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Caltex submission to ACCC inquiry into the price of unleaded petrol

August 2007

Contact:

Frank Topham
Government Affairs & Strategic Communications Manager
Tel: 02 9250 5357
Email: ftopham@caltex.com.au

FOR PUBLIC RELEASE

Executive summary

Refining and international crude oil market

- The Australian oil refining industry has been rationalised in recent years, with closure and downsizing reducing overall capacity, partially offset by efficiency improvements to increase crude oil throughput and product yields.
- Large investments have been made to produce higher quality fuels to meet new national fuel quality standards but the increase in international market-determined prices that supports these investments has been less than 3 cents per litre (cpl).
- Large investments are planned by Caltex to meet growing demand, improve environmental performance and reduce costs. It is expected that regional refiner margins (hence Australian prices through import parity pricing) will stay sufficiently high to justify these investments.
- Increasing competitive pressure from Asian refineries is likely to result in further rationalisation of Australian refineries through closures, which will tend to increase imports, and/or mergers.
- Demand for petroleum products is growing strongly in Asia, led by China. This is helping to drive up the price of crude oil by increasing competition for regional crude production.
- Prices at the refinery level are determined through commercially negotiated, transparent, arms-length contracts, in contrast to the unpriced (but still competitive) "refinery exchange" arrangements of the period to 2002.
- Caltex is not vertically integrated at the refining/import level as it is an Australian company, not a subsidiary of a global oil company – there is a substantial volume of supply purchased from unrelated overseas and Australian refineries. Caltex has no oil exploration or production interests and is effectively an "independent" in relation to sourcing and paying for crude oil and petroleum products.

Importing and international petroleum products market

- About 25% of Australia's total petroleum products are imported. 18% of petrol was imported in 2006 compared with about 7% in 2001/2002.
- Australia will remain dependent on imports for the foreseeable future. No new refineries will be constructed in Australia as it is more economic for additional refining capacity to be constructed in Asia for export to Australia and other regional markets.
- Substantial import volumes mean the petroleum market is import-competitive not just import-contestable as in the 1990s and this situation will continue.
- The reality of import competition places a strong constraint on prices in Australia and reinforces import parity pricing as the essential basis of petrol pricing in Australia.
- Petrol imports to Australian quality standards are readily available to Australian refiners and independent importers.
- Australian refinery prices (buy/sell prices) are closely related to actual prices paid by Caltex for import cargoes.
- MOPS95 is an appropriate benchmark for Australian petrol prices as this is the actual basis for Caltex imports to Australia. A premium over MOPS95 is required as Australian quality petrol exceeds that of petrol in the MOPS95 price quote.

Wholesale storage

- In general, industry terminal capacity has become increasingly constrained as a result of increasing demand, reducing local production, increasing imports and terminal rationalisation (eg through closures and joint ventures) to cut costs.
- Caltex currently has no surplus capacity or space for importers and is investing to meet its own storage needs.
- Storage is available at independent terminals and these terminals are being used by both refiners and non-refiners.

- Storage is not a significant barrier to entry by importers into the petrol market – the constraints on new entrants are mainly financial ie. mainly the difficulty to reliably land, store, sell product at a price competitive with large scale operators.

Wholesale trade

- The structure of independent retailers and resellers has changed in the past 10 years but competition has if anything increased.
- Within Caltex's network, the proportion of supply to independent resellers (eg Liberty) has decreased but supply to independent retailers (of which Woolworths is by far the largest customer) has more than offset this decrease.
- This shift reflects the broader petrol market where supermarkets are now a major competitive force and small independents (often supplied through independent resellers) in general have a lesser role. This competition has reduced the market share of independent resellers and retailers.
- The change in market structure has not resulted in an increase in Caltex margins at the wholesale level. This supports Caltex's view that the wholesale petrol market remains highly competitive.
- Caltex contract wholesale prices are generally not based on published terminal gate prices (TGPs) but instead are based on a wholesale list price (based on MOPS95), which may be discounted, or directly linked to the import parity price. However, these pricing formulas produce the same competitive outcomes as TGPs and closely track MOPS95 with a lag of about one week. Changes in TGPs are a good indicator of changes in wholesale prices.
- Caltex TGPs, which are for spot sales, closely track MOPS95 (with about a one week lag) as they are formula-linked to MOPS95 with an adjustment for market conditions. Very few sales are made at TGP.
- Victorian TGP regulation seeks to impose constraints on pricing that may differ from commercial reality, thereby distorting competition, and also restricts competition by limiting the frequency of wholesale price changes. Both Victorian and WA TGP regulation should be repealed now that Oilcode has been regulated under the Trade Practices Act and covers the same area.

