

## 9 Retail prices in regional locations

### Key Points

- Movements in retail petrol prices in regional locations are largely driven by changes in international refined petrol prices and the AUD–USD exchange rate, just as they are in the five largest cities.
- However, the extent to which petrol prices in each regional location are influenced by changes in international refined petrol prices varies between locations, depending on the specific characteristics of each regional location.
- Petrol prices in regional locations are generally higher than in the five largest cities for a number of reasons, including:
  - lower number of retail sites and therefore a lower level of local competition
  - lower volumes of fuel sold
  - distance/location factors
  - lower convenience store sales.
- These factors also explain differences in petrol prices between regional locations.
- Movements in petrol prices in regional locations—both up and down—tend to lag those in the five largest cities.
- Petrol prices in regional locations tend to be more stable than in the five largest cities. Only a very small number of regional locations have regular petrol price cycles. These tend to be regional locations close to major population centres and/or on major highways.

### 9.1 Introduction

This chapter examines retail petrol prices in regional locations in Australia and the city–country price differential.<sup>116</sup>

In 2009–10 the ACCC significantly increased its focus on regional locations by increasing the number of regional locations included in the ACCC’s fuel price monitoring program from around 110 locations to around 150 locations.

The ACCC’s coverage was further expanded in 2011–12, with the number of regional locations included in the fuel price monitoring program increasing to around 180 locations.<sup>117</sup>

<sup>116</sup> All references to petrol in this chapter are to regular unleaded petrol (RULP) unless otherwise specified.

The city–country price differential for each state and the Northern Territory is the difference between the arithmetic average of prices in each regional location in the state and Northern Territory and the average capital city price.

<sup>117</sup> The specific regional locations in each state and the Northern Territory which are monitored by the ACCC are listed in appendix F, which also provides average annual retail prices for petrol, diesel and automotive LPG in 2011–12 for each regional location.

## 9.2 Petrol prices in regional locations

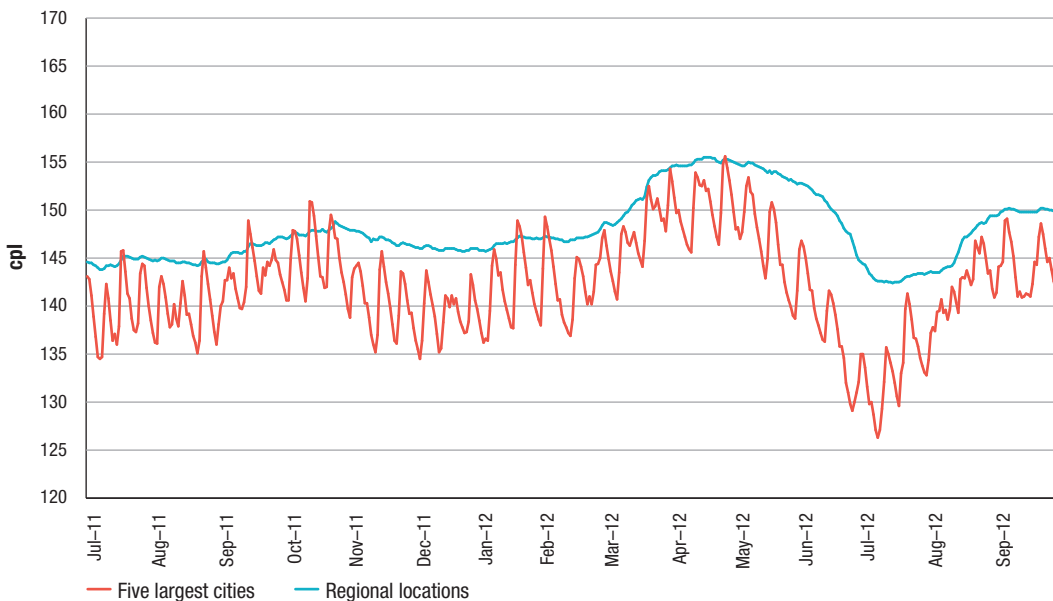
### 9.2.1 Prices in aggregate

Retail petrol prices in regional locations in Australia are typically higher than those in the capital cities, although they generally follow the same overall price movements. Furthermore, in many regional locations there is a lag between movements in capital city prices and local prices. This lag arises because the turnover of petrol stocks is generally lower in the country than in the capital cities due to lower volume of sales in regional areas. As a result, price changes in the five largest cities take some time to be passed on to regional locations. This lag occurs both when prices are increasing and when they are decreasing.

Chart 9.1 shows daily average retail prices across all the monitored regional locations in Australia and daily average retail prices in the five largest cities (i.e. Sydney, Melbourne, Brisbane, Adelaide and Perth). It can be seen that:

- Prices in the regional locations in aggregate broadly follow prices in the five largest cities.
- Regional locations in aggregate do not have the regular retail price cycles that are evident in the five largest cities.

**Chart 9.1 Daily average petrol prices in the five largest cities and the regional locations in aggregate:**  
1 July 2011 to 30 September 2012



