 'capital cities' aggregate is the average of all prices from service stations selling E10 petrol in the five capital cities; and similarly the average monthly price in the 'regional centres and country towns' aggregate is the average of all prices from service stations selling E10 petrol in the New South Wales, Queensland and Victorian regional centres and country towns.

In some locations there are significant variations in the monthly price differential between RULP and E10 petrol. These variations are influenced by factors such as the specific service stations included in the monitoring each month and changes to the pricing policies at service stations.

Appendix E: Gross indicative retail margins for regular unleaded petrol and diesel

This appendix provides data on gross indicative retail margins (i.e., average retail prices minus average terminal gate prices (TGPs)) for regular unleaded petrol (RULP) and diesel.

Regular unleaded petrol

Gross indicative retail margins (hereafter referred to as 'margins') for RULP across the five largest cities were discussed in chapter 9. This appendix provides data on margins for each of the five largest cities individually—shown annually for the period 2002–03 to 2009–10 and monthly for 2009–10.[196] Annual average margins for each city in 2002–03 prices are also provided.[197]

196 Sources for the RULP tables and charts are ACCC, Informed Sources, BP, Caltex, Mobil, Shell, Trafigura, Gull, WA FuelWatch, and Australian Bureau of Statistics (ABS). Sources for the diesel tables and charts are ACCC, Informed Sources, ABS and the Australian Institute of Petroleum (AIP).

197 The ABS All Groups Consumer Price Indices for Sydney, Melbourne, Brisbane, Adelaide and Perth were used to deflate the respective retail margins.

Sydney

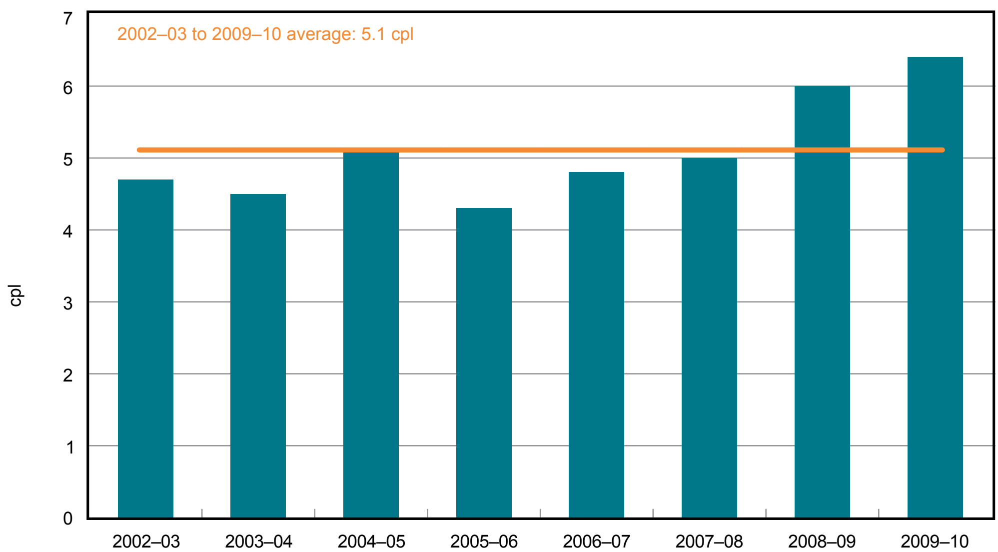
Average annual RULP retail prices, TGPs and margins in Sydney for 2002–03 to 2009–10 are presented in table E.1. The margins are also calculated in real terms relative to 2002–03 prices. The information is presented on a monthly basis for 2009–10 in table E.2. The margins for these periods are also presented in chart form (charts E.1 and E.2).

Table E.1 Average annual RULP retail prices, terminal gate prices and margins, Sydney: 2002–03 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2002–03	89.7	85.0	4.7	4.7
2003–04	91.6	87.1	4.5	4.4
2004–05	103.3	98.2	5.1	4.9
2005–06	122.6	118.3	4.3	4.0
2006–07	123.3	118.5	4.8	4.3
2007–08	136.3	131.3	5.0	4.4
2008–09	128.2	122.2	6.0	5.1
2009–10	123.4	117.0	6.4	5.3
Average margins			5.1	4.6

The average annual margin over the eight years was 5.1 cpl. It ranged from a low of 4.3 cpl in 2005–06 to a high of 6.4 cpl in 2009–10.

Chart E.1 Average annual margins, RULP, Sydney: 2002–03 to 2009–10



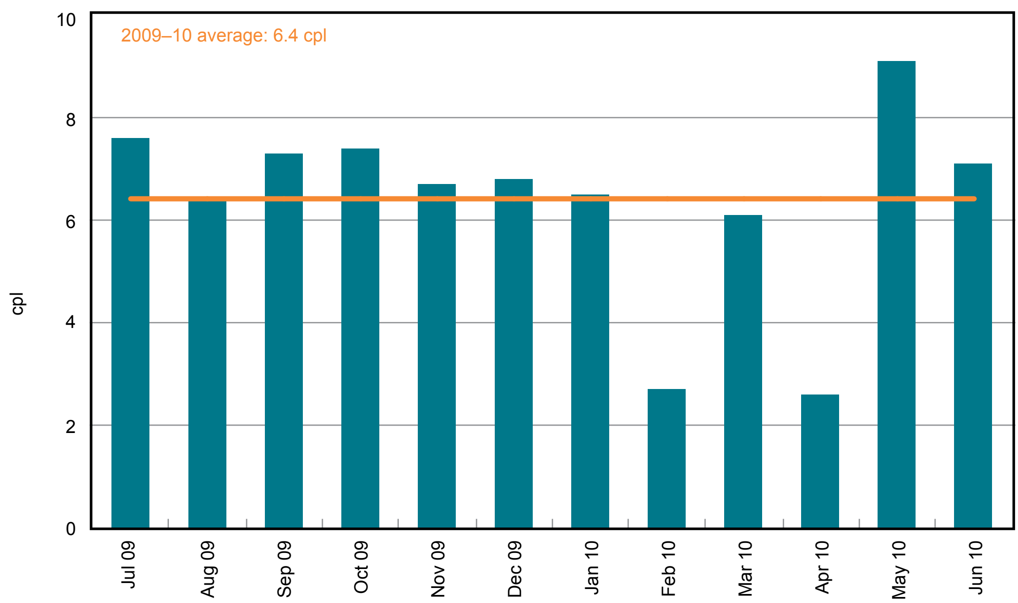
The **real** average annual margin over the eight years was 4.6 cpl. It ranged from a low of 4.0 cpl in 2005–06 to a high of 5.3 cpl in 2009–10.

Table E.2 Average monthly RULP retail prices, terminal gate prices and margins, Sydney: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	121.9	114.3	7.6
Aug 09	125.2	118.8	6.4
Sep 09	122.2	114.9	7.3
Oct 09	117.0	109.6	7.4
Nov 09	120.0	113.3	6.7
Dec 09	120.5	113.7	6.8
Jan 10	125.1	118.6	6.5
Feb 10	121.6	118.9	2.7
Mar 10	126.8	120.7	6.1
Apr 10	123.8	121.2	2.6
May 10	129.7	120.6	9.1
Jun 10	127.0	119.9	7.1
Average margin			6.4

The monthly margin over the year ranged from a low of 2.6 cpl in April 2010 to a high of 9.1 cpl in May 2010.

Chart E.2 Average monthly margins, RULP, Sydney: July 2009 to June 2010



Melbourne

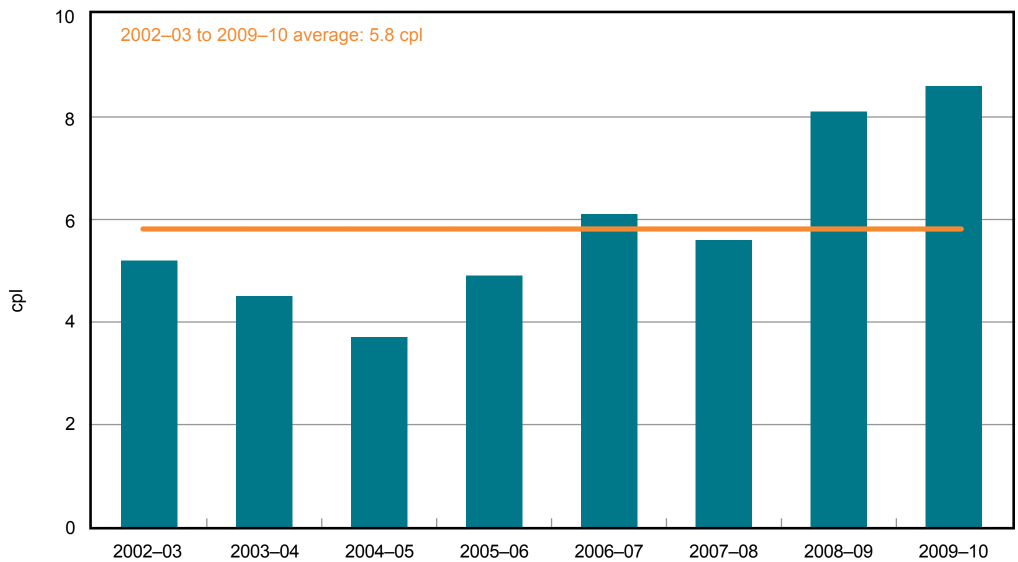
Average annual RULP retail prices, TGPs and margins in Melbourne for 2002–03 to 2009–10 are presented in table E.3. The margins are also calculated in real terms relative to 2002–03 prices. The information is presented on a monthly basis for 2009–10 in table E.4. The margins for these periods are also presented in chart form (charts E.3 and E.4).

Table E.3 Average annual RULP retail prices, terminal gate prices and margins, Melbourne: 2002–03 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2002–03	89.3	84.1	5.2	5.2
2003–04	90.6	86.1	4.5	4.4
2004–05	101.0	97.3	3.7	3.5
2005–06	122.3	117.4	4.9	4.6
2006–07	123.5	117.4	6.1	5.5
2007–08	136.3	130.7	5.6	4.9
2008–09	129.9	121.8	8.1	6.9
2009–10	125.3	116.7	8.6	7.2
Average margins			5.8	5.3

The average annual margin over the eight years was 5.8 cpl. It ranged from a low of 3.7 cpl in 2004–05 to a high of 8.6 cpl in 2009–10.

Chart E.3 Average annual margins, RULP, Melbourne: 2002–03 to 2009–10



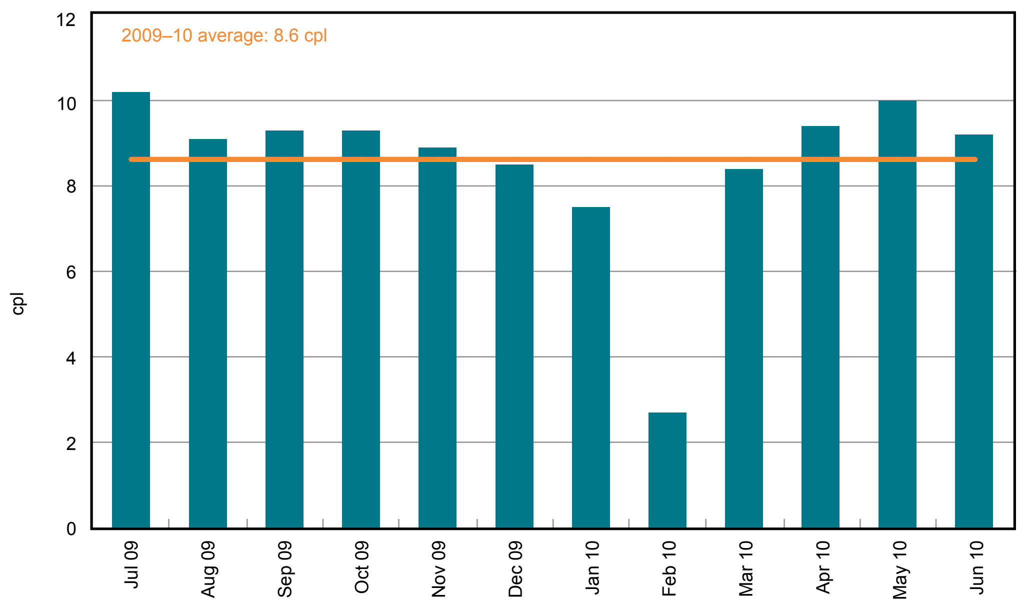
The **real** average annual margin over the eight years was 5.3 cpl. It ranged from a low of 3.5 cpl in 2004–05 to a high of 7.2 cpl in 2009–10.

Table E.4 Average monthly RULP retail prices, terminal gate prices and margins, Melbourne: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	124.4	114.2	10.2
Aug 09	127.7	118.6	9.1
Sep 09	124.0	114.7	9.3
Oct 09	118.6	109.3	9.3
Nov 09	122.1	113.2	8.9
Dec 09	122.0	113.5	8.5
Jan 10	125.9	118.4	7.5
Feb 10	121.2	118.5	2.7
Mar 10	128.8	120.4	8.4
Apr 10	130.1	120.7	9.4
May 10	130.1	120.1	10.0
Jun 10	128.5	119.3	9.2
Average margin			8.6

The monthly margin over the year ranged from a low of 2.7 cpl in February 2010 to a high of 10.2 cpl in July 2009.

