

***Price Differentials for Regular Unleaded Petrol  
[91 Octane] relative to Premium Unleaded Petrol  
[95 and 98 Octane] including Ethanol (E10)  
Unleaded Petrol***

September 2009

## ***Price Differentials for Regular Unleaded Petrol [91 Octane] relative to Premium Unleaded Petrol [95 and 98 Octane] including Ethanol (E10) Unleaded Petrol***

This report highlights:

1. The fuel price differentials between regular unleaded petrol (91 octane) and premium unleaded petrol (95/96 octane and 98 octane) for the period week ending 6 August 2006 through to week end 13 September 2009 ;and
2. The growing relative average price differential between the premium unleaded petrol grades (95/96 octane and 98 octane) and regular unleaded petrol (91 octane), over the same period of time.

The average price differential between these two grades of premium unleaded petrol when compared to regular unleaded petrol over the period week ending 6 August 2006 to 13 September 2009 is:

- i) 7.7 cents per litre between premium unleaded petrol (95/96 octane) and regular unleaded petrol; and
- ii) 11.6 cents per litre between premium unleaded petrol (98 octane) and regular unleaded petrol.

This analysis implies that the differentials may not reflect the true cost impost between the various grades of unleaded petrol.

### **Background**

This report examines the price differentials between the various grades of unleaded petrol with particular reference to:

- Ethanol (E10) unleaded petrol;
- Regular unleaded petrol (91 octane); and
- Premium unleaded petrol grades (95/96 octane and 98 octane).

It is also pertinent to note that:

1. Shell have provided some guidance on their website highlighting a 6 cents per litre differential for Premium Unleaded 95 Octane petrol when compared with Regular unleaded petrol, and a 10 cents per litre differential for Premium Unleaded 98 Octane petrol.
2. Observations involving a number of Caltex (Woolworths) service stations in the St George and Sutherland Shire areas in southern Sydney over the past five months has shown a 9 cents per litre differential between Regular unleaded petrol and Premium unleaded (95 Octane) and a 15 cent differential between Regular unleaded petrol and Premium unleaded (98 Octane). These price differentials seem to be standard price deviations that are held constant.

## Analysis

### ***Price comparison of unleaded petrol grades***

The following analysis examines the weekly average price movements for all grades of unleaded petrol for the Sydney metropolitan area for the period 6 August 2006 through to 13 September 2009.

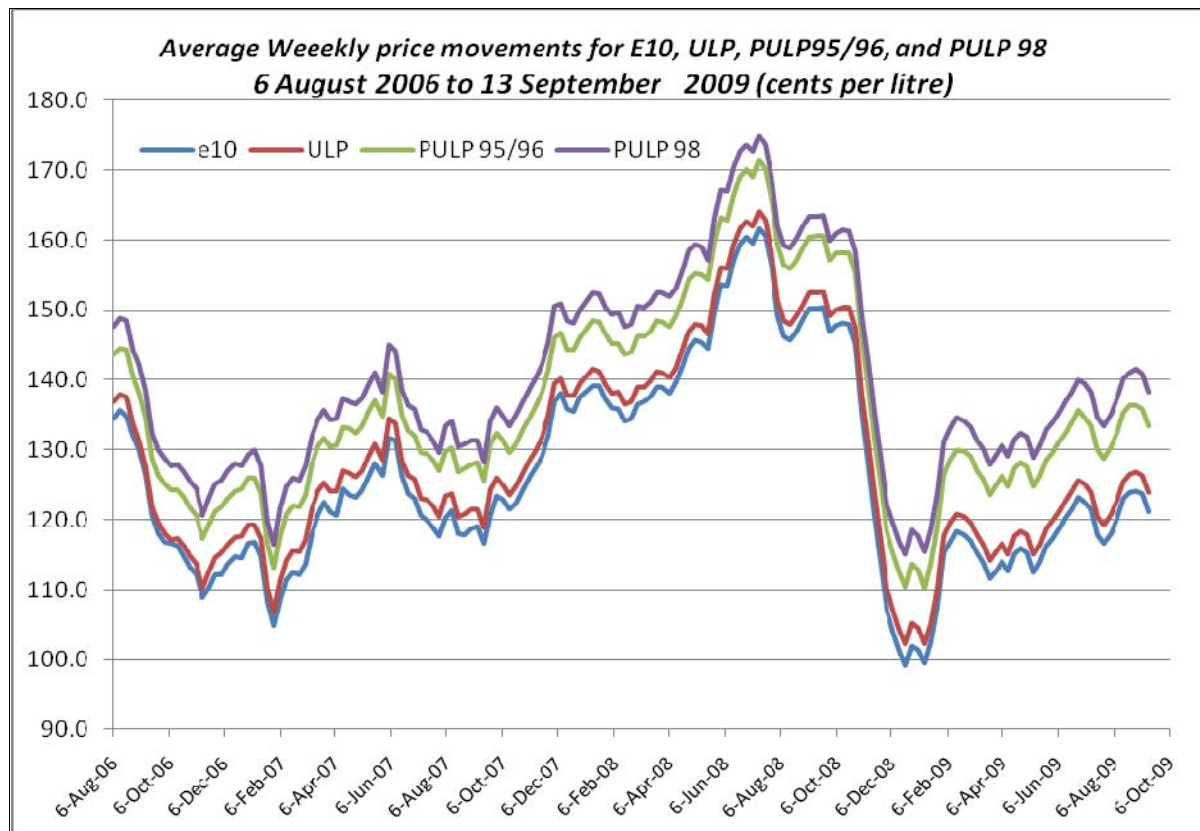
Figure 1: shows the price movements for the for grades of unleaded petrol for the period week ending 6 August 2006 through to the week ending 13 September 2009. The graph illustrates both the rise in petrol prices to July 2008, the huge falls that occurred in the second half of 2008 and the rising upward trend in 2009.