Retail trade

Structure

- The retail petroleum industry is not highly concentrated compared to many other Australian industries. Assertions of an existing or emerging duopoly are unfounded.
- The prevalence of major oil company branded or co-branded sites is often associated by the public with oil company control of sites and pricing. Caltex owns a minority of sites and sets the price at very few sites.
- Shop sales account on average for about 70% of gross margins at service stations, making them convenience retailers far more than fuel retailers. Caltex is Australia's leading convenience store chain.
- Petrol pricing strategies relate not just to fuel sales but also convenience store sales and, in the case of Woolworths alliance sites, possibly Woolworths supermarket sales.

Competition

- Caltex has reduced the number of company owned sites over the past 10 years to improve network financial performance.
- This is part of a trend in service station rationalisation that has been occurring for 30 years aimed at increasing site throughput, diversifying sales and divesting sites with poor economic performance or potential.
- The downstream petroleum reform package has had no significant impact on the structure of Caltex's network and Caltex remains committed to franchising (through wholesale or commission agent relationships for fuel) as a fundamental part of its approach to the market.

- The WA "24 hour rule" restricts competition by not allowing discounters to undercut the prices of competitors. Markets in other states that follow typical weekly price cycles provide similar potential benefits to consumers without the risk of higher average prices induced by the anti-competitive WA regulation.

Pricing

- Petrol in Australia is among the cheapest in OECD countries. Pump prices in Australia follow the same trends as European and US retail petrol prices.
- The landed price of crude oil does not determine the retail price of petrol in Australia – rather, the price of petrol in Singapore forms the basis of the price of petrol in Australia. Pump prices closely follow international prices with a lag of one to two weeks.
- Pump price responses to international prices are symmetrical ie they are not "quick to rise and slow to fall", instead they are "slow to rise" and "slow to fall".
- Notional gross margins (the difference between pump prices and international prices) vary up and down with international price changes but these differences are not sustained over time.
- There does not appear to be any behavioural model of the market underlying ACCC's chart so any conclusions drawn from it may not be meaningful.
- Retail prices do not respond exactly to international prices (MOPS95) on short time scales (up to several weeks) so regulators need to exercise caution in making judgements about any perceived deviations from normal competitive outcomes.
- Price cycles are the outcomes of competitive tension between "discounters" typically driving prices down and "non-discounters" (or "price followers") typically driving prices up when discounting becomes unsustainable.
- The supermarket alliances operate the largest number of service stations that are aggressive discounters. In most markets, non-major oil company brands play a minor role.
- Petrol prices don't all increase at the same time and Caltex is not aware of any collusion in pricing – only fierce competition that benefits consumers.
- Daily petrol sales respond to price cycles, to the benefit of consumers. About 55% of petrol is sold on low-priced days of the week in the three east coast capital cities compared with high priced days.
- 60 per cent or more of consumers take price into account when buying petrol, so benefit directly from price cycles.
- Prices in Brisbane, Adelaide, Melbourne and Sydney did not jump because of the Easter and Queen's Birthday long weekends in 2006 and 2007.

<u>Current impediments to efficient petrol pricing</u>

- Government regulations do impose constraints on efficient pricing - regulation in WA and Victoria is unnecessarily prescriptive in relation to terminal gate pricing and should be repealed in favour of the TGP provisions in the Oilcode.
- Caltex is unaware of any anti-competitive conduct (i.e. such as price collusion or taking advantage of market power) at any of the three levels of the industry.
- There are no impediments to importing fuel into Australia.
- The relatively small number of players in the market does not influence the degree of competition at certain levels of the industry.
- There is adequate competition at the wholesale and distribution level.
- There is adequate competition in the retail petrol market.
- There is a high degree of transparency at all levels of the market: Singapore prices are readily available (albeit on subscription), terminal gate prices are published daily and retail prices are published by various means including subscription services and the media.

Contents

Caltex submission to ACCC inquiry into the price of unleaded petrol, July 2007

Introduction

Structure of submission

Caltex's submission follows the supply chain for unleaded petrol: refining and the international crude oil market, importing and the international petroleum products market, wholesale storage, wholesale trade and finally retail trade.

At each stage, Caltex addresses issues raised by the ACCC in its June 2007 issues paper in relation to structure, competition and pricing. Finally, Caltex addresses the ACCC topic area of current impediments to efficient petrol pricing and possible methods to address them.