Chart E.4 Average monthly margins, RULP, Melbourne: July 2009 to June 2010



Brisbane

Average annual RULP retail prices, TGPs and margins in Brisbane for 2002–03 to 2009–10 are presented in table E.5. The margins are also calculated in real terms relative to 2002–03 prices. The information is presented on a monthly basis for 2009–10 in table E.6. The margins for these periods are also presented in chart form (charts E.5 and E.6).

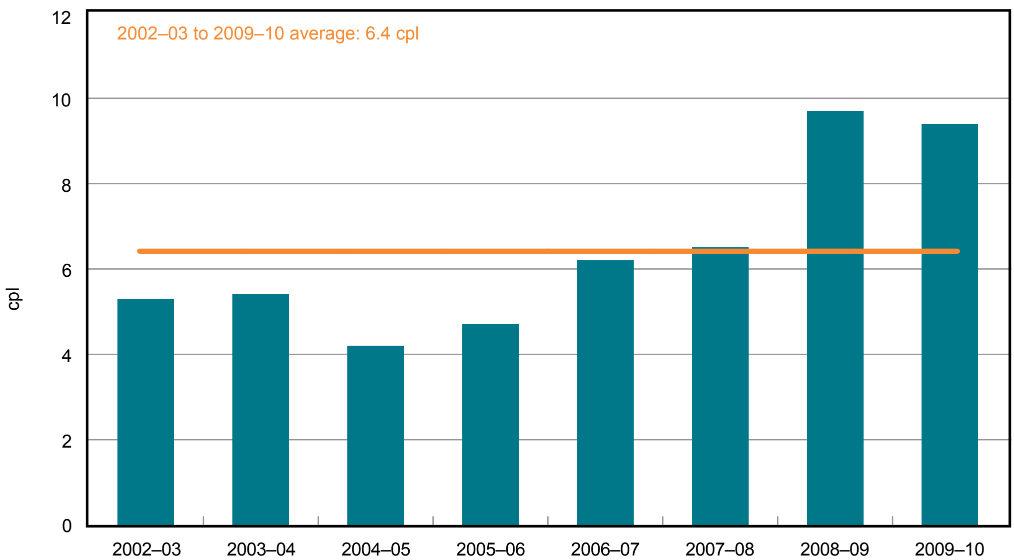
Table E.5 Average annual RULP retail prices, terminal gate prices and margins, Brisbane: 2002–03 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2002–03	81.8	76.5	5.3	5.3
2003–04	84.0	78.6	5.4	5.2
2004–05	94.1	89.9	4.2	4.0
2005–06	114.5	109.8	4.7	4.3
2006–07	116.0	109.8	6.2	5.5
2007–08	128.5	122.0	6.5	5.5
2008–09	122.5	112.8	9.7	8.0
2009–10	126.3	116.9	9.4	7.6
Average margins			6.4	5.7

Note: TGPs were adjusted downward before 2009–10 to reflect the Queensland Government retail fuel subsidy of approximately 9.2 cpl (including the GST).

The average annual margin over the eight years was 6.4 cpl. It ranged from a low of 4.2 cpl in 2004–05 to a high of 9.7 cpl in 2008–09.

Chart E.5 Average annual margins, RULP, Brisbane: 2002–03 to 2009–10



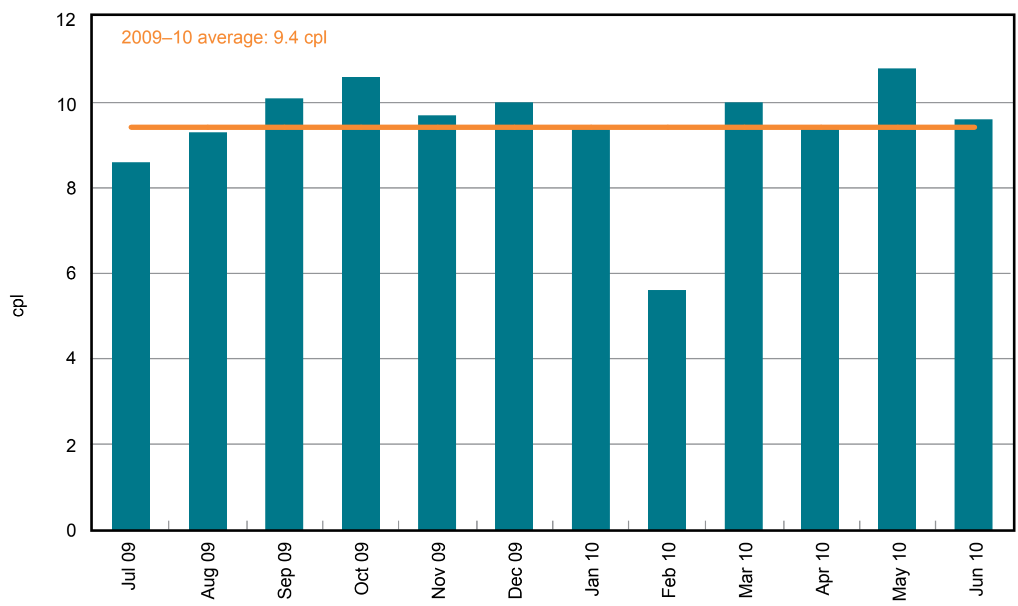
The **real** average annual margin over the eight years was 5.7 cpl. It ranged from a low of 4.0 cpl in 2004–05 to a high of 8.0 cpl in 2008–09.

Table E.6 Average monthly RULP retail prices, terminal gate prices and margins, Brisbane: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	122.9	114.3	8.6
Aug 09	128.1	118.8	9.3
Sep 09	125.0	114.9	10.1
Oct 09	120.1	109.5	10.6
Nov 09	122.7	113.0	9.7
Dec 09	123.3	113.3	10.0
Jan 10	127.7	118.3	9.4
Feb 10	124.1	118.5	5.6
Mar 10	130.4	120.4	10.0
Apr 10	130.5	121.1	9.4
May 10	131.3	120.5	10.8
Jun 10	129.3	119.7	9.6
Average margin			9.4

The monthly margin over the year ranged from a low of 5.6 cpl in February 2010 to a high of 10.8 cpl in May 2010.

Chart E.6 Average monthly margins, RULP, Brisbane: July 2009 to June 2010



Adelaide

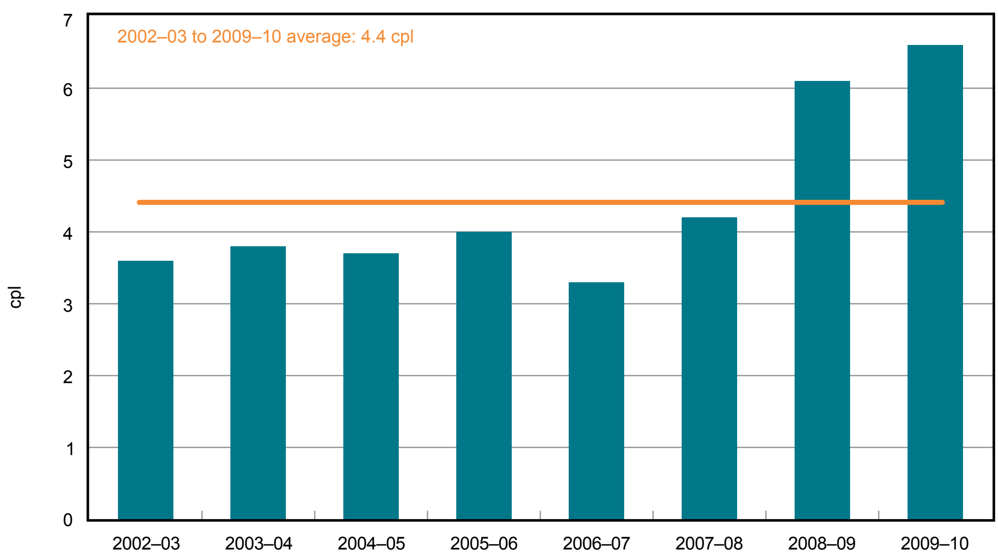
Average annual RULP retail prices, TGPs and margins in Adelaide for 2002–03 to 2009–10 are presented in table E.7. The margins are also calculated in real terms relative to 2002–03 prices. The information is presented on a monthly basis for 2009–10 in table E.8. The margins for these periods are also presented in chart form (charts E.7 and E.8).

Table E.7 Average annual RULP retail prices, terminal gate prices and margins, Adelaide: 2002–03 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2002–03	90.4	86.8	3.6	3.6
2003–04	92.9	89.1	3.8	3.7
2004–05	103.3	99.6	3.7	3.5
2005–06	123.7	119.7	4.0	3.7
2006–07	122.4	119.1	3.3	3.0
2007–08	135.6	131.4	4.2	3.6
2008–09	128.7	122.6	6.1	5.1
2009–10	123.6	117.0	6.6	5.4
Average margins			4.4	4.0

The average annual margin over the eight years was 4.4 cpl. It ranged from a low of 3.3 cpl in 2006–07 to a high of 6.6 cpl in 2009–10.

Chart E.7 Average annual margins, RULP, Adelaide: 2002–03 to 2009–10



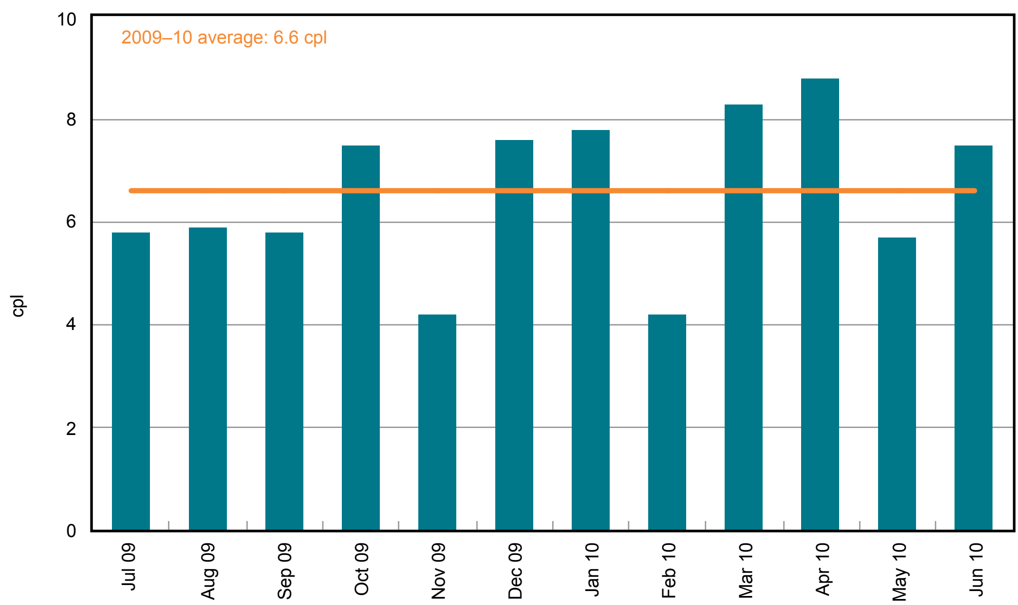
The **real** average annual margin over the eight years was 4.0 cpl. It ranged from a low of 3.0 cpl in 2006–07 to a high of 5.4 cpl in 2009–10.

Table E.8 Average monthly RULP retail prices, terminal gate prices and margins, Adelaide: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	120.8	115.0	5.8
Aug 09	125.3	119.4	5.9
Sep 09	121.4	115.6	5.8
Oct 09	117.6	110.1	7.5
Nov 09	117.9	113.7	4.2
Dec 09	120.9	113.3	7.6
Jan 10	126.0	118.2	7.8
Feb 10	122.5	118.3	4.2
Mar 10	128.5	120.2	8.3
Apr 10	129.6	120.8	8.8
May 10	126.0	120.3	5.7
Jun 10	126.9	119.4	7.5
Average margin			6.6

The monthly margin over the year ranged from a low of 4.2 cpl in November 2009 and February 2010 to a high of 8.8 cpl in April 2010.

Chart E.8 Average monthly margins, RULP, Adelaide: July 2009 to June 2010



Perth

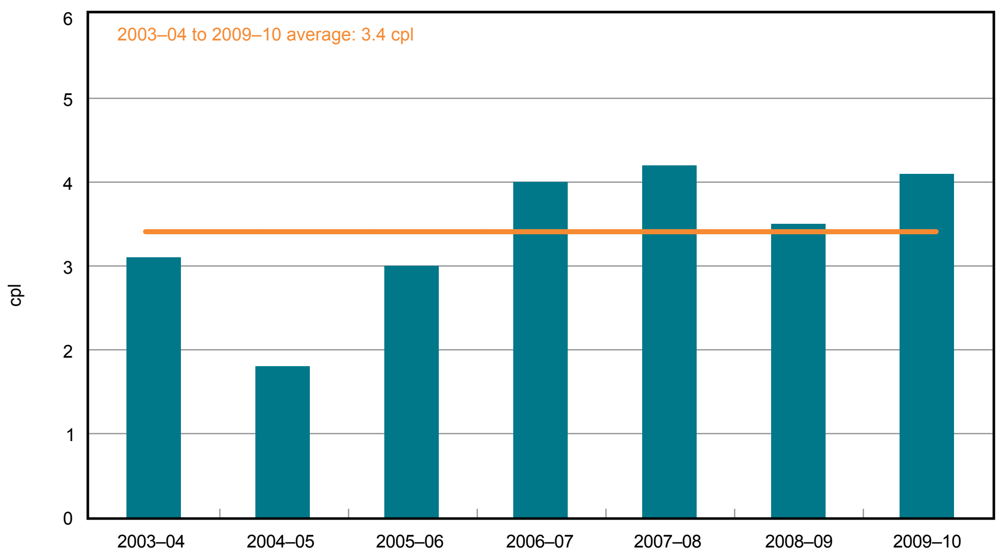
Average annual RULP retail prices, TGPs and margins in Perth for 2003–04 to 2009–10 are presented in table E9.[198] The margins are also calculated in real terms relative to 2002–03 prices. The information is presented on a monthly basis for 2009–10 in table E.10. The margins for these periods are also presented in chart form (charts E.9 and E.10).