Figure 1 also highlights the close correlation between E10 and regular unleaded petrol prices with very little discrepancy in the two average price lines.

In addition the price movements between the four grades of unleaded petrol show similar price movements over the period under examination.

The lowest and highest set of prices occurred on the weeks ending 21 December 2008 and 3 July 2008 respectively. (see Table 1)

***Figure 1: Average Weekly price movements for E10, Regular ULP, Premium (95/96 and PULP 98) for week ending 6 August 2006 to 13 September 2009***



### **Price Differential between E10 and Regular unleaded petrol (Octane 91)**

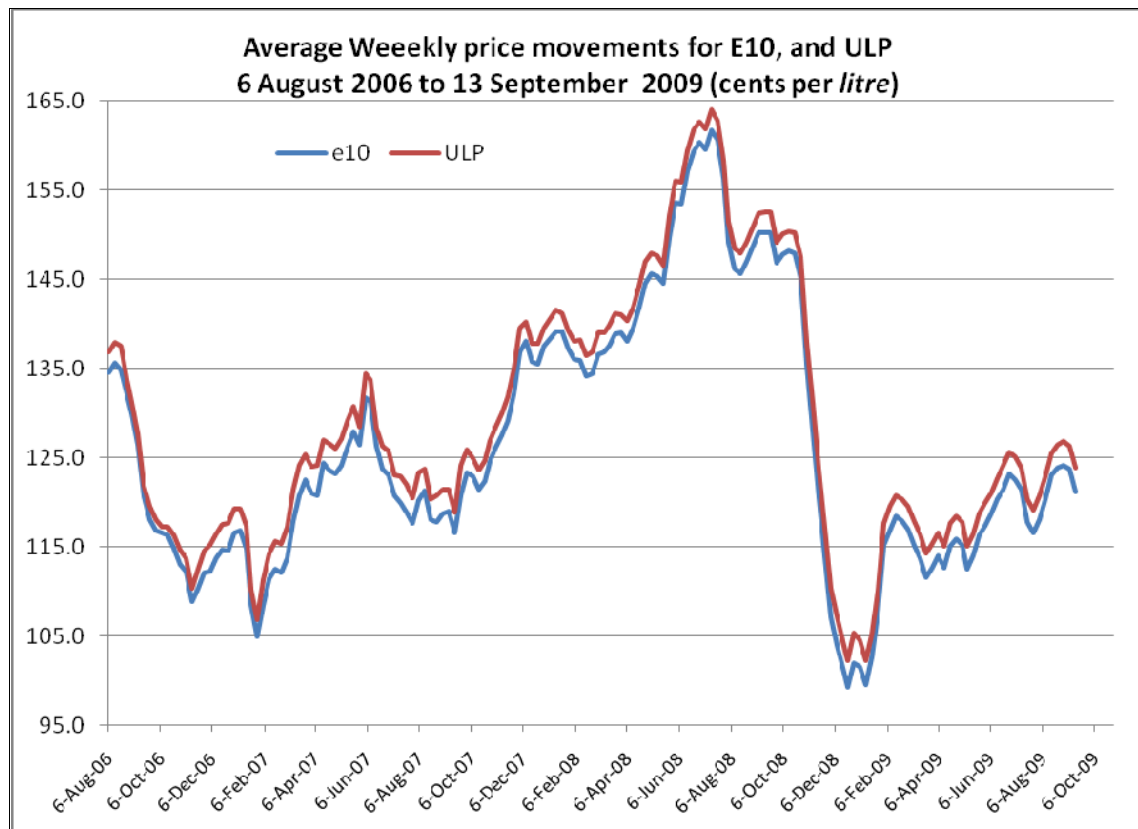
The average price differential between these two grades of unleaded petrol over the period in question is 2.5 cents per litre.