Source: ACCC calculations based on Informed Sources data

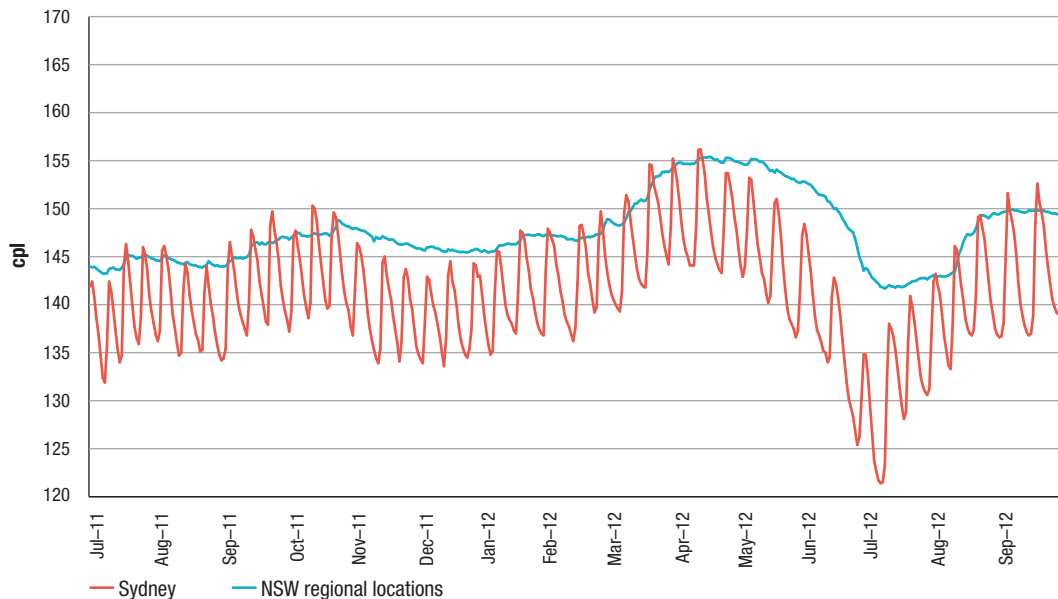
## 9.2.2 Prices in each of the states and the Northern Territory

Charts 9.2 to 9.8 show daily average retail petrol prices for the monitored regional locations in aggregate in each state and the Northern Territory, along with the relevant capital city prices, from 1 July 2011 to 30 September 2012.<sup>118</sup>

The charts show that:

- Apart from the fluctuations associated with regular price cycles in most of the capital cities, prices in regional locations, on average, have generally followed movements in prices in their respective capital cities.
- In states with capital cities that have regular price cycles, the city-country price differential varies significantly on a daily basis.
- There were times when the city-country price differentials were larger than usual. These are particularly evident when there are periods of discounting in the capital cities.
  - For example, there was a period of substantial discounting in Melbourne in May and June 2012. The average city-country price differential in May and June 2012 was 10.4 cents per litre (cpl), compared with an average differential of 3.0 cpl for the remaining 10 months of 2011–12.
- Prices in regional locations in Western Australia and the Northern Territory, where many locations are a long way from a refinery and import terminals, are significantly higher than those in Perth and Darwin, respectively. Conversely, in Tasmania, where distances from terminals are smaller, prices in regional locations are relatively close to those in Hobart.

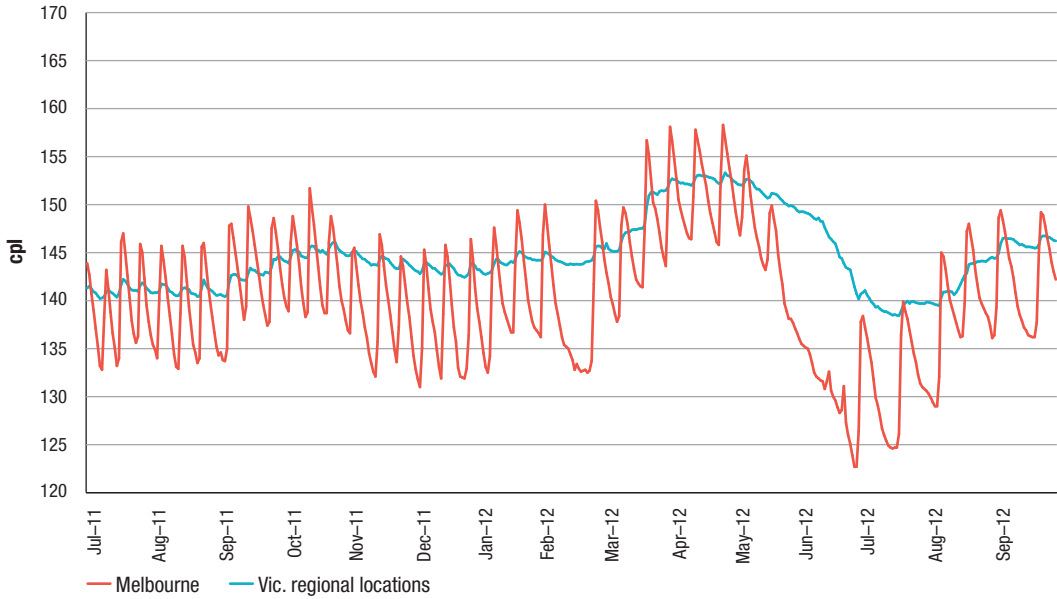
**Chart 9.2 Daily average petrol prices in Sydney and New South Wales regional locations: 1 July 2011 to 30 September 2012**