Table E.9 Average annual RULP retail prices, terminal gate prices and margins, Perth: 2003–04 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2003–04	92.3	89.2	3.1	3.0
2004–05	101.4	99.6	1.8	1.7
2005–06	122.3	119.3	3.0	2.7
2006–07	122.9	118.9	4.0	3.5
2007–08	135.8	131.6	4.2	3.6
2008–09	126.2	122.7	3.5	2.9
2009–10	122.3	118.2	4.1	3.3
Average margins			3.4	3.0

The average annual margin over the seven years was 3.4 cpl. It ranged from a low of 1.8 cpl in 2004–05 to a high of 4.2 cpl in 2007–08.

Chart E.9 Average annual margins, RULP, Perth: 2003–04 to 2009–10



198 TGP data for Perth for 2002–03 is not available.

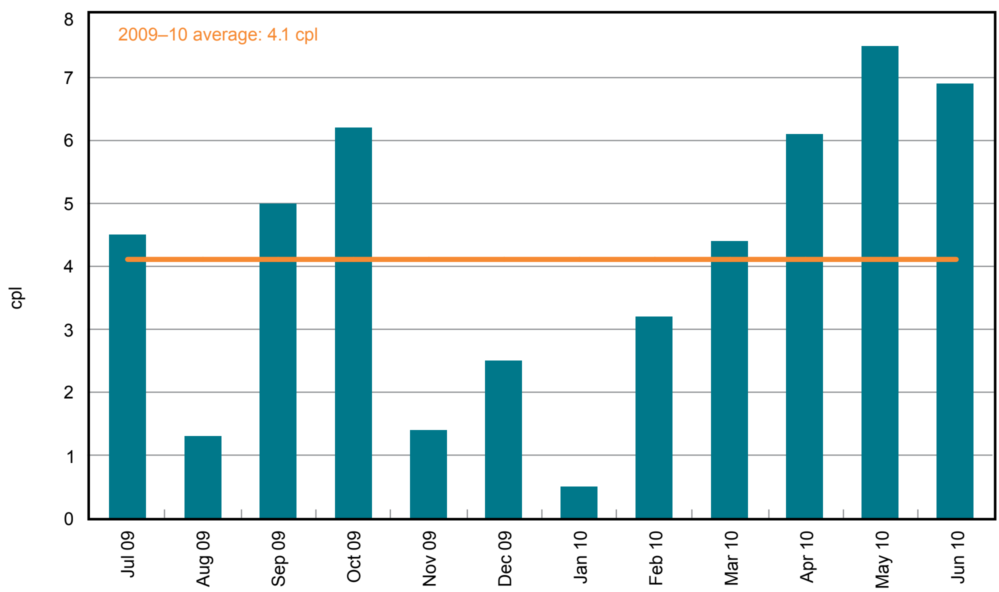
The **real** average annual margin over the seven years was 3.0 cpl. It ranged from a low of 1.7 cpl in 2004–05 to a high of 3.6 cpl in 2007–08.

Table E.10 Average monthly RULP retail prices, terminal gate prices and margins, Perth: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	120.4	115.9	4.5
Aug 09	121.5	120.2	1.3
Sep 09	121.2	116.2	5.0
Oct 09	117.0	110.8	6.2
Nov 09	115.9	114.5	1.4
Dec 09	117.2	114.7	2.5
Jan 10	120.1	119.6	0.5
Feb 10	123.0	119.8	3.2
Mar 10	126.1	121.7	4.4
Apr 10	128.4	122.3	6.1
May 10	129.1	121.6	7.5
Jun 10	127.5	120.6	6.9
Average margin			4.1

The monthly margin over the year ranged from a low of 0.5 cpl in January 2010 to a high of 7.5 cpl in May 2010.

Chart E.10 Average monthly margins, RULP, Perth: July 2009 to June 2010



Diesel

Five largest cities

Average annual diesel retail prices, TGPs and margins across the five largest cities for 2004–05 to 2009–10 are presented in table E.11.[199] The margins are also calculated in real terms relative to 2004–05 prices. The information is presented on a monthly basis for 2009–10 in table E.12. The margins for these periods are also presented in chart form (charts E.11 and E.12).

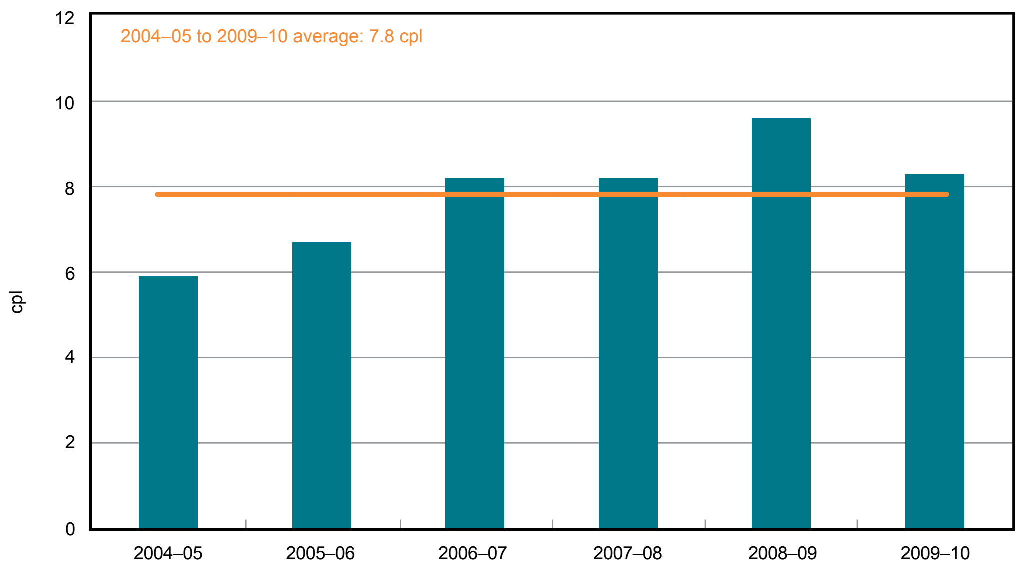
Table E.11 Average annual diesel retail prices, terminal gate prices and margins, five largest cities: 2004–05 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2004–05	109.0	103.1	5.9	5.9
2005–06	130.3	123.6	6.7	6.5
2006–07	127.6	119.4	8.2	7.7
2007–08	147.2	139.0	8.2	7.4
2008–09	139.0	129.4	9.6	8.4
2009–10	124.5	116.2	8.3	7.1
Average margins			7.8	7.2

Note: TGPs in Brisbane were adjusted downward before 2009–10 to reflect the Queensland Government retail fuel subsidy of approximately 9.2 cpl (including the GST).

The average annual margin over the six years was 7.8 cpl. It ranged from a low of 5.9 cpl in 2004–05 to a high of 9.6 cpl in 2008–09.

Chart E.11 Average annual margins, diesel, five largest cities: 2004–05 to 2009–10



199 Diesel TGP data is sourced from the AIP and is only available from January 2004.

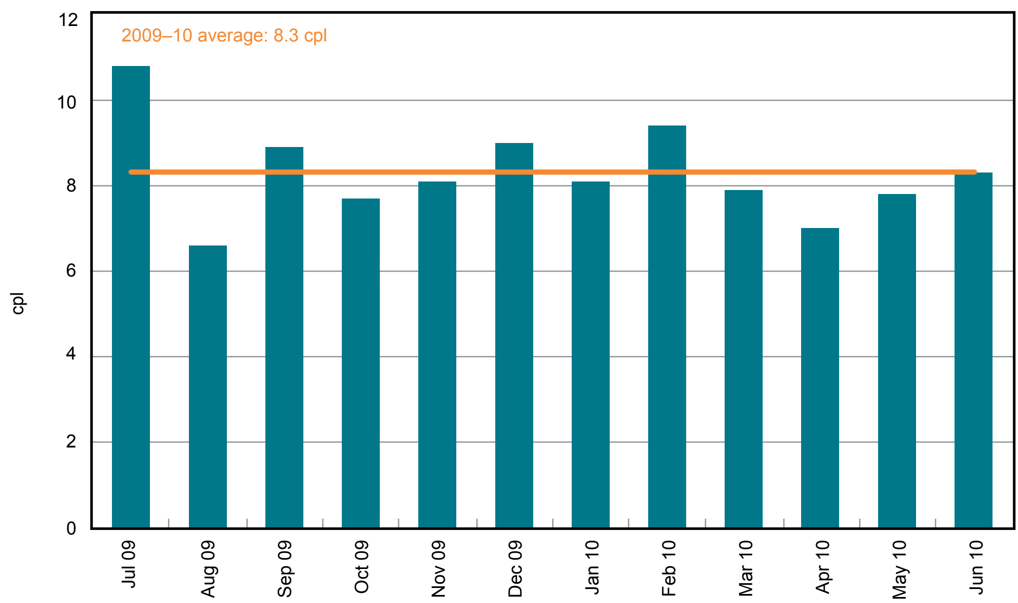
The **real** average annual margin over the six years was 7.2 cpl. It ranged from a low of 5.9 cpl in 2004–05 to a high of 8.4 cpl in 2008–09.

Table E.12 Average monthly diesel retail prices, terminal gate prices and margins, five largest cities: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	123.9	113.1	10.8
Aug 09	122.6	116.0	6.6
Sep 09	121.9	113.0	8.9
Oct 09	119.1	111.4	7.7
Nov 09	122.8	114.7	8.1
Dec 09	122.5	113.5	9.0
Jan 10	124.7	116.6	8.1
Feb 10	123.9	114.5	9.4
Mar 10	124.9	117.0	7.9
Apr 10	127.4	120.4	7.0
May 10	130.1	122.3	7.8
Jun 10	129.9	121.6	8.3
Average margin			8.3

The monthly margin over the year ranged from a low of 6.6 cpl in August 2009 to a high of 10.8 cpl in July 2009.

Chart E.12 Average monthly margins, diesel, five largest cities: July 2009 to June 2010



Sydney

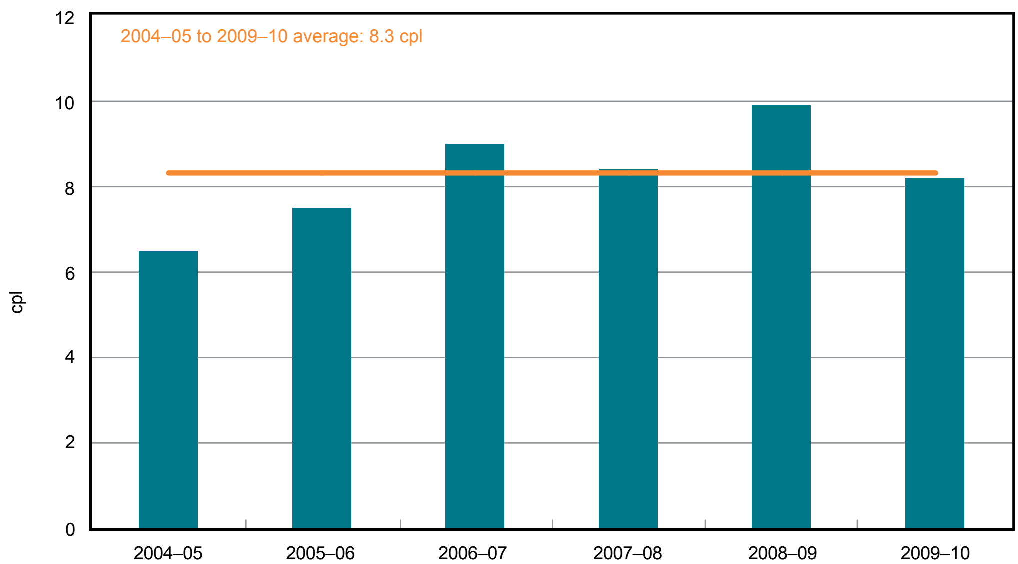
Average annual diesel retail prices, TGPs and margins in Sydney for 2004–05 to 2009–10 are presented in table E.13. The margins are also calculated in real terms relative to 2004–05 prices. The information is presented on a monthly basis for 2009–10 in table E.14. The margins for these periods are also presented in chart form (charts E.13 and E.14).