Price data for E10 unleaded petrol has been collected since July 2006. The initial pricing strategies adopted by the major oil retailers were to price E10 petrol at a discount of 3 cents per litre to regular unleaded petrol.

Whether this discount represents the true cost of supplying these two grades of unleaded petrol is questionable. Informal discussions with several oil retailers suggest that the true price differential should be in the order of at least 4-5 cents per litre.

Figure 2: highlights the price levels for the E10 and regular unleaded petrol grades.

**Figure 2: Average Weekly price movements for E10, and Regular ULP for week ending 6 August 2006 to 28 June 2009**



**Price Differential between Regular unleaded petrol (Octane 91), and Premium unleaded Octane 95/96 and Premium unleaded Octane 98**

The average price differential between these two grades of premium unleaded petrol when compared to regular unleaded petrol over the period week ending 6 August 2006 to 13 September 2009 is:

1. 7.7 cents per litre between premium unleaded petrol (95/96 octane) and regular unleaded petrol; and
2. 11.6 cents per litre between premium unleaded petrol (98 octane) and regular unleaded petrol.

Discussions with various oil industry experts suggest that the cost differential between regular unleaded petrol and premium 95/96 unleaded petrol should be in the order of up to 6 cents per litre and an extra two cents per litre between the premium 95/96 and premium 98 grades of unleaded petrol.

Clearly these cost differentials are not showing up in the relative average price movements between the various grades of unleaded petrol.

Figure 3 highlights the average weekly price movements between the three grades of unleaded petrol. It shows a widening gap between both premium grades when compared with the regular grade. This trend has been quite discernible since December 2008.

**Figure 3: Average Weekly price movements for Regular ULP, and Premium (95/96 and PULP 98) for week ending 6 August 2006 to 13 September 2009**