Source: ACCC calculations based on Informed Sources data

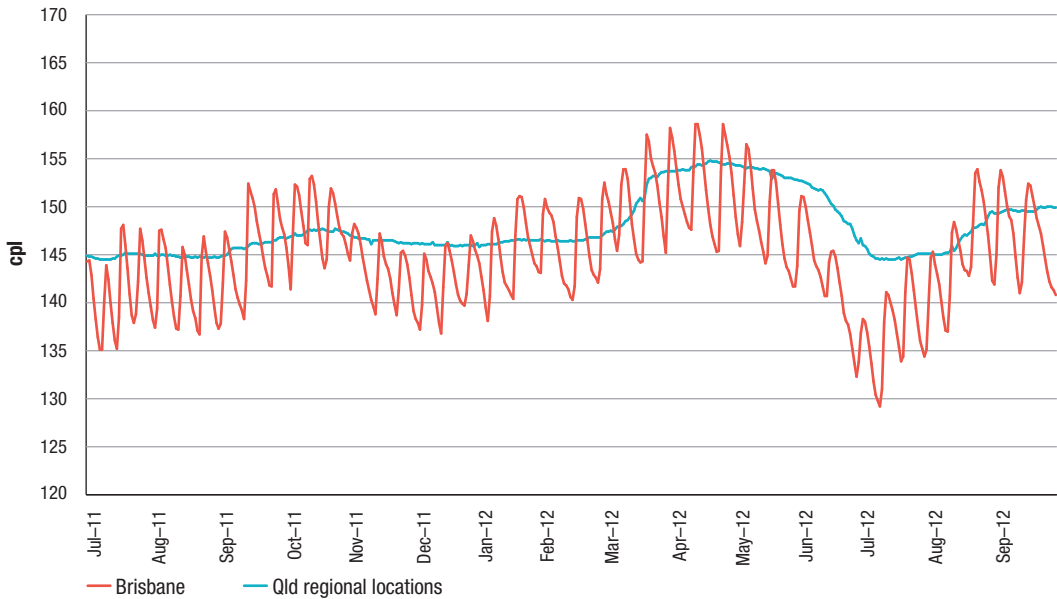
<sup>118</sup> Note that there are no prices available for locations in the Australian Capital Territory other than Canberra.

**Chart 9.3** Daily average petrol prices in Melbourne and Victorian regional locations:  
1 July 2011 to 30 September 2012



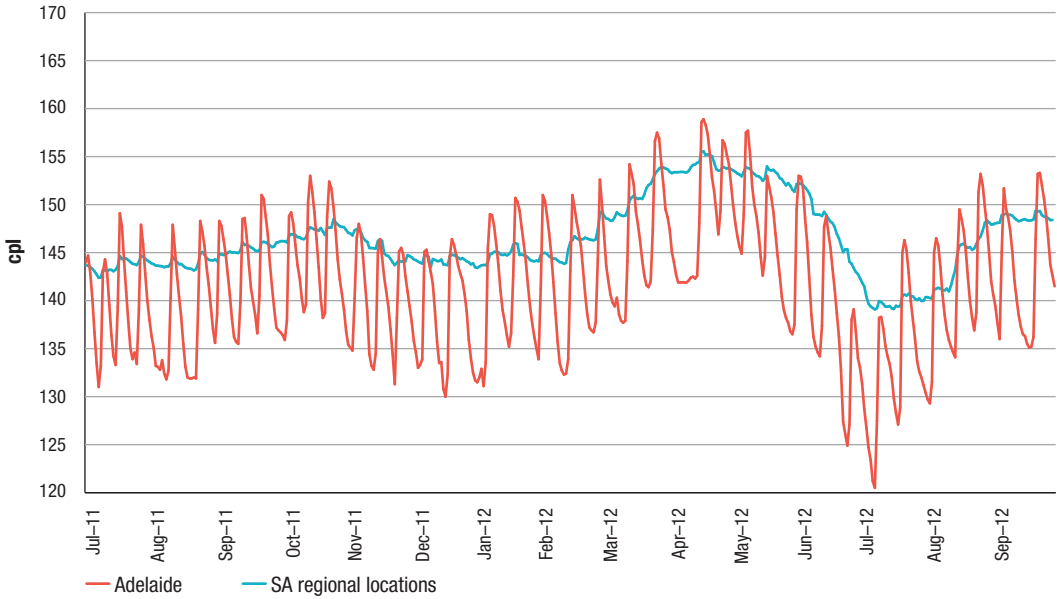
Source: ACCC calculations based on Informed Sources data

**Chart 9.4** Daily average petrol prices in Brisbane and Queensland regional locations:  
1 July 2011 to 30 September 2012



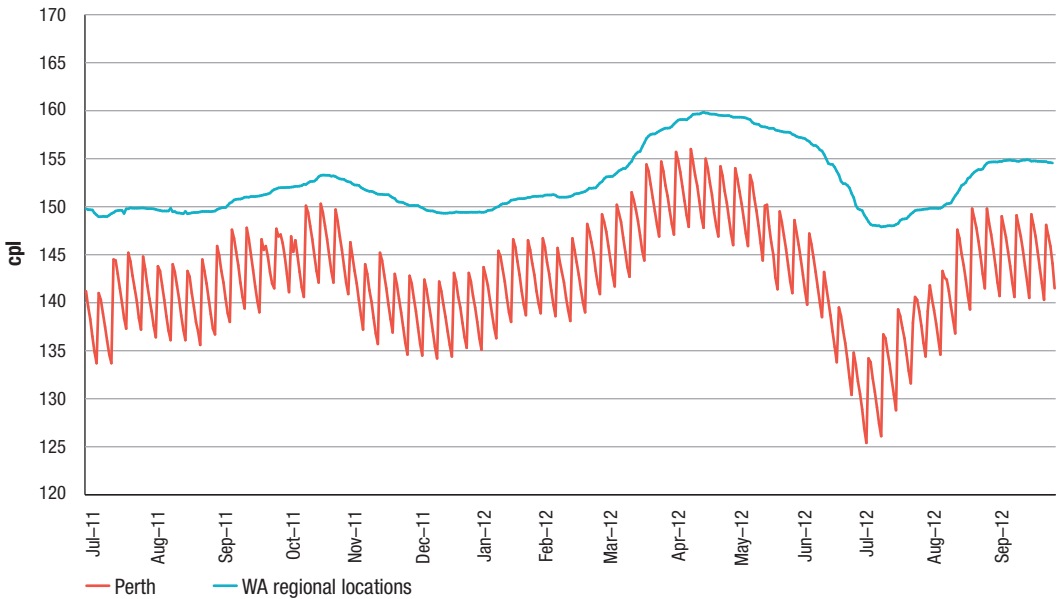
Source: ACCC calculations based on Informed Sources data