Table E.13 Average annual retail prices, terminal gate prices and margins, Sydney: 2004–05 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2004–05	111.7	105.2	6.5	6.5
2005–06	132.9	125.4	7.5	7.3
2006–07	130.5	121.5	9.0	8.5
2007–08	149.6	141.2	8.4	7.7
2008–09	141.2	131.3	9.9	8.8
2009–10	124.3	116.1	8.2	7.1
Average margins			8.3	7.7

The average annual margin over the six years was 8.3 cpl. It ranged from a low of 6.5 cpl in 2004–05 to a high of 9.9 cpl in 2008–09.

Chart E.13 Average annual margins, diesel, Sydney: 2004–05 to 2009–10



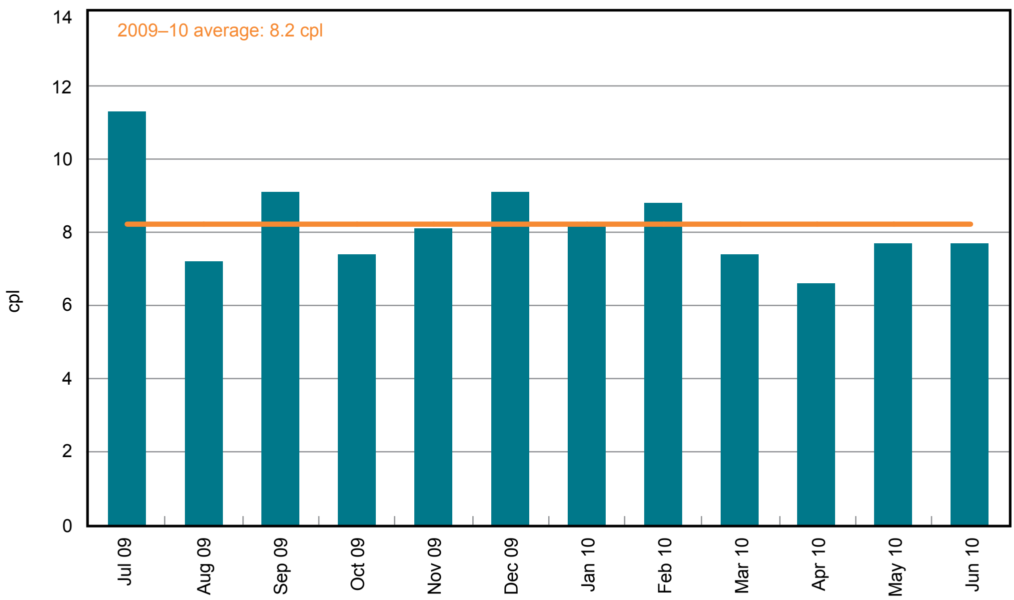
The **real** average annual margin over the six years was 7.7 cpl. It ranged from a low of 6.5 cpl in 2004–05 to a high of 8.8 cpl in 2008–09.

Table E.14 Average monthly diesel retail prices, terminal gate prices and margins, Sydney: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	124.2	112.9	11.3
Aug 09	123.1	115.9	7.2
Sep 09	121.9	112.8	9.1
Oct 09	118.7	111.3	7.4
Nov 09	122.7	114.6	8.1
Dec 09	122.5	113.4	9.1
Jan 10	124.6	116.4	8.2
Feb 10	123.3	114.5	8.8
Mar 10	124.4	117.0	7.4
Apr 10	127.0	120.4	6.6
May 10	130.0	122.3	7.7
Jun 10	129.4	121.7	7.7
Average margin			8.2

The monthly margin over the year ranged from a low of 6.6 cpl in April 2010 to a high of 11.3 cpl in July 2009.

Chart E.14 Average monthly margins, diesel, Sydney: July 2009 to June 2010



Melbourne

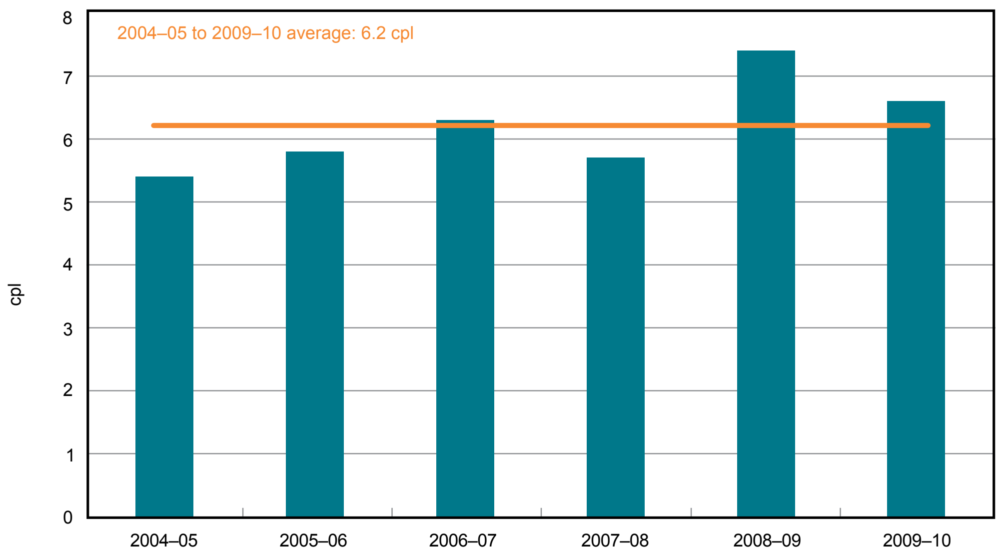
Average annual diesel retail prices, TGPs and margins in Melbourne for 2004–05 to 2009–10 are presented in table E.15. The margins are also calculated in real terms relative to 2004–05 prices. The information is presented on a monthly basis for 2009–10 in table E.16. The margins for these periods are also presented in chart form (charts E.15 and E.16).

Table E.15 Average annual diesel retail prices, terminal gate prices and margins, Melbourne: 2004–05 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2004–05	109.0	103.6	5.4	5.4
2005–06	129.7	123.9	5.8	5.6
2006–07	126.1	119.8	6.3	6.0
2007–08	146.1	140.4	5.7	5.2
2008–09	138.2	130.8	7.4	6.6
2009–10	122.3	115.7	6.6	5.7
Average margins			6.2	5.7

The average annual margin over the six years was 6.2 cpl. It ranged from a low of 5.4 cpl in 2004–05 to a high of 7.4 cpl in 2008–09.

Chart E.15 Average annual margins, diesel, Melbourne: 2004–05 to 2009–10



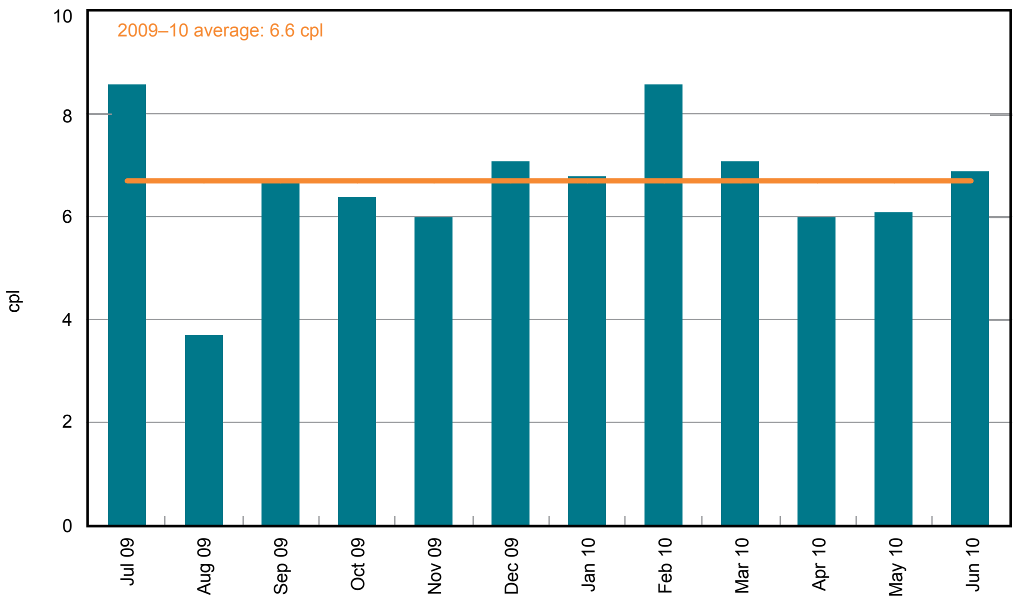
The **real** average annual margin over the six years was 5.7 cpl. It ranged from a low of 5.2 cpl in 2007–08 to a high of 6.6 cpl in 2008–09.

Table E.16 Average monthly diesel retail prices, terminal gate prices and margins, Melbourne: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	121.2	112.6	8.6
Aug 09	119.3	115.6	3.7
Sep 09	119.2	112.5	6.7
Oct 09	117.3	110.9	6.4
Nov 09	120.3	114.3	6.0
Dec 09	120.1	113.0	7.1
Jan 10	122.9	116.1	6.8
Feb 10	122.6	114.0	8.6
Mar 10	123.5	116.4	7.1
Apr 10	125.7	119.7	6.0
May 10	127.8	121.7	6.1
Jun 10	128.0	121.1	6.9
Average margin			6.6

The monthly margin over the year ranged from a low of 3.7 cpl in August 2009 to a high of 8.6 cpl in July 2009 and February 2010.

Chart E.16 Average monthly margins, diesel, Melbourne: July 2009 to June 2010



Brisbane

Average annual diesel retail prices, TGPs and margins in Brisbane for 2004–05 to 2009–10 are presented in table E.17. The margins are also calculated in real terms relative to 2004–05 prices. The information is presented on a monthly basis for 2009–10 in table E.18. The margins for these periods are also presented in chart form (charts E.17 and E.18).

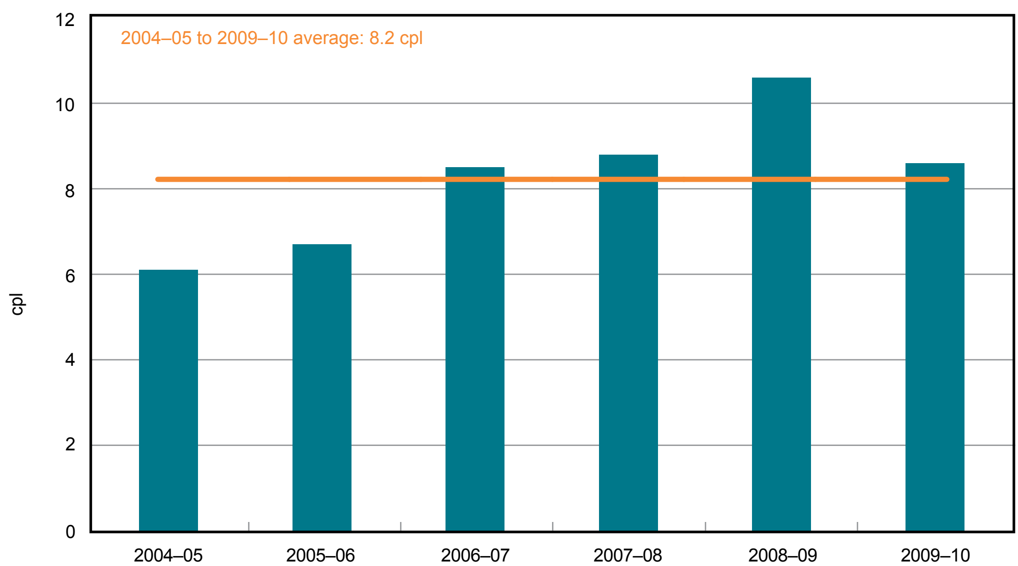
Table E.17 Average annual diesel retail prices, terminal gate prices and margins, Brisbane: 2004–05 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2004–05	102.0	95.9	6.1	6.1
2005–06	123.5	116.8	6.7	6.5
2006–07	121.1	112.6	8.5	8.0
2007–08	140.5	131.7	8.8	7.9
2008–09	132.5	121.9	10.6	9.2
2009–10	124.5	115.9	8.6	7.3
Average margins			8.2	7.5

Note: TGPs were adjusted downward before 2009–10 to reflect the Queensland Government retail fuel subsidy of approximately 9.2 cpl (including the GST).

The average annual margin over the six years was 8.2 cpl. It ranged from a low of 6.1 cpl in 2004–05 to a high of 10.6 cpl in 2008–09.