References in square brackets in section headings are to ACCC issues paper questions eg [B3]. There is a two-way concordance table in the attachment cross-referencing Caltex submission sections to ACCC issues paper questions.

Inquiry issues are economic, not legal

Caltex's understanding of the inquiry is that it is intended to address economic issues related to the supply chain for unleaded petrol in Australia, from refining and importing through to retail trade. The focus is on the level of competition at various stages of the supply chain and whether competitive forces within current regulatory settings are generating the lowest prices for consumers consistent with a largely deregulated market economy and other government policy objectives eg protection of the environment and public health.

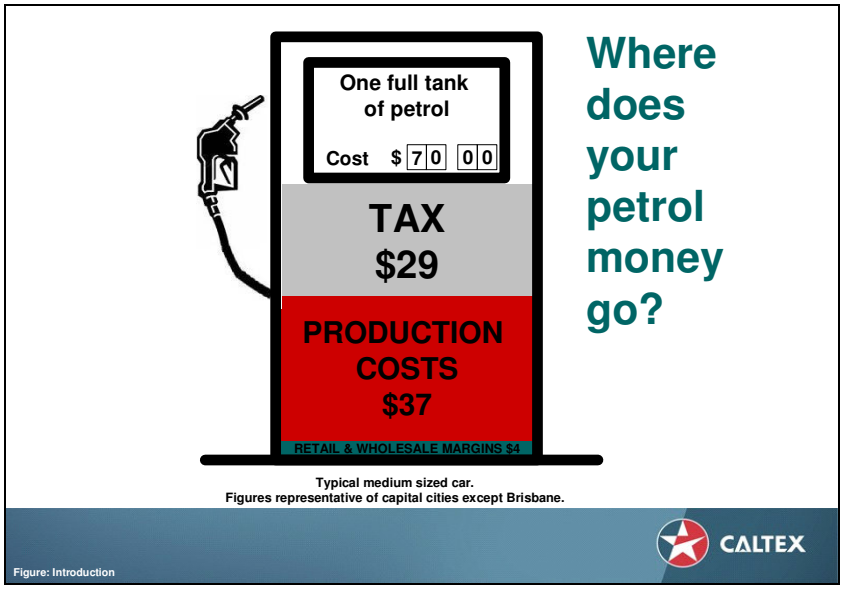
The inquiry is not investigating allegations of illegal behaviour, except to the extent that any persons who have made such allegations as an explanation of retail pricing outcomes have the opportunity to present material supporting their claims.

Caltex has a strict Trade Practices Act compliance policy and program including a rigorous training program. In our view, compliance is taken very seriously among major competitors in the industry and illegal activity is not a factor affecting petrol prices. Caltex fully supports the investigation and prosecution of any cases where such activity is occurring.

Background - Caltex structure and operations

Caltex Australia Limited is an Australian company. It is Australia's leading refiner and marketer of petroleum products, which are sold under the Caltex, Caltex Woolworths and Ampol brands. Caltex is the only major refiner and marketer listed on the Australian Stock Exchange. Chevron Corporation of the US is a 50% shareholder but Caltex is not a subsidiary and all decisions are made by Caltex's Australian board and management. Caltex is engaged in refining and marketing only and has no oil or gas exploration or production interests, nor any overseas refining or marketing operations. Caltex has two refineries, in Sydney (Kurnell) and Brisbane (Lytton) and as at 31 December 2006 owned or leased 511 service stations within a network of about 2000 branded service stations. Caltex has about 3200 employees.

Pricing overview



About 40% of the cost of an average tank of petrol is tax

Excise is 38 cents per litre and GST is included in the total price.

Pump prices for petrol have increased by about 30 cents per litre since early 2005 – mostly due to higher crude oil prices. Australian petrol prices rise and fall in line with world prices. About 15% of our petrol is imported.

Because of strong competition, prices in larger cities are heavily discounted, typically on a weekly cycle. By watching the price cycle consumers can save by filling up when petrol is cheapest. Prices are higher in many country towns because there is less competition plus higher freight and distribution costs and lower service station sales volumes.

Australia's petrol prices are among the lowest of developed countries. When Australia is $1.30 per litre, the US is $1.10 but Japan is $1.50 and Europe averages about $2.30 per litre.

Caltex's average profit (on a replacement cost of production basis ie. excluding the effect on prices of inventory) across all petroleum products, including petrol, in 2006 was only 2.2 cents per litre.

The expected profit for first half 2007 equates to approximately 2.4 to 2.7 cents per litre on average for all petroleum products sold.