**Chart 9.5** Daily average petrol prices in Adelaide and South Australian regional locations:  
1 July 2011 to 30 September 2012



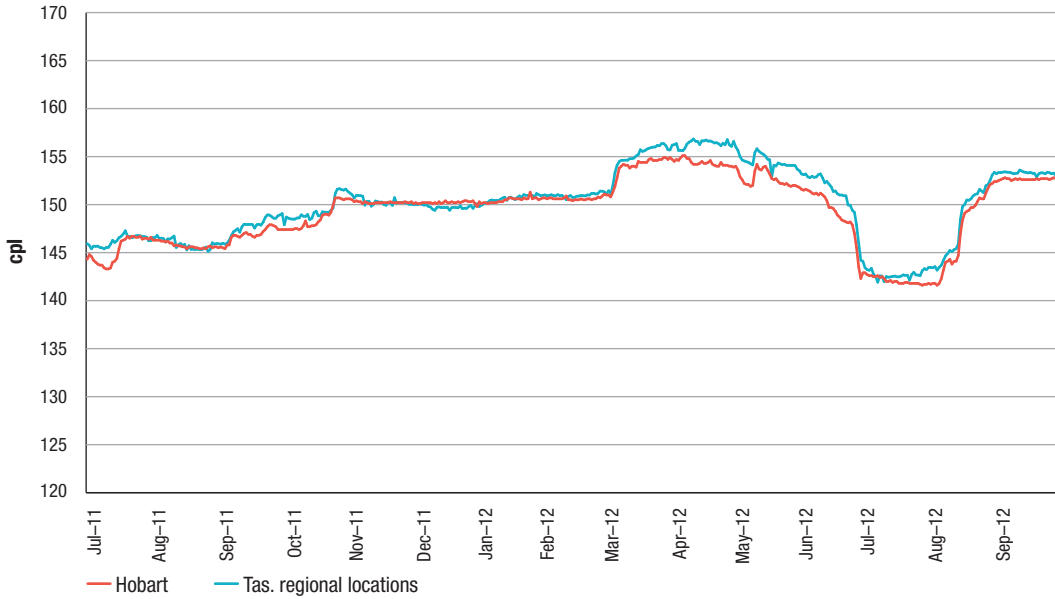
Source: ACCC calculations based on Informed Sources data

**Chart 9.6** Daily average petrol prices in Perth and Western Australian regional locations:  
1 July 2011 to 30 September 2012



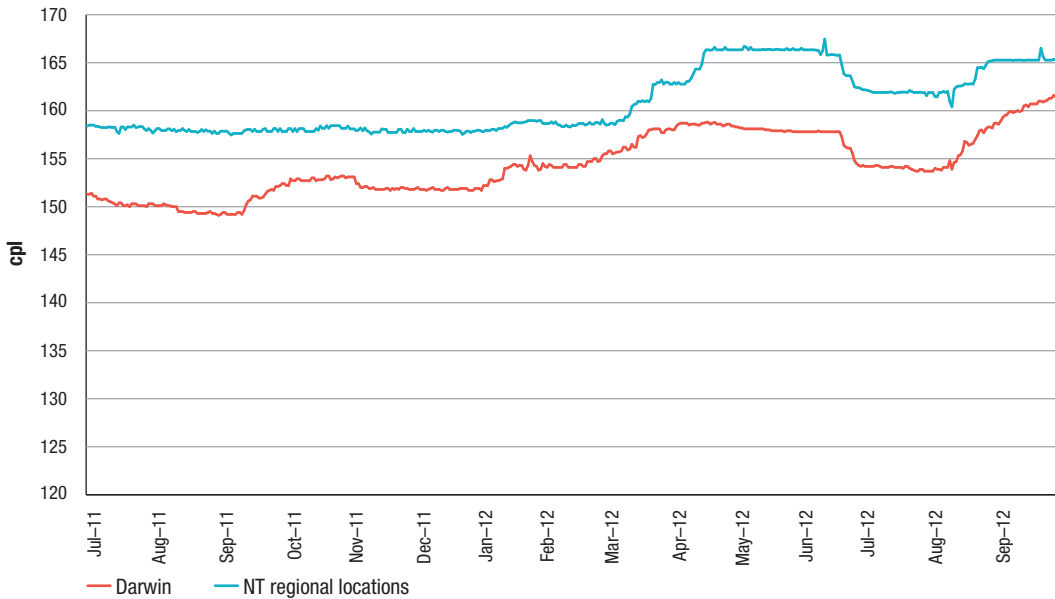
Source: ACCC calculations based on Informed Sources data

**Chart 9.7** Daily average petrol prices in Hobart and Tasmanian regional locations:  
1 July 2011 to 30 September 2012



Source: ACCC calculations based on Informed Sources data

**Chart 9.8** Daily average petrol prices in Darwin and Northern Territory regional locations:  
1 July 2011 to 30 September 2012



Source: ACCC calculations based on Informed Sources data

### 9.2.3 Price differentials over time

The city–country price differential varies between states and over time. Table 9.1 provides data on annual average price differentials between the capital city and regional locations for each state and the Northern Territory. It also shows two aggregate indicators of the city–country price differential: five-city and eight-city.<sup>119</sup>

**Table 9.1 Annual average petrol price differentials between the capital city and the monitored regional locations for each state and the Northern Territory: 2010–11, 2011–12 and 10-year average**

State/Territory	2010–11 cpl	2011–12 cpl	10-year avg. cpl
NSW	3.5	6.1	5.0
Vic.	1.0	4.1	3.7
Qld	1.8	2.6	3.4
SA	4.5	5.2	4.4
WA	10.6	9.4	11.9
Tas.	–0.1	0.6	0.2
NT	8.9	6.4	6.5
<b>Aggregate indicators</b>			
5-city	4.1	5.5	5.4
8-city	2.3	2.7	2.9

Source: ACCC calculations based on Informed Sources data

When comparing city–country price differentials over time it needs to be remembered that the number of regional locations included in the ACCC's fuel price monitoring program has increased over this period.