Chart E.17 Average annual margins, diesel, Brisbane: 2004–05 to 2009–10



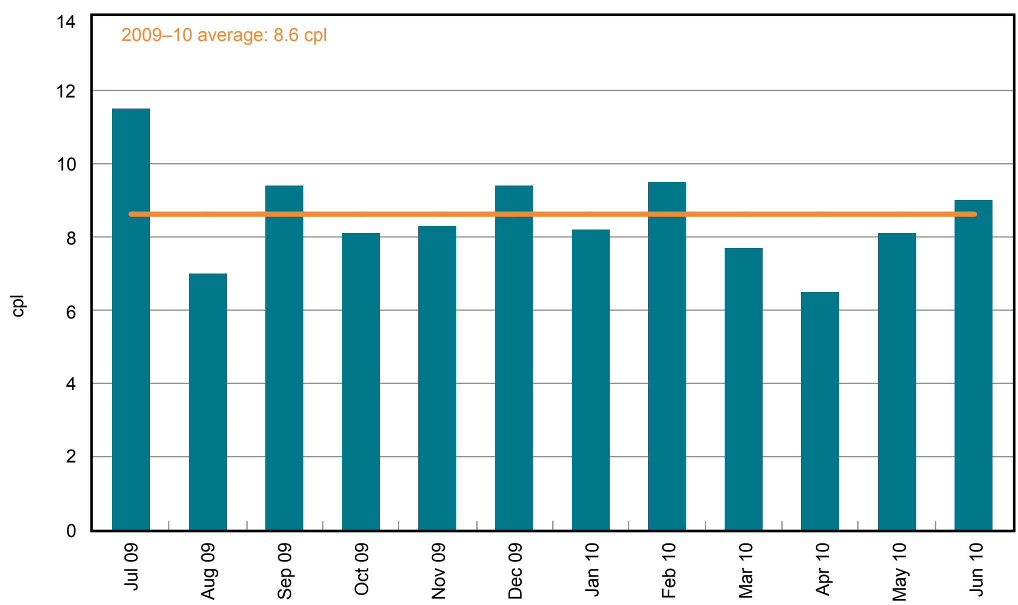
The **real** average annual margin over the six years was 7.5 cpl. It ranged from a low of 6.1 cpl in 2004–05 to a high of 9.2 cpl in 2008–09.

Table E.18 Average monthly diesel retail prices, terminal gate prices and margins, Brisbane: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	124.3	112.8	11.5
Aug 09	122.8	115.8	7.0
Sep 09	122.1	112.7	9.4
Oct 09	119.2	111.1	8.1
Nov 09	122.8	114.5	8.3
Dec 09	122.6	113.2	9.4
Jan 10	124.5	116.3	8.2
Feb 10	123.8	114.3	9.5
Mar 10	124.4	116.7	7.7
Apr 10	126.6	120.1	6.5
May 10	130.1	122.0	8.1
Jun 10	130.4	121.4	9.0
Average margin			8.6

The monthly margin over the year ranged from a low of 6.5 cpl in April 2010 to a high of 11.5 cpl in July 2009.

Chart E.18 Average monthly margins, diesel, Brisbane: July 2009 to June 2010



Adelaide

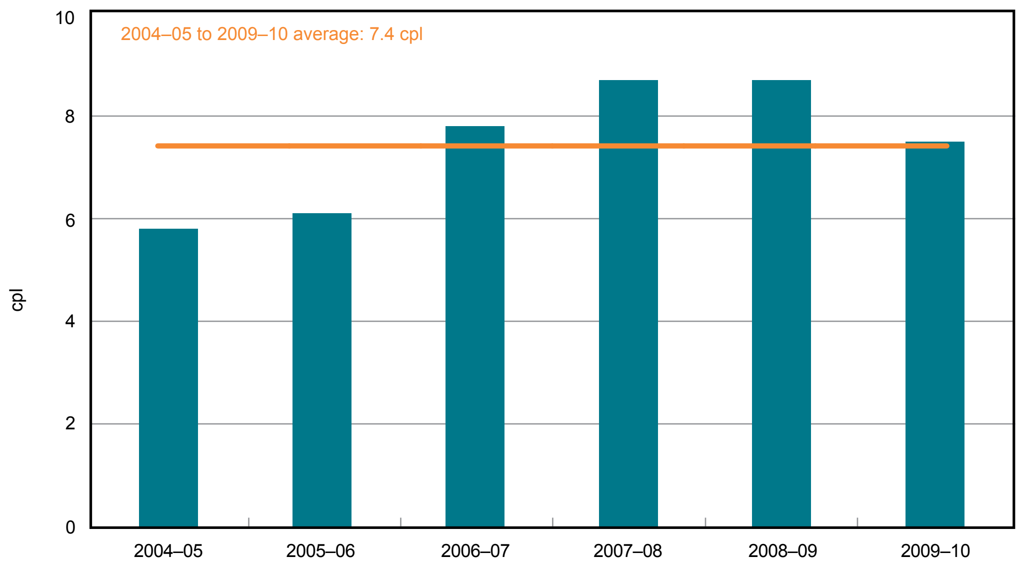
Average annual diesel retail prices, TGPs and margins in Adelaide for 2004–05 to 2009–10 are presented in table E.19. The margins are also calculated in real terms relative to 2004–05 prices. The information is presented on a monthly basis for 2009–10 in table E.20. The margins for these periods are also presented in chart form (charts E.19 and E.20).

Table E.19 Average annual diesel retail prices, terminal gate prices and margins, Adelaide: 2004–05 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2004–05	110.9	105.1	5.8	5.8
2005–06	132.4	126.3	6.1	5.9
2006–07	129.8	122.0	7.8	7.4
2007–08	149.7	141.0	8.7	8.0
2008–09	140.1	131.4	8.7	7.7
2009–10	123.8	116.3	7.5	6.5
Average margins			7.4	6.9

The average annual margin over the six years was 7.4 cpl. It ranged from a low of 5.8 cpl in 2004–05 to a high of 8.7 cpl in 2007–08 and 2008–09.

Chart E.19 Average annual margins, diesel, Adelaide: 2004–05 to 2009–10



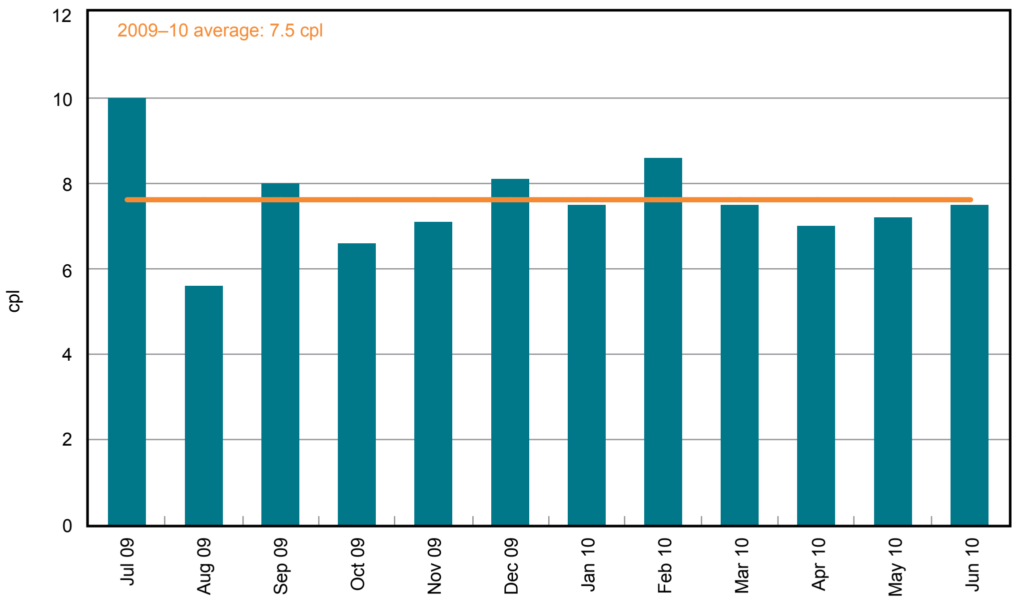
The **real** average annual margin over the six years was 6.9 cpl. It ranged from a low of 5.8 cpl in 2004–05 to a high of 8.0 cpl in 2007–08.

Table E.20 Average monthly diesel retail prices, terminal gate prices and margins, Adelaide: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	123.2	113.2	10.0
Aug 09	121.7	116.1	5.6
Sep 09	121.1	113.1	8.0
Oct 09	118.1	111.5	6.6
Nov 09	122.0	114.9	7.1
Dec 09	121.7	113.6	8.1
Jan 10	124.1	116.6	7.5
Feb 10	123.2	114.6	8.6
Mar 10	124.5	117.0	7.5
Apr 10	127.4	120.4	7.0
May 10	129.6	122.4	7.2
Jun 10	129.3	121.8	7.5
Average margin			7.5

The monthly margin over the year ranged from a low of 5.6 cpl in August 2009 to a high of 10.0 cpl in July 2009.

Chart E.20 Average monthly margins, diesel, Adelaide: July 2009 to June 2010



Perth

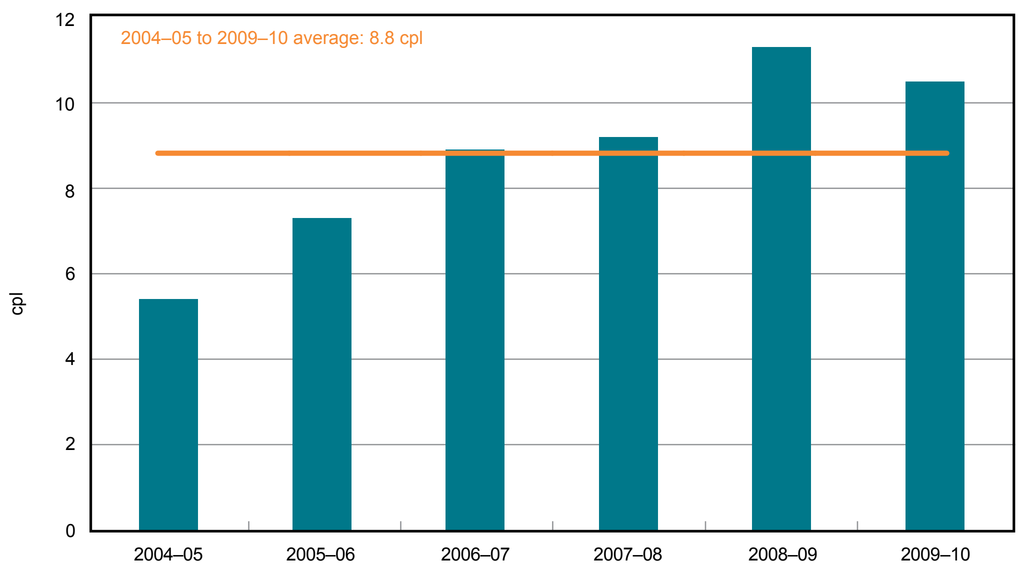
Average annual diesel retail prices, TGPs and margins in Perth for 2004–05 to 2009–10 are presented in table E.21. The margins are also calculated in real terms relative to 2004–05 prices. The information is presented on a monthly basis for 2009–10 in table E.22. The margins for these periods are also presented in chart form (charts E.21 and E.22).

Table E.21 Average annual diesel retail prices, terminal gate prices and margins, Perth: 2004–05 to 2009–10

	Average retail price cpl	Average TGP cpl	Margin cpl	Margin (real) cpl
2004–05	111.0	105.6	5.4	5.4
2005–06	132.8	125.5	7.3	7.0
2006–07	130.3	121.4	8.9	8.2
2007–08	150.1	140.9	9.2	8.2
2008–09	142.7	131.4	11.3	9.8
2009–10	127.4	116.9	10.5	8.9
Average margins			8.8	7.9

The average annual margin over the six years was 8.8 cpl. It ranged from a low of 5.4 cpl in 2004–05 to a high of 11.3 cpl in 2008–09.

Chart E.21 Average annual margins, diesel, Perth: 2004–05 to 2009–10



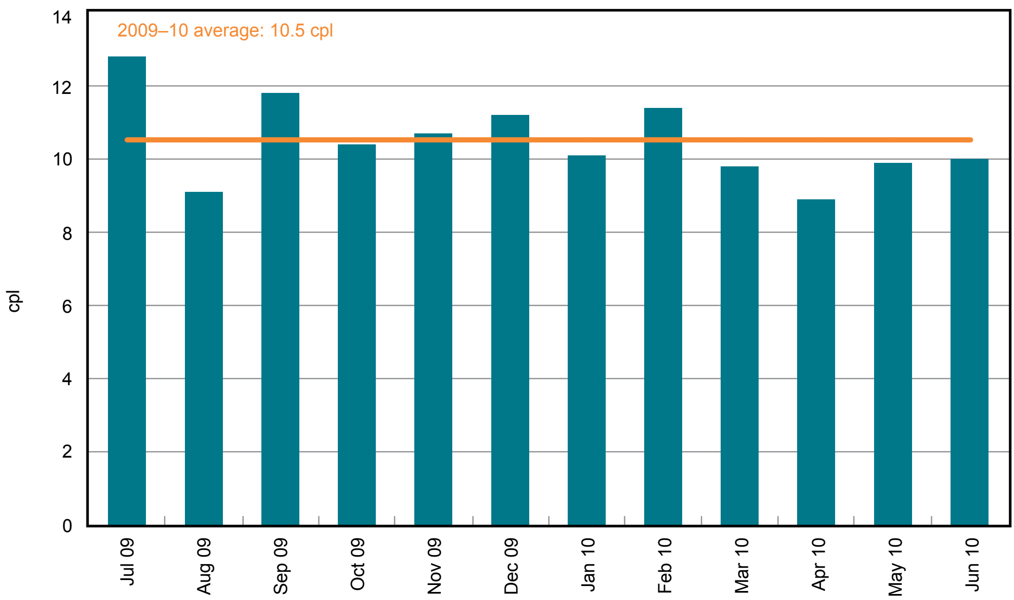
The **real** average annual margin over the six years was 7.9 cpl. It ranged from a low of 5.4 cpl in 2004–05 to a high of 9.8 cpl in 2008–09.