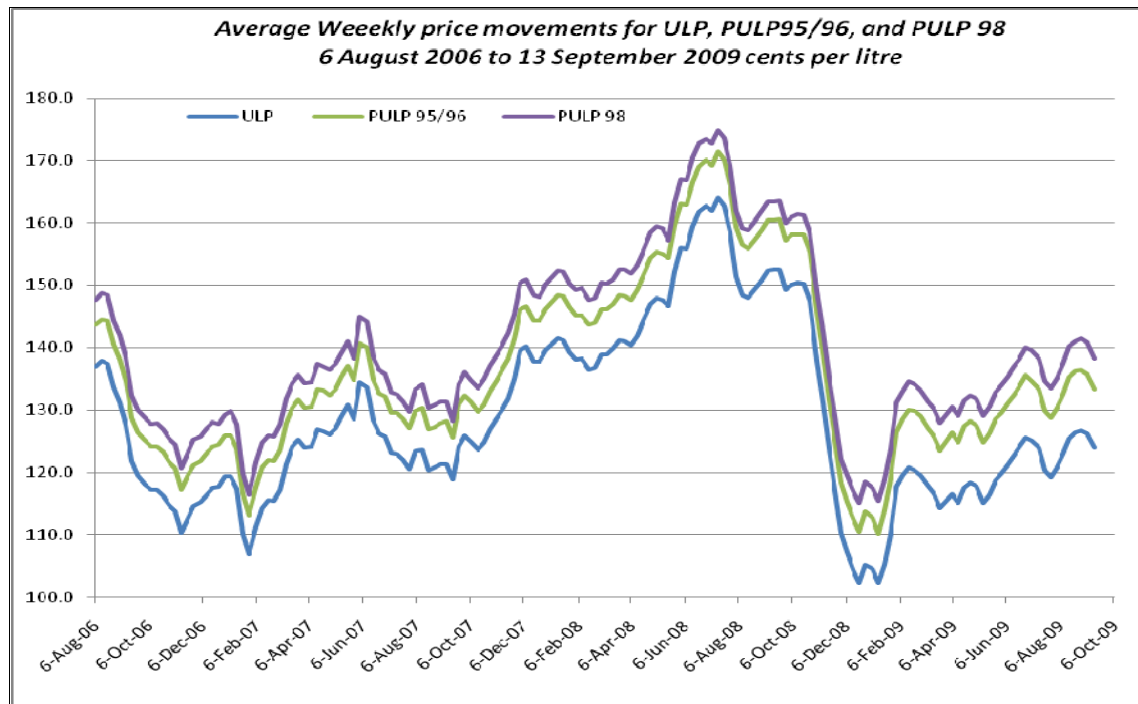
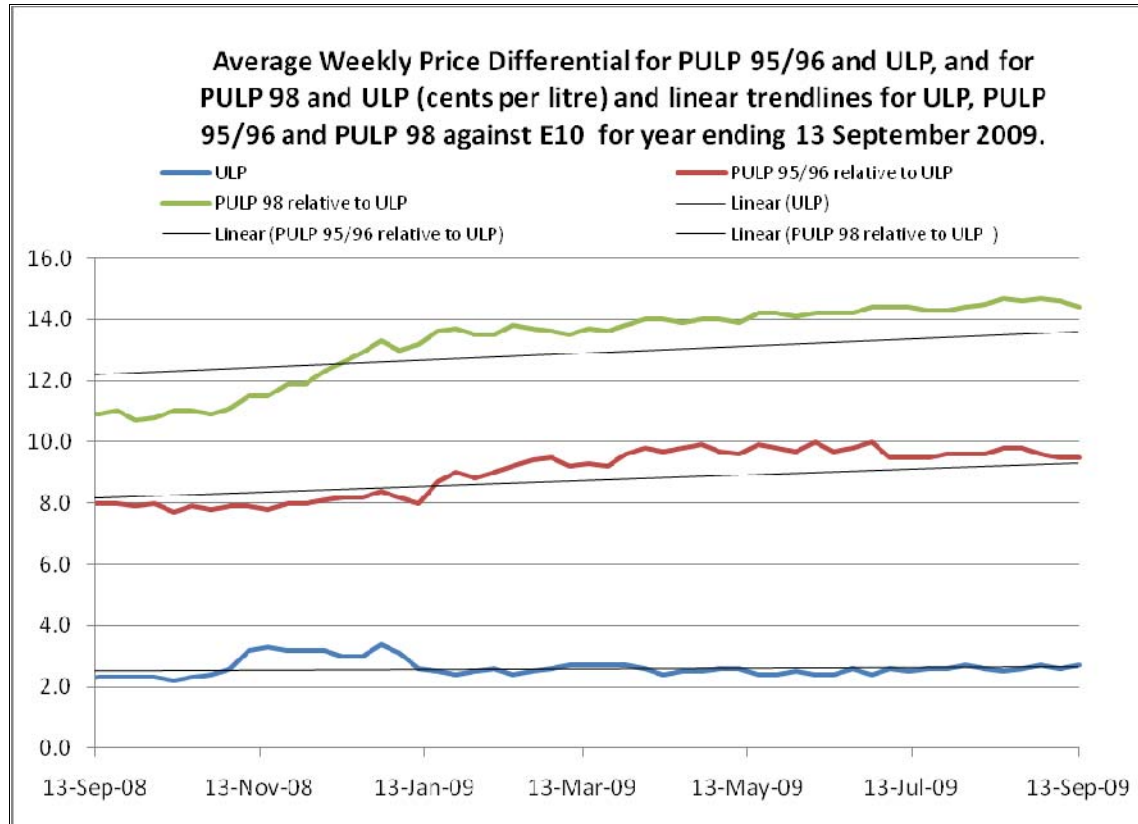


Figure 4 illustrates the relative trend line movements of regular unleaded petrol and the two premium grades against ethanol E10 unleaded petrol.

It shows that the relative movement of regular unleaded petrol has remained relatively constant over the last 12 twelve months.

In contrast the differentials movement for the two premium grades of unleaded petrol is trending upwards.

**Figure 4: Comparison of linear trend line price movements for ULP, PULP 95/96 and PULP 98 against E10 for the year ending 13 September 2009.**



Figures 5, 6 and 7 show the rising average price differential between these two grades of premium unleaded petrol when compared to regular unleaded petrol.