Part 1 Refining and international crude oil market

Key points

- The Australian oil refining industry has been rationalised in recent years, with closure and downsizing reducing overall capacity, partially offset by efficiency improvements to increase crude oil throughput and product yields.
- Large investments have been made to produce higher quality fuels to meet new national fuel quality standards but the increase in international market-determined prices that supports these investments has been less than 3 cents per litre (cpl).
- Large investments are planned by Caltex to meet growing demand, improve environmental performance and reduce costs. It is expected that regional refiner margins (hence Australian prices through import parity pricing) will stay sufficiently high to justify these investments.
- Increasing competitive pressure from Asian refineries is likely to result in further rationalisation of Australian refineries through closures, which will tend to increase imports, and/or mergers.
- Demand for petroleum products is growing strongly in Asia, led by China. This is helping to drive up the price of crude oil by increasing competition for regional crude production.
- Prices at the refinery level are determined through commercially negotiated, transparent, arms-length contracts, in contrast to the unpriced (but still competitive) "refinery exchange" arrangements of the period to 2002.
- Caltex is not vertically integrated at the refining/import level as it is an Australian company, not a subsidiary of a global oil company – there is a substantial volume of supply purchased from unrelated overseas and Australian refineries. Caltex has no oil exploration or production interests and is effectively an "independent" in relation to sourcing and paying for crude oil and petroleum products.

1.A Structure

1.A.1 Crude oil distillation capacity has increased since 1996 [A1]

	Crude oil distillation capacity in barrels per day by fuels refinery (1 barrel = 159 litres)		
	Kurnell	Lytton	Combined
1996	116,700	100,000	216,700
1997	116,700	100,000	216,700
1998	116,700	104,000	220,700
1999	122,700	105,500	228,200
2000	124,500	105,500	230,000
2001	124,500	105,500	230,000
2002	124,500	105,500	230,000
2003	122,750	105,500	228,250
2004	124,500	105,500	230,000
2005	125,900	105,500	231,400
2006	130,700	108,609	239,309
June 2007	130,700	108,609	239,309

Note: capacity is not equal to throughput.

Figure: 1.A.1

The crude distillation units (CDU) are the first process units in the refining of crude into petroleum products and thus their crude intake capacity generally governs the maximum output of a refinery[1].

Major increases in crude distillation capacity without corresponding increases in downstream processing units would result in bottlenecks and higher inventories of semi-processed intermediate products. Accordingly, crude distillation capacities are progressively increased through efficiency improvements and as downstream bottlenecks are removed. Total crude distillation capacity has increased by over 10% since 1996.

1. At times intermediate feedstock from other refineries can be used to fill out under utilised downstream units.

1.A.2 Downstream unit capacities have also increased [A.1]

The capacities and capabilities of downstream processing units have also changed significantly during this period. Increased downstream unit capacity has been due to both debottlenecking (to increase production capacity) and also to increase the production of higher specification fuel relative to lower specification fuel. Modifying process unit capabilities to produce the higher specification fuel using existing process equipment does not generally increase overall capacity due to the need to keep the refinery in total balance.

Lytton fuels refinery

Catalytic reforming and naphtha hydrotreating capacity decreased in 2006 following the adoption of the higher gasoline specifications. In order to meet these higher specifications, the severity of operation of this unit was increased to produce blendstocks with increased octane rating which in turn, reduces the production capability of the process unit. Further, the distillate hydrotreating capacity was more than doubled during the Clean Fuels Project which was completed during 2006.

Kurnell fuels refinery

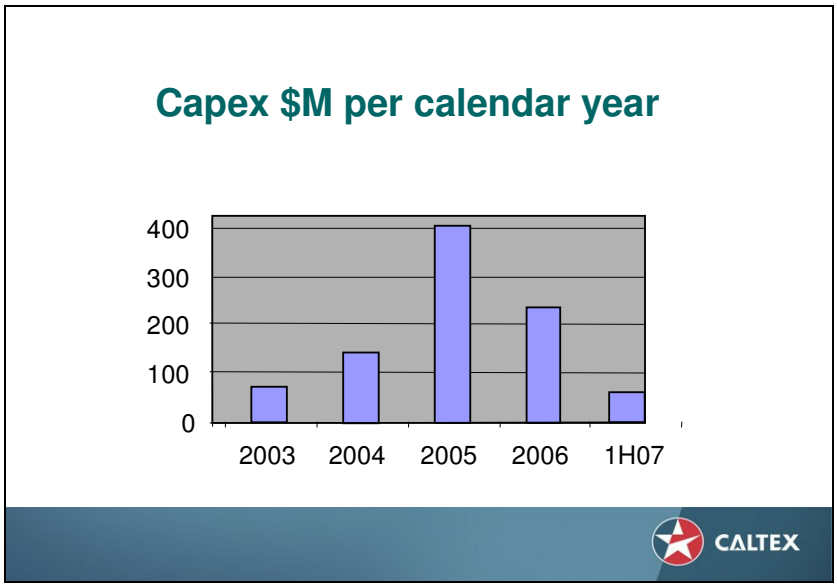
Similar to the Clean Fuels Project at the Lytton refinery, the Kurnell distillate hydrotreating capacity was almost doubled as part of the project in order to meet the higher specification required for diesel production.