#### *2011–12 compared with 2010–11*

Table 9.1 shows that in 2011–12, compared with 2010–11:

- the city–country price differential increased in New South Wales, Victoria, Queensland, South Australia and Tasmania
- there was a decrease in the city–country price differential in Western Australia and the Northern Territory. The largest decrease was in the Northern Territory (2.5 cpl)
- the five-city price differential increased by 1.4 cpl and the eight-city price differential increased by 0.4 cpl.

#### *2011–12 compared with the 10-year average*

Table 9.1 shows that in 2011–12, compared with the 10-year average:

- the city–country price differential was higher in New South Wales, Victoria, South Australia and Tasmania, and was lower in Queensland, Western Australia and the Northern Territory
- the five-city price differential was higher, while the eight-city price differential was lower.

<sup>119</sup> The **five-city** city–country price differential is the difference between the arithmetic average of prices in the monitored regional locations in the six states and the Northern Territory and the arithmetic average price in the five largest cities (Sydney, Melbourne, Brisbane, Adelaide and Perth).

The **eight-city** city–country price differential is the difference between the arithmetic average of prices in the monitored regional locations in the six states and the Northern Territory and the arithmetic average price in the eight capital cities (the five largest cities plus Canberra, Hobart and Darwin).

## 9.3 Influences on prices in regional locations

Movements in retail petrol prices in regional locations are largely driven by changes in international refined petrol prices and the AUD–USD exchange rate, just as they are in the five largest cities. However, prices are generally higher in regional locations. A number of factors contribute to these higher prices and they are outlined below. The influence of these factors varies significantly from location to location. This means that there may be substantial differences in prices between specific regional locations.

### 9.3.1 Lower number of retail sites and therefore a lower level of local competition

In general, the degree of competition in a market will be greater if there are a large number of sellers. Therefore, everything else being equal, the higher the number of retail sites in a location, the greater the level of competition.

Smaller populations in regional locations generally have fewer vehicles, and therefore less retail sites, compared with the larger cities. Often this results in less competition in regional locations. In small country towns with a small number of retail sites there may be little incentive to reduce prices. This is because competitors will also quickly reduce their prices and the net result is the same volume of petrol sold at each retail site but with a lower margin.

### 9.3.2 Lower volumes of fuel sold

The volume of fuel sold at any particular retail site can significantly influence the price. Generally, the greater the volume of fuel sold the lower the price.

Certain costs of running a retail site (such as rent and maintenance) may be fixed irrespective of the volume of fuel sold. However, retail sites in regional locations generally sell lower volumes of fuel than retail sites in larger cities because they have comparatively fewer customers. Retail sites with higher volume sales can spread their fixed costs over this greater volume, which reduces the unit cost of supplying their fuel compared with retail sites with lower volumes of sales.

### 9.3.3 Distance/location factors

It generally costs more to deliver fuel to regional locations than it does to the largest capital cities. In regional locations, fuels need to be moved further from the fuel terminals, leading to higher freight costs. Additional storage costs may also be necessary if the fuel is stored in a local storage facility before being supplied to retail sites.

Regional locations which are situated along a major highway may have lower prices due to increased competition. This is because they may sell higher volumes due to the passing traffic on the highway, and may also have lower delivery and storage costs.

### 9.3.4 Lower convenience store sales

The margin on convenience store sales is usually significantly higher than on fuel sales. In the five largest cities convenience store sales generally make a greater contribution to the overall returns of a retail site than they do in regional locations. These retail sites can remain profitable on much lower margins on fuel sales. As a result, upward pressure is put on retail petrol prices in retail sites with lower convenience store sales, such as in regional locations.

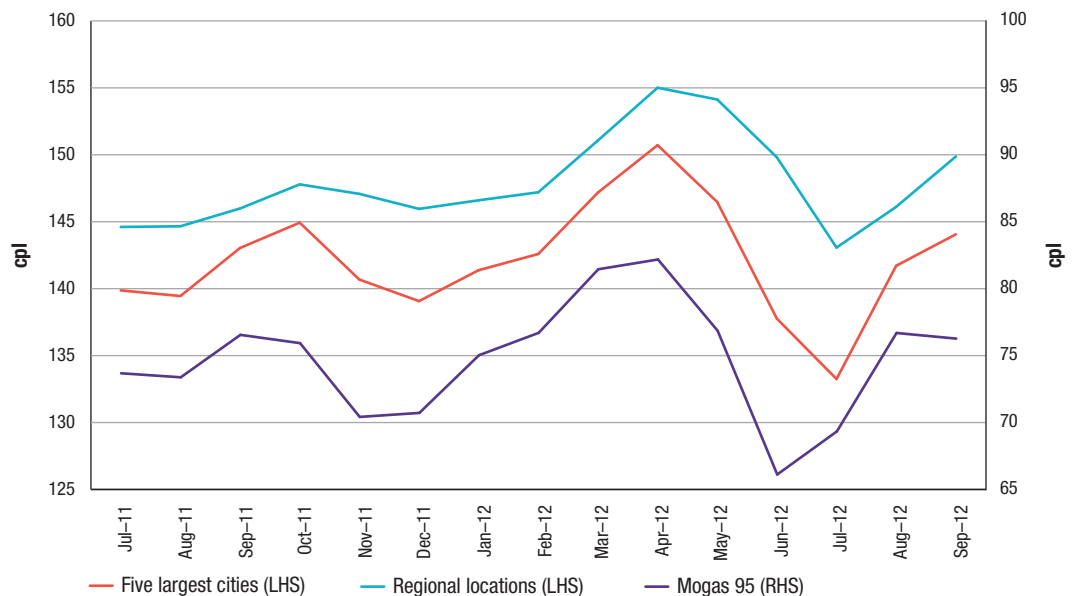


### 9.3.5 Lags in price movements in regional locations

Price movements in regional locations generally lag behind movements in the five largest cities. This is due in part to a lower volume of sales in these locations, and hence slower replenishment of fuel stocks by wholesalers and retailers. Consequently, prices in regional locations often take more time to reflect changes in international prices than those in the five largest cities.