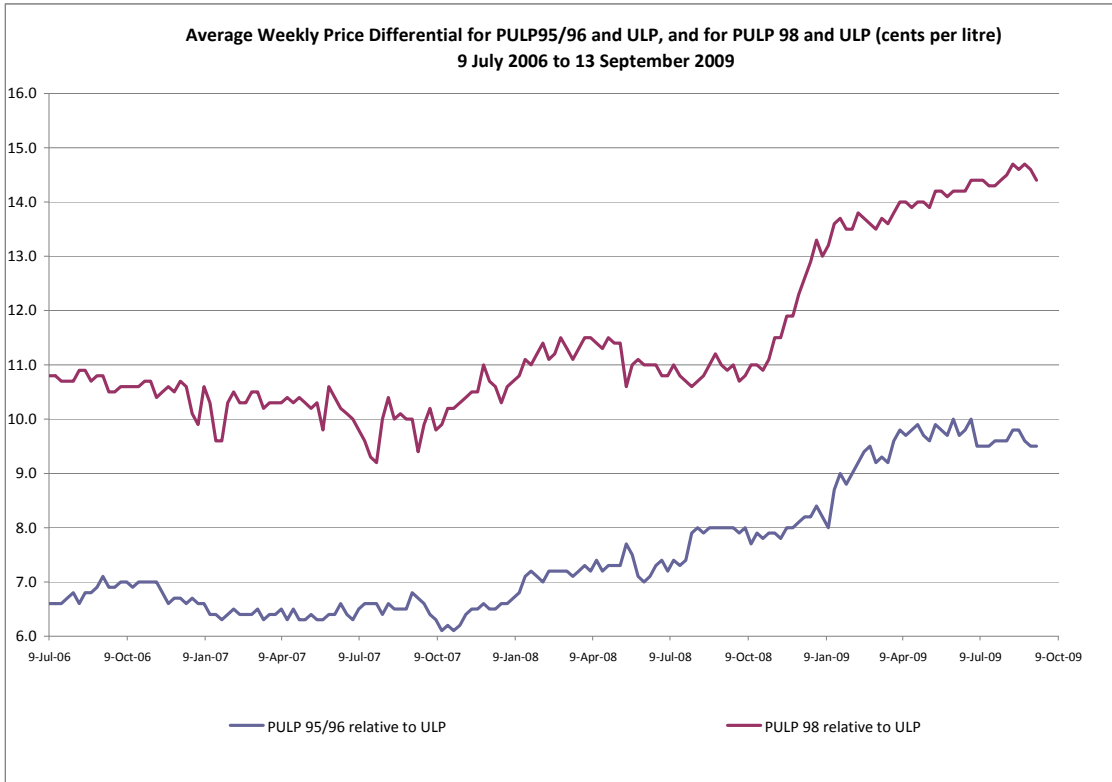
Clearly the price gap between PULP 98 and regular unleaded petrol has risen by about 4 cents per litre since June 2008, with the corresponding gap between PULP 95/96 and regular unleaded petrol of 3 cents per litre.

The gap between the two premium grades against regular unleaded is continuing to widen.

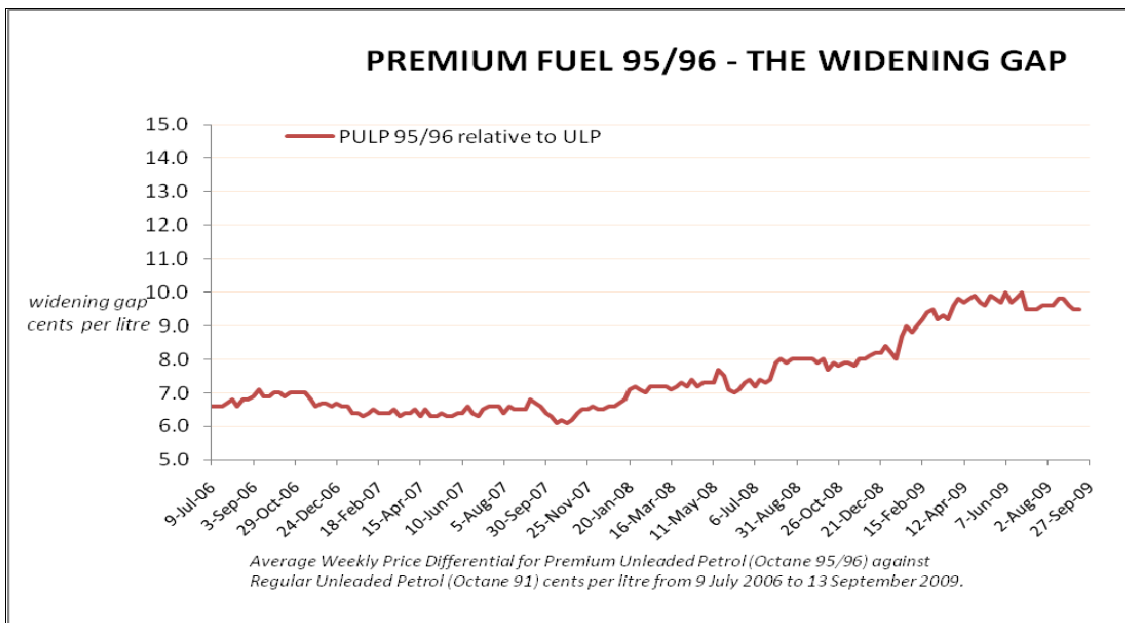
It suggests that the price differential is widening to the disadvantage of motorists having to purchase the already more expensive premium fuel stock.