Table E.22 Average monthly diesel retail prices, terminal gate prices and margins, Perth: July 2009 to June 2010

	Average retail price cpl	Average TGP cpl	Margin cpl
Jul 09	126.6	113.8	12.8
Aug 09	125.9	116.8	9.1
Sep 09	125.5	113.7	11.8
Oct 09	122.4	112.0	10.4
Nov 09	126.2	115.5	10.7
Dec 09	125.3	114.1	11.2
Jan 10	127.3	117.2	10.1
Feb 10	126.7	115.3	11.4
Mar 10	127.8	118.0	9.8
Apr 10	130.3	121.4	8.9
May 10	133.0	123.1	9.9
Jun 10	132.3	122.3	10.0
Average margin			10.5

The monthly margin over the year ranged from a low of 8.9 cpl in April 2010 to a high of 12.8 cpl in July 2009.

Chart E.22 Average monthly margins, diesel, Perth: July 2009 to June 2010



Appendix F: State retail petrol and diesel subsidies in 2009–10

In recent years, the number of states and territories providing subsidies at the wholesale and retail level to reduce the prices of petrol and diesel to consumers has diminished.

Since 2007 subsidies have been discontinued in Victoria (July 2007), Tasmania (October 2007), the Northern Territory (May 2009), Queensland (July 2009) and New South Wales (July 2009).

In 2009–10, South Australia was the only jurisdiction that provided petrol and diesel subsidies.

Table F.1 describes the subsidies for unleaded petrol and diesel applicable in South Australia in 2009–10. It outlines the amount of the subsidies and how they applied. Assuming that the full amount of the subsidies in South Australia were passed on to consumers, the possible effect of these subsidies on average retail unleaded petrol and diesel prices in regional centres and country towns in Australia in 2009–10 (discussed in section 10.2) are estimated.

Table F.1 South Australian retail price subsidies and the possible effect on average retail prices in regional centres and country towns in Australia: 2009–10

Fuel	Amount (excl. GST) cpl	Application	Possible effect (incl. GST) cpl
Petrol	Between 0.82 and 3.3	0.82 cpl for towns 50–100km from Adelaide GPO; 3.3 cpl for towns >100km from Adelaide GPO	–0.4
Diesel	1.94	1.94 cpl for towns >100km from Adelaide GPO	–0.2

Source: ACCC calculations based on Informed Sources data

In September 2010 the South Australian Government announced that these subsidies would be abolished from 1 January 2011.

Appendix G: Retail fuel prices in regional centres and country towns

The ACCC monitors fuel prices in approximately 150 regional centres and country towns. Data is collected by Informed Sources on a daily basis.

Annual average regular unleaded petrol (RULP), diesel and automotive LPG retail prices in regional centres and country towns in 2009–10 are shown in tables G1 to G3.[200]

Table G.1 Average retail RULP prices in regional centres and country towns: 2009–10

	cpl		cpl		cpl
New South Wales					
Albury	121.4	Grafton	127.5	Newcastle	127.0
Armidale	130.2	Griffith	127.3	Nowra	126.6
Ballina	129.7	Gundagai	129.5	Nyngan	na
Batemans Bay	127.1	Gunnedah	129.3	Orange	128.6
Bathurst	125.3	Hay	131.6	Parkes	128.8
Bega	131.5	Inverell	129.2	Port Macquarie	126.3
Broken Hill	128.5	Jerilderie	129.5	Queanbeyan	129.0
Bulahdelah	123.3	Kempsey	126.0	Singleton	130.1
Casino	126.7	Lismore	127.4	Tamworth	129.6
Coffs Harbour	128.7	Merimbula	127.9	Taree	123.7
Cooma	131.6	Mittagong	127.9	Temora	131.6
Cowra	124.4	Moree	130.7	Ulladulla	127.0
Deniliquin	131.8	Moruya	130.1	Wagga Wagga	128.6
Dubbo	125.8	Moss Vale	129.0	Wellington	131.8
Forbes	130.4	Mudgee	132.6	West Wyalong	131.5
Forster	124.4	Murwillumbah	127.7	Wollongong	126.4
Gilgandra	130.4	Muswellbrook	na	Yass	127.4
Goulburn	124.4	Narrabri	131.3		
Northern Territory					
Alice Springs	141.4	Katherine	134.4	Tennant Creek*	144.7
Queensland					
Atherton	126.8	Goondiwindi	126.5	Miles	134.1
Ayr	128.8	Gympie	126.3	Moranbah	133.3
Biloela	128.8	Hervey Bay	127.2	Mt Isa	127.3
Bowen	129.1	Ingham	125.5	Rockhampton	129.6
Bundaberg	126.5	Innisfail	128.5	Roma	127.7
Cairns	127.1	Kingaroy	126.1	Toowoomba	122.3
Charters Towers	129.6	Longreach	134.9	Townsville	124.0
Dalby	124.0	Mackay	125.7	Warwick	124.9
Emerald	128.4	Mareeba	127.2	Whitsunday	132.4
Gladstone	128.9	Maryborough	125.9	Yeppoon	129.3

200 For a price to be included in the tables it had to meet a number of quality thresholds. In general, there had to be a price observation on at least 75 per cent of days over the financial year, with no break in price data of more than 30 consecutive days. In cases where this threshold was not met, a price has still been included in the tables if there was an even spread of missing data observations which would mean that a broadly reliable average price could be estimated. Locations in the latter category have been identified with an (*) and a degree of caution is required in using the prices of these towns.

Sources for all tables in this appendix are ACCC and Informed Sources.

	cpl		cpl		cpl
South Australia					
Bordertown	128.9	Keith	129.6	Port Lincoln	128.5
Ceduna	132.4	Loxton	124.9	Port Pirie	125.5
Clare	124.4	Mt Gambier	125.3	Renmark	125.3
Coober Pedy	142.9	Murray Bridge	124.7	Victor Harbour	122.4
Gawler	123.5	Naracoorte	125.9	Whyalla	122.3
Kadina	124.3	Port Augusta	126.8		
Tasmania					
Burnie	129.0	Huonville	131.9	Queenstown	136.4
Devonport	128.1	Launceston	130.1	Sorell	123.5
George Town	131.5	New Norfolk	127.9	Ulverstone	128.1
Victoria					
Ararat	123.9	Hamilton	128.9	Sale	125.3
Bairnsdale	121.3	Horsham	128.5	Seymour	124.2
Ballarat	122.6	Lakes Entrance	127.6	Shepparton	126.6
Benalla	126.7	Leongatha	130.5	Swan Hill	129.9
Bendigo	123.0	Mildura	129.8	Traralgon	126.4
Cohuna*	129.2	Moe	126.4	Wangaratta	127.4
Colac	127.5	Morwell	125.5	Warrnambool	123.9
Echuca	126.8	Orbost	130.9	Wodonga	122.9
Geelong	124.6	Portland	128.4		
Western Australia					
Albany	132.2	Carnarvon	141.3	Kalgoorlie	132.6
Boulder	133.7	Collie	129.7	Karratha	142.9
Broome	145.1	Dongara	138.1	Majimup	132.2
Bunbury	126.4	Esperance	134.6	Port Hedland	144.9
Busselton	128.0	Geraldton	136.6	Waroona	129.2

Table G.2 Average retail diesel prices in regional centres and country towns: 2009–10

	cpl		cpl		cpl
New South Wales					
Albury	123.8	Grafton	127.0	Newcastle	125.8
Armidale	131.8	Griffith	127.4	Nowra	126.2
Ballina	129.7	Gundagai	131.1	Nyngan	131.6
Batemans Bay	127.0	Gunnedah	128.0	Orange	127.3
Bathurst	125.4	Hay	130.1	Parkes	129.2
Bega	131.5	Inverell	129.2	Port Macquarie	127.4
Broken Hill	127.2	Jerilderie	125.9	Queanbeyan	126.7
Bulahdelah	125.4	Kempsey	127.7	Singleton	123.5
Casino	126.2	Lismore	126.4	Tamworth	129.9
Coffs Harbour	128.7	Merimbula	128.5	Taree	124.0
Cooma	132.9	Mittagong	128.6	Temora	131.5
Cowra	124.6	Moree	130.5	Ulladulla	128.1
Deniliquin	130.1	Moruya	129.7	Wagga Wagga	129.4
Dubbo	127.4	Moss Vale	128.1	Wellington	131.9
Forbes	129.4	Mudgee	130.6	West Wyalong	131.9
Forster	127.0	Murwillumbah	127.7	Wollongong	127.7
Gilgandra	127.8	Muswellbrook*	128.4	Yass	127.8
Goulburn	124.8	Narrabri	131.7		
Northern Territory					
Alice Springs	141.4	Katherine	131.9	Tennant Creek	144.0
Queensland					
Atherton	128.4	Goondiwindi	127.0	Miles	132.9
Ayr	126.6	Gympie	125.4	Moranbah	131.9
Biloela	127.8	Hervey Bay	127.3	Mt Isa	127.5
Bowen	127.8	Ingham	125.4	Rockhampton	129.8
Bundaberg	126.2	Innisfail	127.2	Roma	129.2
Cairns	128.4	Kingaroy	127.0	Toowoomba	125.2
Charters Towers	128.7	Longreach	135.1	Townsville	125.1
Dalby	125.0	Mackay	126.0	Warwick	125.9
Emerald	128.7	Mareeba	129.1	Whitsunday	130.1
Gladstone	128.8	Maryborough	126.3	Yeppoon	130.8
South Australia					
Bordertown	129.1	Keith	130.2	Port Lincoln	127.7
Ceduna	128.5	Loxton	124.7	Port Pirie	125.0
Clare	124.7	Mt Gambier	128.6	Renmark	122.1
Coober Pedy	141.7	Murray Bridge	126.1	Victor Harbour	125.2
Gawler	123.8	Naracoorte	127.4	Whyalla	126.1
Kadina	124.6	Port Augusta	125.2		
Tasmania					
Burnie	129.3	Huonville	130.8	Queenstown	135.4
Devonport	129.8	Launceston	130.4	Sorell	127.8
George Town	131.2	New Norfolk	129.1	Ulverstone	129.6

	cpl		cpl		cpl
Victoria					
Ararat	123.4	Hamilton	127.7	Sale	126.3
Bairnsdale	122.9	Horsham	125.9	Seymour	123.6
Ballarat	122.8	Lakes Entrance	127.6	Shepparton	123.6
Benalla	126.7	Leongatha	129.6	Swan Hill	129.3
Bendigo	123.2	Mildura	128.4	Traralgon	126.7
Cohuna	129.4	Moe	126.2	Wangaratta	126.4
Colac	125.3	Morwell	126.0	Warrnambool	125.4
Echuca	123.9	Orbost	130.0	Wodonga	125.1
Geelong	121.6	Portland	128.5		
Western Australia					
Albany	132.3	Carnarvon	138.5	Kalgoorlie	134.0
Boulder	133.9	Collie	130.7	Karratha	141.2
Broome	140.8	Dongara	134.9	Majimup	131.8
Bunbury	128.6	Esperance	133.2	Port Hedland	137.1
Busselton	129.0	Geraldton	136.6	Waroona	127.3

Table G.3 Average retail automotive LPG prices in regional centres and country towns: 2009–10

	cpl		cpl		cpl
New South Wales					
Albury	55.6	Grafton	69.0	Newcastle	61.4
Armidale	72.8	Griffith	67.6	Nowra	62.7
Ballina	71.9	Gundagai	71.2	Nyngan	82.6
Batemans Bay	75.6	Gunnedah	70.8	Orange	67.1
Bathurst	63.4	Hay	68.8	Parkes	74.9
Bega	76.7	Inverell	70.0	Port Macquarie	68.1
Broken Hill	68.2	Jerilderie	66.5	Queanbeyan	61.6
Bulahdelah	64.9	Kempsey	65.6	Singleton	61.6
Casino	71.8	Lismore	70.0	Tamworth	67.8
Coffs Harbour	65.3	Merimbula	71.9	Taree	62.5
Cooma	76.1	Mittagong	63.2	Temora	73.6
Cowra	na	Moree	76.8	Ulladulla	67.5
Deniliquin	68.3	Moruya	76.8	Wagga Wagga	65.7
Dubbo	70.6	Moss Vale	60.0	Wellington	66.5
Forbes	76.4	Mudgee	68.8	West Wyalong	77.7
Forster	63.9	Murwillumbah	67.7	Wollongong	61.1
Gilgandra	77.2	Muswellbrook*	63.6	Yass	63.2
Goulburn	62.6	Narrabi	na		
Northern Territory					
Alice Springs	87.5	Katherine	87.6	Tennant Creek	na
Queensland					
Atherton	na	Goondiwindi	68.6	Miles	77.6
Ayr	80.7	Gympie	70.7	Moranbah	na
Biloela	na	Hervey Bay	73.2	Mt Isa	75.3
Bowen	82.6	Ingham*	82.0	Rockhampton	76.4
Bundaberg	74.2	Innisfail	na	Roma	78.6
Cairns	81.1	Kingaroy	63.8	Toowoomba	58.6
Charters Towers	na	Longreach	na	Townsville	76.7
Dalby	74.8	Mackay	67.5	Warwick	64.1
Emerald	79.9	Mareeba	82.0	Whitsunday	77.1
Gladstone	73.6	Maryborough	74.2	Yeppoon	76.3
South Australia					
Bordertown	67.9	Keith	72.9	Port Lincoln	66.7
Ceduna	76.0	Loxton	67.4	Port Pirie	70.6
Clare	70.1	Mt Gambier	66.6	Renmark	64.1
Coober Pedy	na	Murray Bridge	65.7	Victor Harbour	61.9
Gawler	60.5	Naracoorte	66.2	Whyalla	63.4
Kadina	69.8	Port Augusta	64.4		
Tasmania					
Burnie	73.0	Huonville	73.7	Queenstown	na
Devonport	73.5	Launceston	71.7	Sorell	69.9
George Town	na	New Norfolk	71.2	Ulverstone	74.6