Chart 9.9 shows monthly average petrol prices in the five largest cities, regional locations in aggregate, and the monthly average price of Mogas 95 in Australian cents per litre in the period July 2011 to September 2012.

**Chart 9.9 Monthly average retail petrol prices in the five largest cities and regional locations in aggregate, and Mogas 95 prices in Australian cents per litre: July 2011 to September 2012**



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

One example of the lag is during the period November 2011 to February 2012:

- monthly average Mogas 95 prices troughed in November 2011, but retail prices in the five largest cities and in regional locations did not trough until a month later
- between November 2011 and January 2012, Mogas 95 prices increased by 4.6 cpl; however, between December 2011 and February 2012 retail prices in the five largest cities increased by only 3.5 cpl and in regional locations they increased by only 1.2 cpl.

Another example is the period April 2012 to June 2012:

- monthly average Mogas 95 prices peaked in April 2012 and subsequently decreased by 16.1 cpl over the next two months
- over the same period, average monthly prices in the five largest cities decreased by 13.0 cpl; however, average prices across regional locations decreased by only 5.2 cpl.

## 9.4 Price movements can vary among regional locations

While retail petrol prices in regional locations at an *aggregate level* broadly follow movements in retail prices in the five largest cities—and hence international refined petrol prices—with a lag, at the *individual regional location level* there can be quite distinct differences in the extent to which retail petrol prices in regional locations follow movements in international refined petrol prices.

In a number of regional locations retail petrol prices closely follow movements in international refined petrol prices, whereas in others retail petrol prices have only a minimal relationship with movements in international refined petrol prices. There are other regional locations where retail petrol prices broadly follow movements in international refined petrol prices. Examples of these three types of regional locations are presented below.

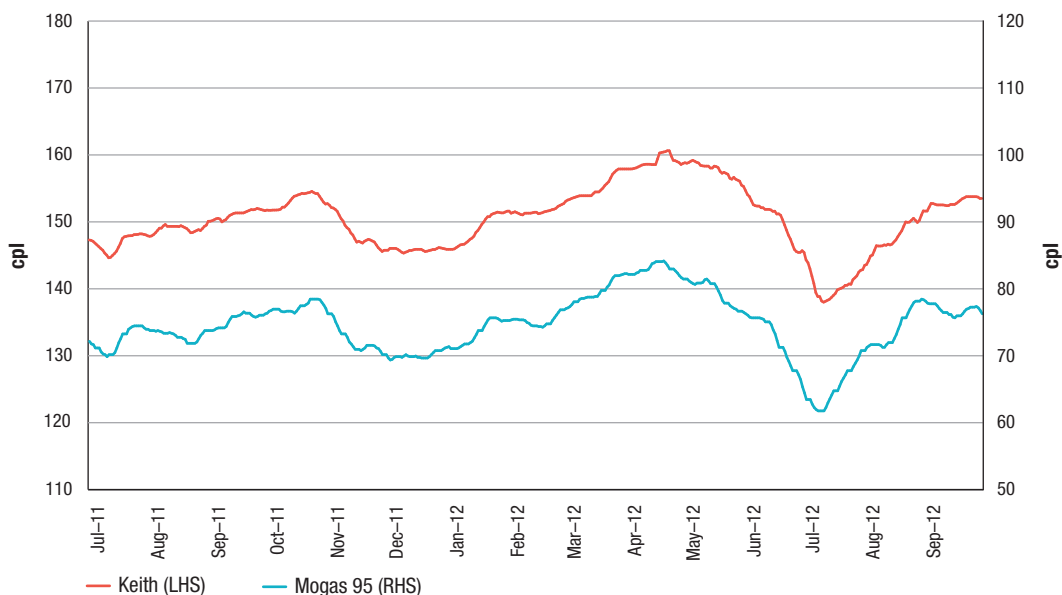
### 9.4.1 Case studies

#### Keith

Keith is a small town located in South Australia, around 230 kilometres (km) south-west of Adelaide. It has a population of around 2000 people and five retail sites selling petrol.<sup>120</sup>

Chart 9.10 shows seven-day rolling average retail petrol prices in Keith and seven-day rolling average Mogas 95 prices lagged 10 days from 1 July 2011 to 30 September 2012.<sup>121</sup>

**Chart 9.10 Seven-day rolling average retail petrol prices in Keith and Mogas 95 prices in Australian cents per litre: 1 July 2011 to 30 September 2012**



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

The chart shows that retail prices in Keith closely followed movements in Mogas 95 prices for the entire period.

<sup>120</sup> The source for population and retail site data in the three case studies is: Australian Bureau of Statistics, 2010 Estimated Resident Population data provided on a consultancy basis to the ACCC, and Informed Sources data.