This trend also paints a picture that as E10 fuel becomes mandated from July 2011, and regular unleaded petrol is removed, many motorists will be required to pay relatively more per litre for premium unleaded petrol.

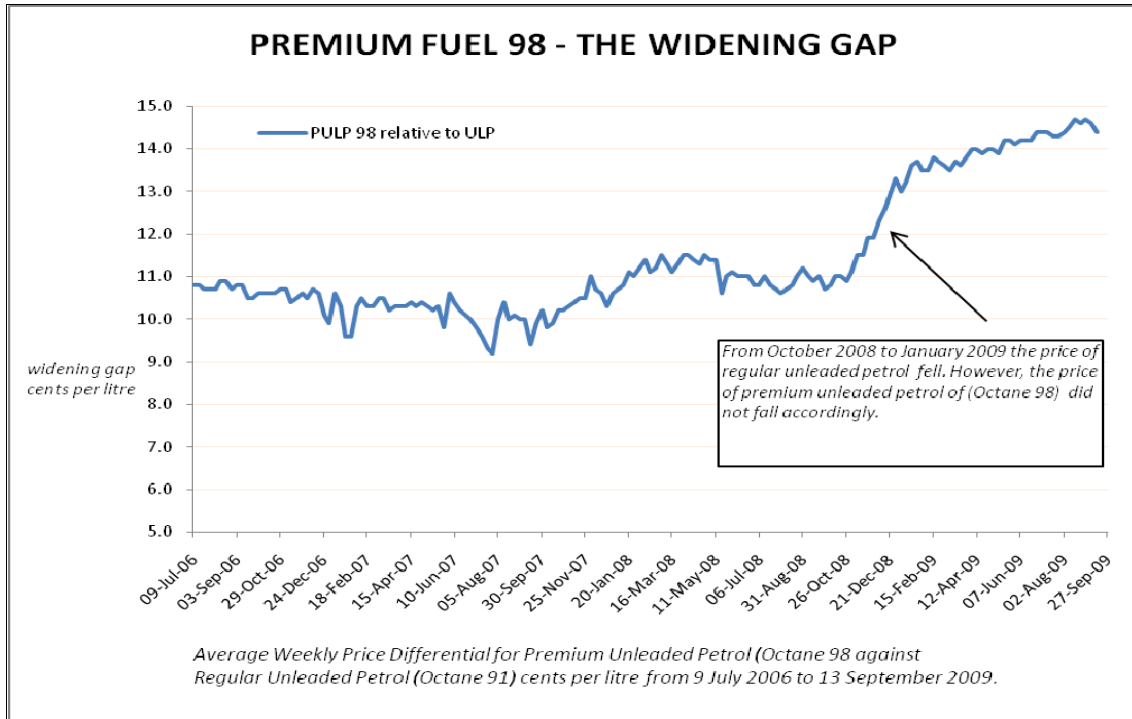
**Figure 5: Price Differential for Average Weekly price movements – Premium (95/96 and 98) against Regular unleaded for week ending 9 July 2006 to 13 September 2009**



**Figure 6: Widening Gap for Average Weekly price movements - Premium (95/96) against Regular unleaded for week ending 9 July 2006 to 13 September 2009**



**Figure 7 Widening Gap for Average Weekly price movements - Premium (98) against Regular unleaded for week ending 9 July 2006 to 13 September 2009**



Data Source: Informed Sources