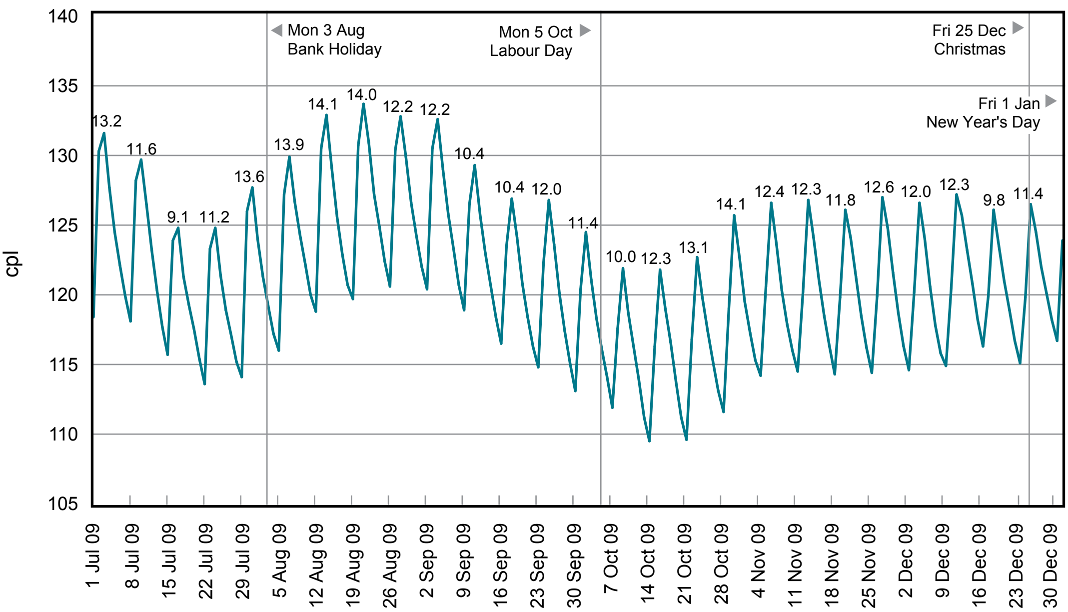
	cpl		cpl		cpl
Victoria					
Ararat	56.3	Hamilton	61.8	Sale	59.0
Bairnsdale	57.3	Horsham	61.8	Seymour	55.1
Ballarat	54.4	Lakes Entrance	61.0	Shepparton	59.5
Benalla	61.8	Leongatha	63.9	Swan Hill	61.9
Bendigo	56.4	Mildura	64.3	Traralgon	59.8
Cohuna*	65.9	Moe	58.3	Wangaratta	57.5
Colac	55.9	Morwell	60.1	Warrnambool	57.7
Echuca	57.9	Orbost*	62.4	Wodonga	58.5
Geelong	55.0	Portland	61.4		
Western Australia					
Albany	84.0	Carnarvon	91.1	Kalgoorlie	82.2
Boulder	86.3	Collie	75.0	Karratha	95.3
Broome	101.6	Dongara	85.7	Majimup	82.5
Bunbury	69.7	Esperance	87.9	Port Hedland	98.9
Busselton	76.2	Geraldton	77.8	Waroona	74.3

Appendix H: Petrol price cycles and public holidays by city

Charts H.1 to H.10 show daily average retail prices for regular unleaded petrol for the second half of 2009 and the first half of 2010 in each of the five largest cities (i.e., Sydney, Melbourne, Brisbane, Adelaide and Perth). They also identify the amplitude of each price cycle during the period and the dates of public holidays. The charts also provide information on the average, minimum and maximum amplitude of price cycles in 2009 and the first half of 2010.[201]

Similar charts for the period January 2007 to June 2009 were provided in appendix G of the 2009 petrol report.

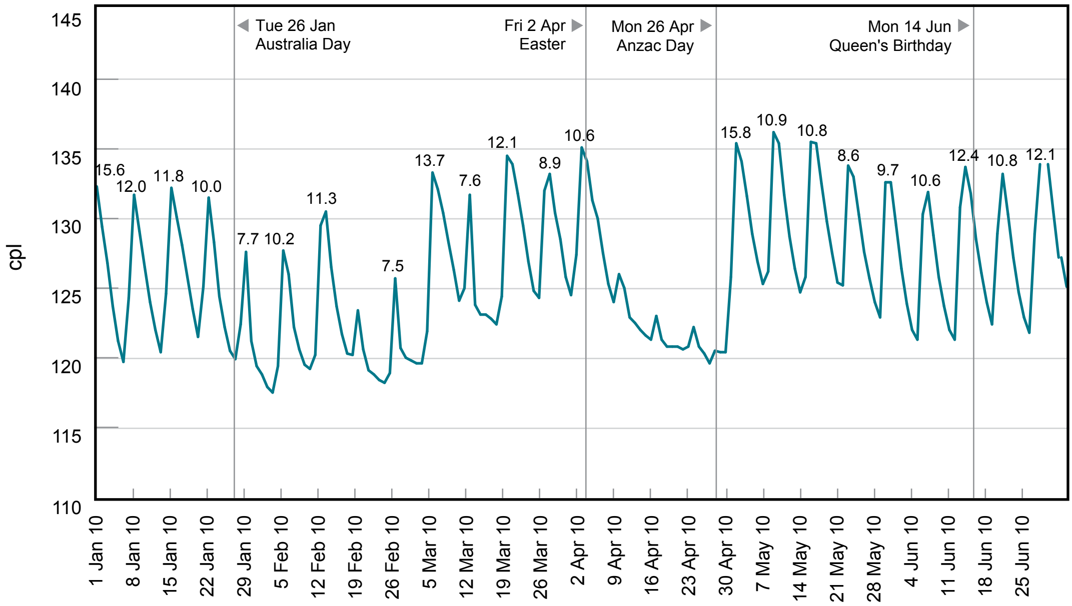
Chart H.1 Sydney, average daily retail prices—price cycle amplitudes and public holidays: 1 July to 31 December 2009



2009 average amplitude: 12.2 cpl	2009 minimum amplitude: 8.7 cpl	2009 maximum amplitude: 15.8 cpl

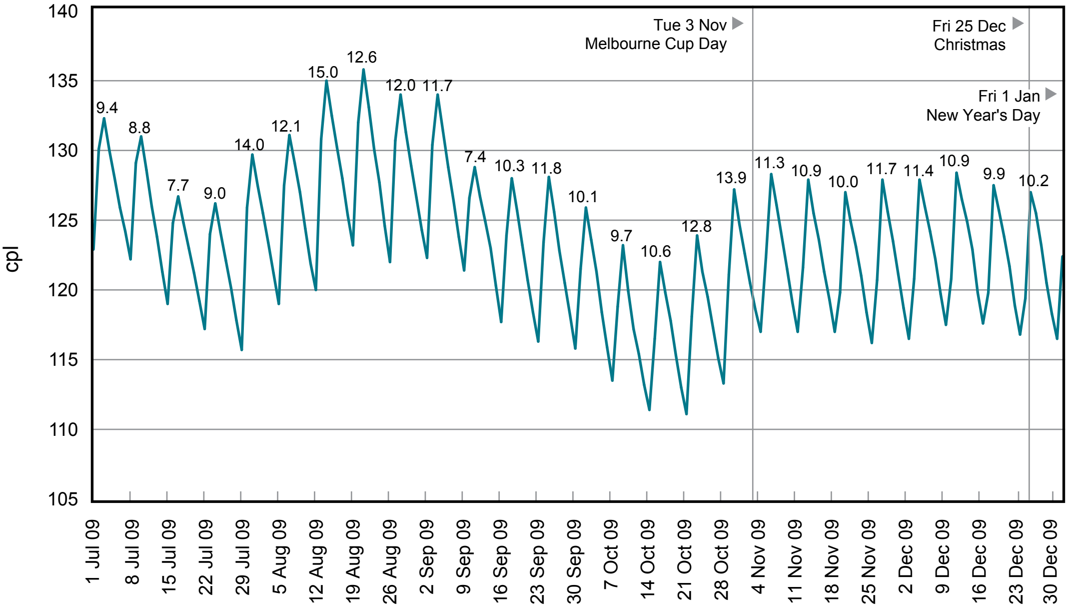
201 Source for all charts: ACCC and Informed Sources.

Chart H.2 Sydney, average daily retail prices—price cycle amplitudes and public holidays: 1 January to 30 June 2010



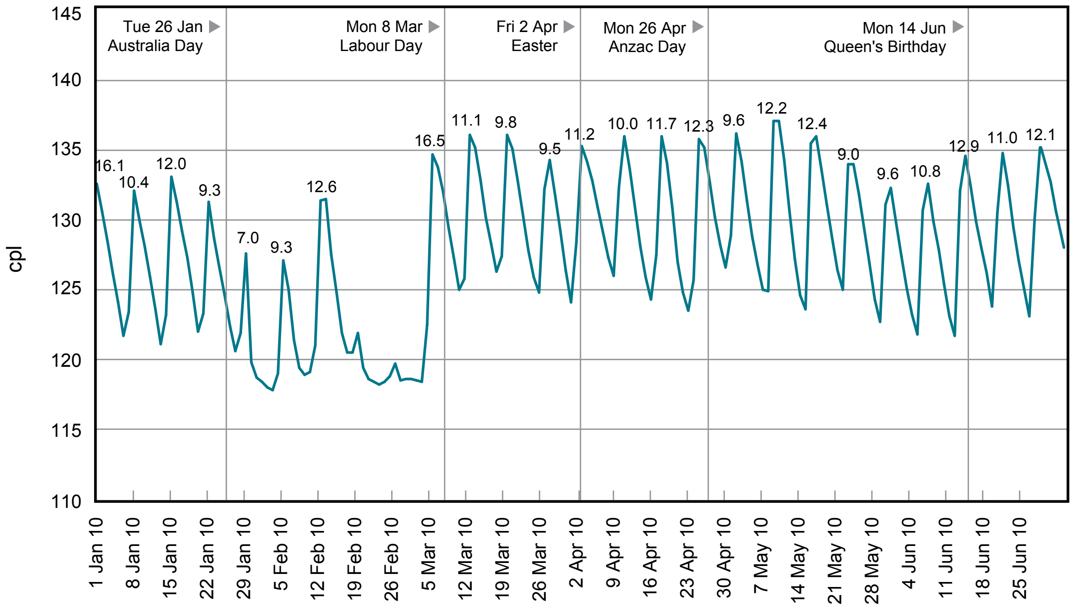
1st half 2010 average amplitude: 10.9 cpl
1st half 2010 minimum amplitude: 7.5 cpl
1st half 2010 maximum amplitude: 15.8 cpl

Chart H.3 Melbourne, average daily retail prices—price cycle amplitudes and public holidays: 1 July to 31 December 2009



2009 average amplitude: 11.0 cpl	2009 minimum amplitude: 6.3 cpl	2009 maximum amplitude: 15.4 cpl

Chart H.4 Melbourne, average daily retail prices—price cycle amplitudes and public holidays: 1 January to 30 June 2010



1st half 2010 average amplitude: 11.2 cpl
1st half 2010 minimum amplitude: 7.0 cpl
1st half 2010 maximum amplitude: 16.5 cpl

Chart H.5 Brisbane, average daily retail prices—price cycle amplitudes and public holidays: 1 July to 31 December 2009