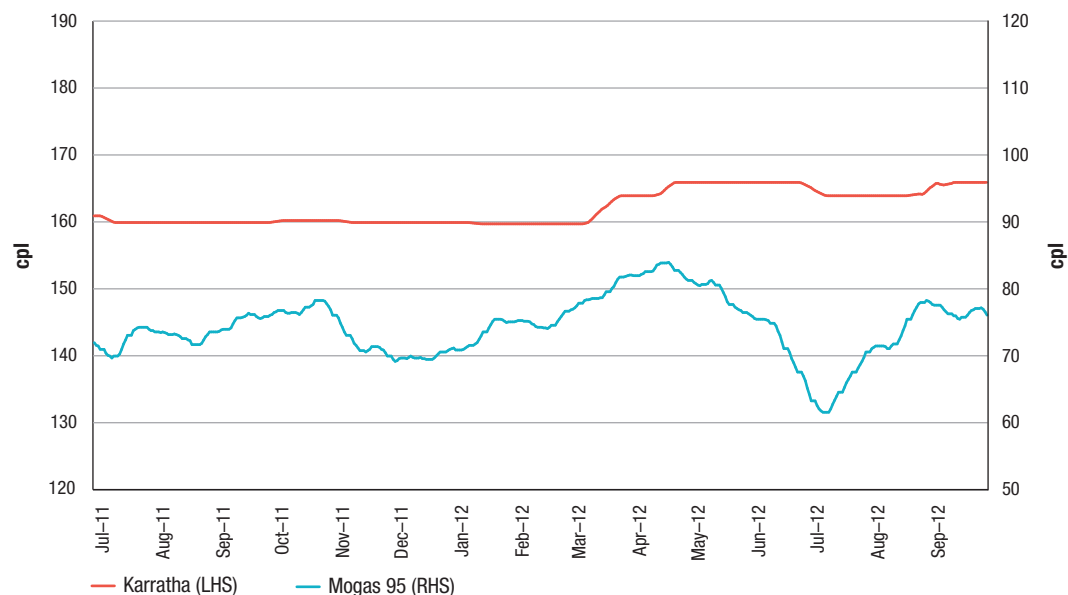
<sup>121</sup> In charts 9.10 to 9.12 retail prices are shown on the left hand side of the chart and Mogas 95 prices are shown on the right hand side of the chart (with different starting and ending values). This is done to show clearly the relative movements in the price series.

## Karratha

Karratha is located in the north-west of Western Australia, around 1500 km north of Perth. It has a population of around 14 000 people and five retail sites selling petrol.

Chart 9.11 shows seven-day rolling average retail petrol prices in Karratha and seven-day rolling average Mogas 95 prices lagged 10 days from 1 July 2011 to 30 September 2012.

**Chart 9.11 Seven-day rolling average retail petrol prices in Karratha and Mogas 95 prices in Australian cents per litre: 1 July 2011 to 30 September 2012**



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

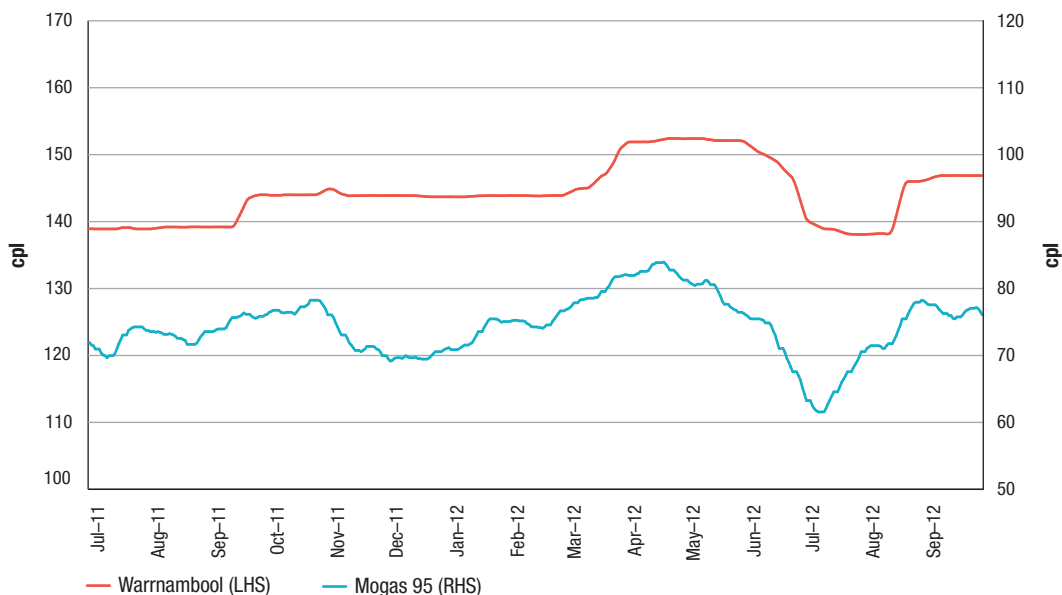
Retail petrol prices in Karratha remained largely unchanged between July 2011 and March 2012, despite movements in Mogas 95 prices during that period. They subsequently increased by around 6.0 cpl in two stages before becoming relatively stable again from early April 2012. The chart shows that between July 2011 and September 2012 retail prices in Karratha had only a minimal relationship with movements in international refined petrol prices.

## Warrnambool

Warrnambool is located in Victoria, around 250 km south-west of Melbourne. It has a population of around 32 000 people and 12 retail sites selling petrol.

Chart 9.12 shows seven-day rolling average retail petrol prices in Warrnambool and seven-day rolling average Mogas 95 prices lagged 10 days from 1 July 2011 to 30 September 2012.

**Chart 9.12 Seven-day rolling average retail petrol prices in Warrnambool and Mogas 95 prices in Australian cents per litre: 1 July 2011 to 30 September 2012**



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

Between July 2011 and September 2012, retail prices in Warrnambool moved broadly in line with Mogas 95 prices. However, there were periods when movements in Warrnambool prices did not correspond with movements in Mogas 95 prices. For example, between late October 2011 and March 2012, Mogas 95 prices decreased by around 9.0 cpl before increasing by around the same amount. In contrast, retail prices in Warrnambool during this time remained constant.

### 9.4.2 Differences in price movements in regional locations

The factors that influence the extent to which retail petrol prices in specific regional locations follow international refined petrol prices were described in section 9.3.

For example, the number of retail sites in the specific regional location is likely to be an important factor. Keith has one retail site for every 400 people whereas Karratha has one retail site for every 2800 people. Warrnambool has one retail site for every 2667 people.

Similarly, the distance of the specific regional location from the capital city, and whether it is on a major highway, are likely to be relevant factors. Keith is located on the main highway between Melbourne and Adelaide and is around 230 km from Adelaide. Karratha, on the other hand, is situated 1500 km from Perth in a remote area. Warrnambool is around 250 km from Melbourne and is located on a fairly busy highway.

This analysis demonstrates that when comparing petrol prices between regional locations, it needs to be borne in mind that every regional location will tend to have particular factors that influence petrol prices to varying degrees. Furthermore, these influences can change over time.

## 9.5 Price cycles in regional locations

Regular price cycles are a prominent feature of petrol prices in Australia's five largest cities (see chapter 10). Petrol price cycles also sometimes occur in Canberra, but not in Hobart or Darwin.

This section examines the extent to which there were petrol price cycles in regional locations in calendar year 2011. Daily average petrol prices in all of the regional locations included in the ACCC's fuel price monitoring program were analysed and classified according to the number of price cycles that occurred.

### 9.5.1 Methodology

A petrol price cycle is a movement in price from the trough to a peak to a subsequent trough.<sup>122</sup> A price cycle was considered to have occurred if the following criteria were met:

- the increase in price from the trough to the peak was 3 per cent or more of the trough price
- the decrease in price to the subsequent trough was also 3 per cent or more of the initial trough price.

To ensure that the price cycles in regional locations were of a broadly regular pattern—similar to those in the five largest cities—an additional criterion was applied:

- the decrease in price from the peak to the subsequent trough must have occurred within three weeks of the peak being reached.

The daily price movements in the regional locations were assessed and locations were classified into three broad categories according to the number of price cycles in the year. These categories were:

- **Regular price cycles:** these regional locations had 20 or more price cycles during 2011.
- **Occasional price cycles:** these regional locations had between six and 19 price cycles during 2011.
- **No or few price cycles:** these regional locations had five price cycles or less during 2011.

A degree of judgement was required when setting the criteria for this analysis. Note that:

- Price cycle increases are calculated from daily average prices in each regional location. This means that the actual increase in price at any individual retail site in the regional location may vary from the average price cycle increase.
- Prices in some regional locations may appear to move in a similar pattern to a price cycle; however, unless they met the criteria above these price movements were not counted as price cycles.

### 9.5.2 Analysis

Of the 173 regional locations analysed:<sup>123</sup>

- Eight regional locations (5 per cent) had regular petrol price cycles. These were:
  - Geelong, Seymour, Wallan, and Koo Wee Rup in Victoria; Moss Vale, Singleton and Tweed Heads South in New South Wales; and Gawler in South Australia.

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<sup>122</sup> See the diagram in section 10.2.

<sup>123</sup> While around 180 regional locations are included in the fuel price monitoring program there are times when price data is not available in a particular regional location for all of the year. In 2011 there were 173 regional locations for which petrol price data was sufficiently available to analyse the extent of petrol price cycles.

- 11 regional locations (6 per cent) had occasional petrol price cycles. These were:
  - Newcastle, Wollongong, Central Coast, Narrabri, Forster and Goulburn in New South Wales; Blackall in Queensland; Keith in South Australia; Wynyard and Sorell in Tasmania, and Corryong in Victoria.
- 154 regional locations (89 per cent) had no or few petrol price cycles. Of these:
  - 124 regional locations (72 per cent of the total number of regional locations analysed) had no price cycles at all in 2011
  - 16 regional locations (9 per cent) had only one price cycle in 2011.

### 9.5.3 Comparison with 2010 analysis

A comparison with the analysis of price cycles in regional locations in 2010 (which is described in chapter 10 of the 2011 ACCC petrol monitoring report) shows that:

- Five of the eight locations that had regular petrol price cycles in 2010 also had regular cycles in 2011. These were: Geelong, Seymour, Moss Vale, Singleton and Gawler.
- The other three regional locations that had regular petrol price cycles in 2011—Wallan, Koo Wee Rup and Tweed Heads South—were locations that were added to the ACCC's fuel price monitoring program in 2011.
- There were four regional locations that had regular petrol price cycles in 2010 but not in 2011. These were: Wollongong, Newcastle, Queanbeyan and Bulahdelah in New South Wales.
- In 2011 all four of these regional locations had a greater number of price cycles for E10 petrol than for regular unleaded petrol. It may be that the steady move from selling regular unleaded petrol to selling E10 petrol in New South Wales, as a result of the ethanol mandate, has had an influence on the number of petrol price cycles in these locations.

### 9.5.4 Common features of the regional locations with regular price cycles

Some common features of the eight regional locations with regular petrol price cycles in 2011 are that they are either a major population centre (such as Geelong) or are close to major population centres and/or on major highways:

- Moss Vale is close to Wollongong, on the Illawarra Highway and close to the Hume Highway.
- Singleton is close to Newcastle and on the New England Highway.
- Seymour is relatively close to Melbourne and on the Hume Highway.
- Koo Wee Rup is close to Melbourne and on the South Gippsland Highway.
- Wallan is close to Melbourne and on the Hume Highway.
- Tweed Heads South is relatively close to Brisbane, and on the Pacific Highway.
- Gawler is close to Adelaide and near the Sturt Highway.

Generally, when petrol price cycles failed in the capital city, they also failed in the associated regional location. This suggests that retail petrol prices in these regional locations may be set on a similar basis to those in the five largest cities.