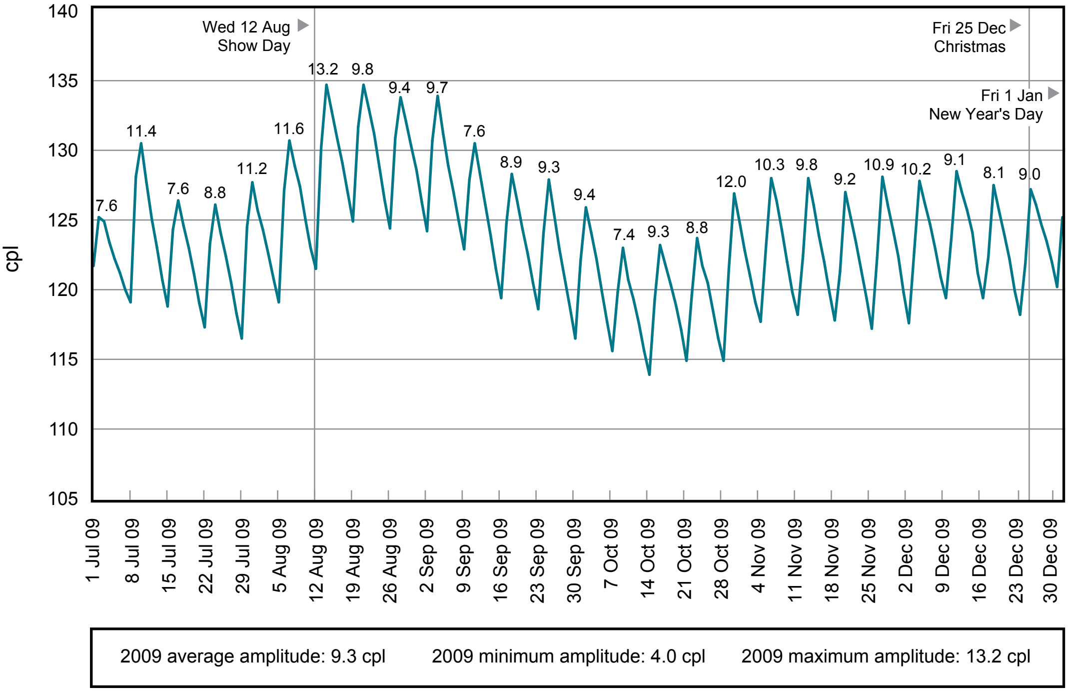
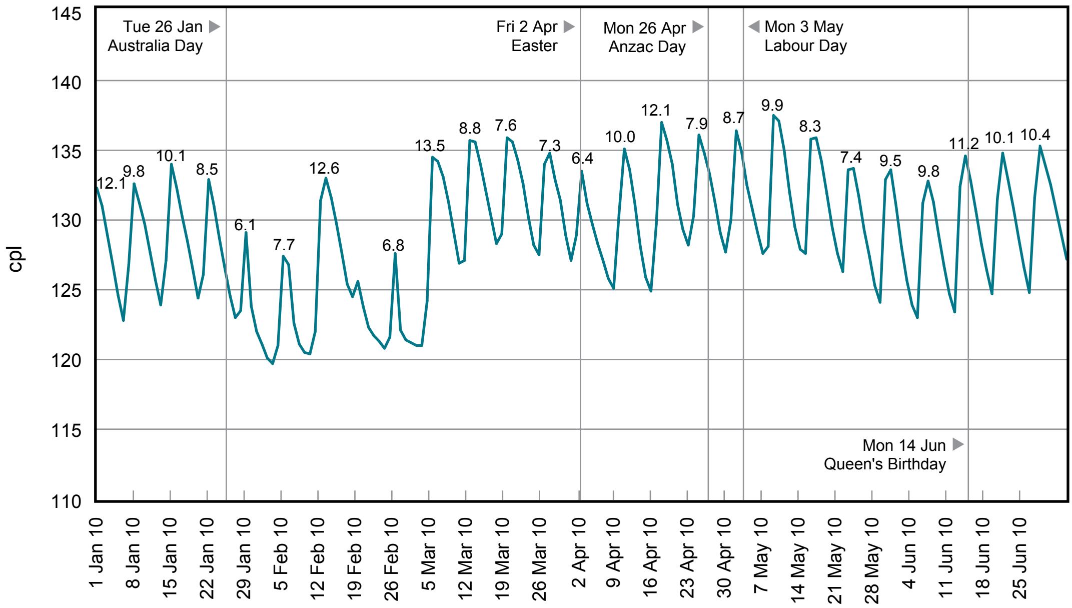
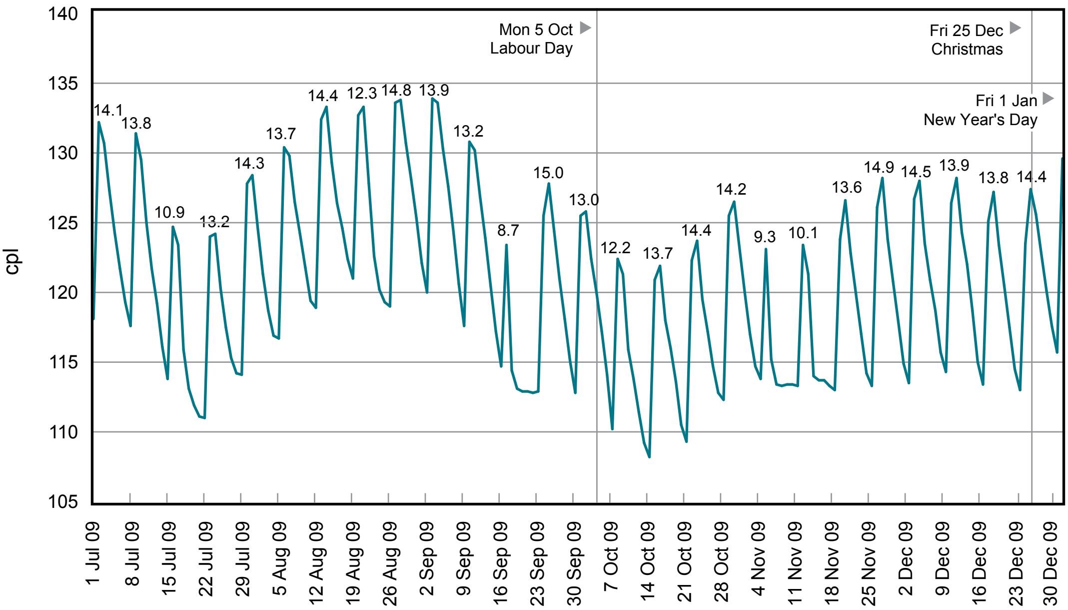


Chart H.6 Brisbane, average daily retail prices—price cycle amplitudes and public holidays: 1 January to 30 June 2010



1st half 2010 average amplitude: 9.3 cpl
1st half 2010 minimum amplitude: 6.1 cpl
1st half 2010 maximum amplitude: 13.5 cpl

Chart H.7 Adelaide, average daily retail prices—price cycle amplitudes and public holidays: 1 July to 31 December 2009



2009 average amplitude: 13.5 cpl	2009 minimum amplitude: 8.7 cpl	2009 maximum amplitude: 15.8 cpl

Chart H.8 Adelaide, average daily retail prices—price cycle amplitudes and public holidays: 1 January to 30 June 2010

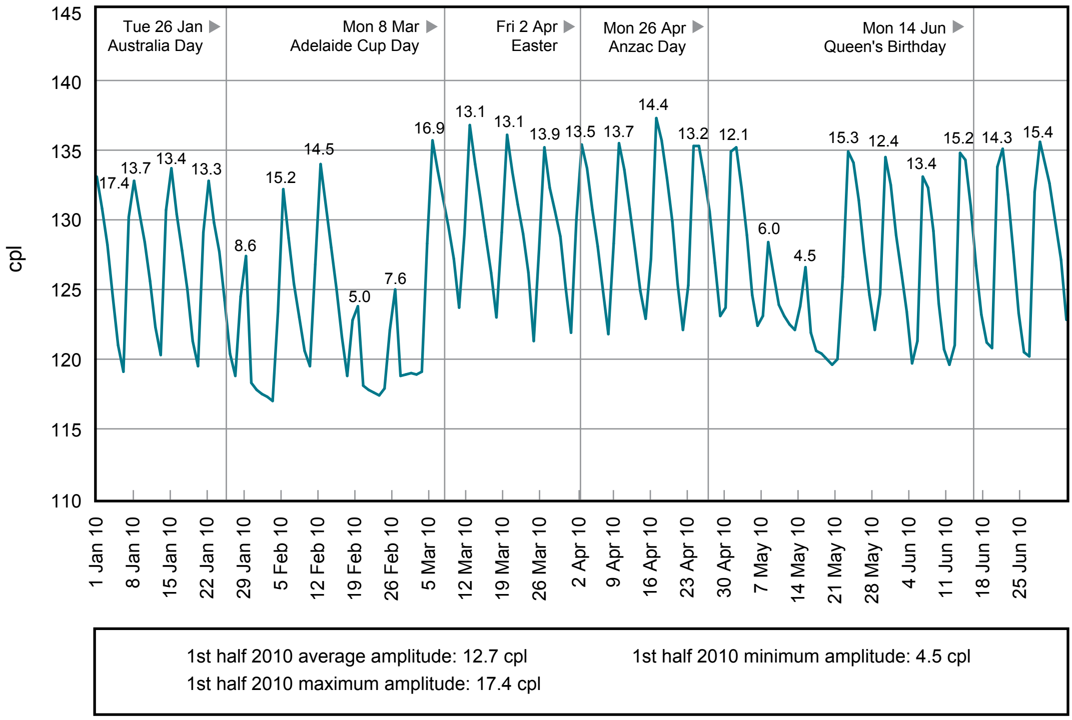
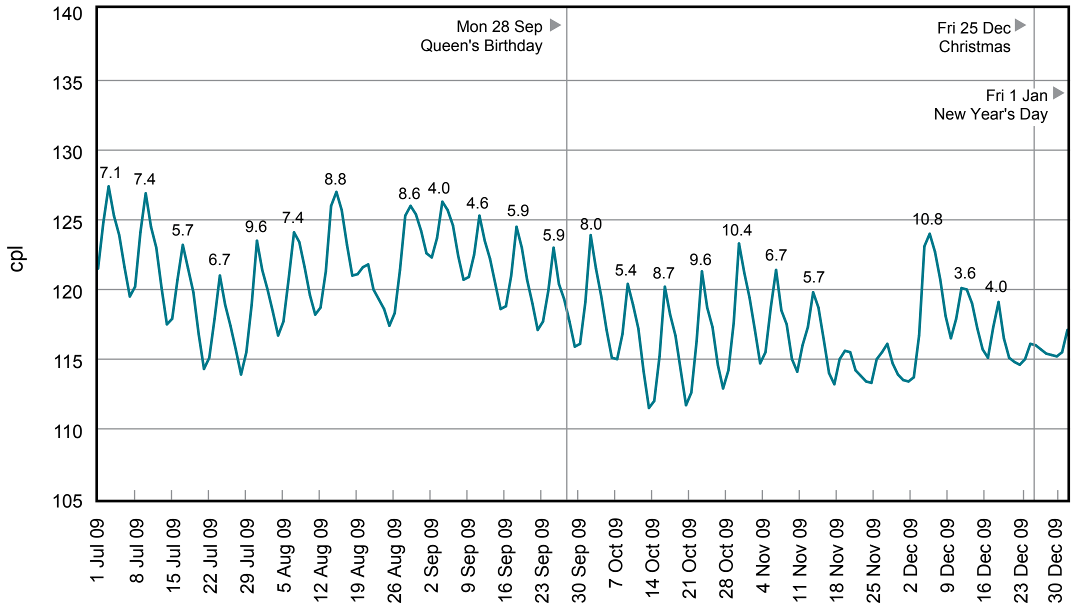
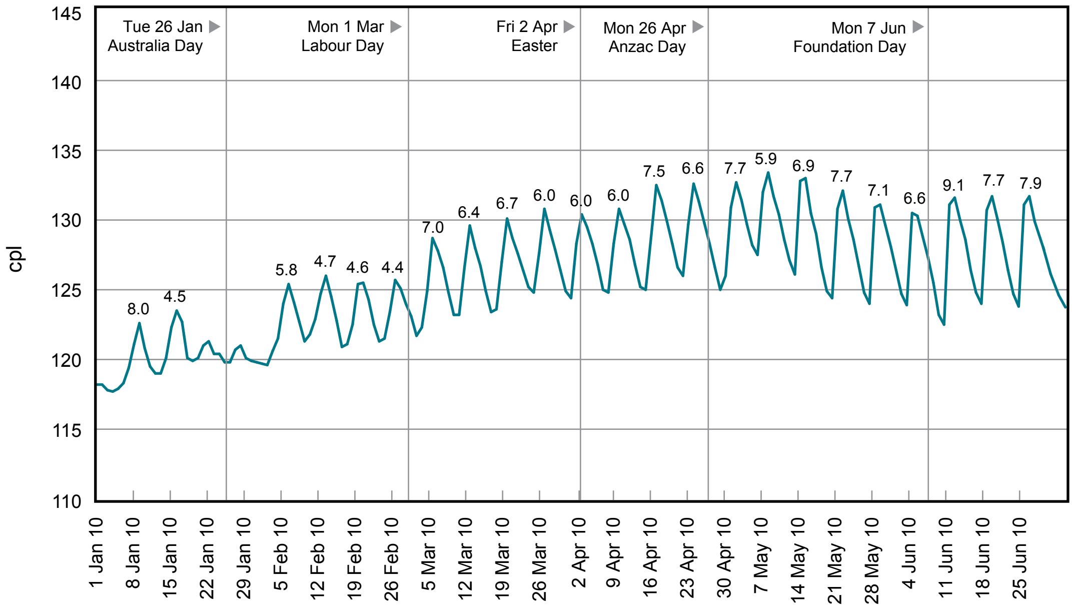


Chart H.9 Perth, average daily retail prices—price cycle amplitudes and public holidays: 1 July to 31 December 2009



2009 average amplitude: 7.6 cpl	2009 minimum amplitude: 3.6 cpl	2009 maximum amplitude: 18.9 cpl

Chart H.10 Perth, average daily retail prices—price cycle amplitudes and public holidays: 1 January to 30 June 2010



1st half 2010 average amplitude: 6.6 cpl
1st half 2010 maximum amplitude: 9.1 cpl
1st half 2010 minimum amplitude: 4.4 cpl

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