1.A.3 Significant capital expenditure has been made to maintain and expand production capability [A1]

In the last decade, a high level of capital has been reinvested back into the refining business to maintain production capability in a higher fuel specification environment, to meet tighter environmental constraints and where possible to expand production.

To put Caltex profits in historical context, from 2003 to first half 2007 Caltex capital expenditure totalled about $1.3 billion, about 80% of the total profit over the period (RCOP basis).

The chart below demonstrates the high level of expenditure which has been undertaken in Caltex's refining system since 2003. More specific details of the major projects are given below.



1.A.4 The Clean Fuels Project increased product processing capability (but not overall capacity) [A1]

The $500 million Clean Fuels Project allowed Caltex refineries to meet the 10 ppm sulfur diesel and 1% benzene petrol specification requirements. The project did not directly increase either refinery's refining capacity, but did increase Caltex's production capability of higher specification "clean fuels" relative to lower specification fuels. This project included the construction of new process plants, being a benzene saturation unit (Kurnell), benzene hydrogenation unit (Lytton) and major upgrades to some existing process plants including an extensive revamp and capacity expansion to the diesel hydrotreater units at both Lytton and Kurnell refineries.

1.A.5 Other significant refining capacity/production capability projects have been undertaken over the past decade [A1]

Refinery Performance Improvement Program (RPIP)

Commencing 4Q2004, Caltex embarked on a program designed to increase refinery throughput. The program was managed in two streams - RPIP minor and RPIP major projects.

The RPIP minor projects consisted of approximately 120 smaller projects primarily designed to increase throughput, yield and optimise refinery operations within a two year time frame. The budget for RPIP minor projects was approximately $100M and is attributed with the majority of the increased refinery capacity/throughput achieved during 2005 and 2006.

The RPIP major projects consisted of 10 major projects designed to increase refinery capacity, throughput, yield and optimisation. These projects ranged from the construction of new crude and diesel tanks to the commissioning of an additional diesel hydrotreater unit (DHTU). The 3 major projects which are well under way will cost in excess of $300M in capital and are expected to be completed between 1Q2008 and 1Q2009.

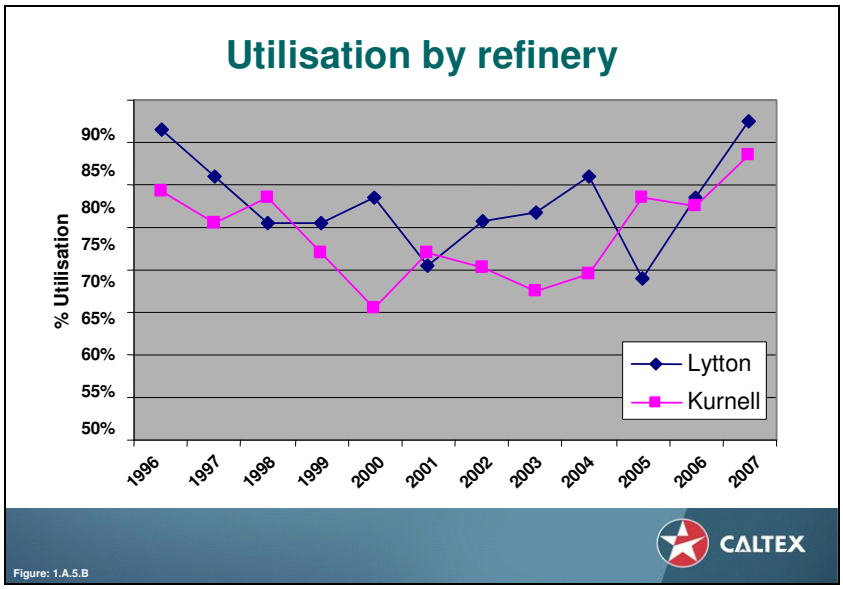
Improved work processes and practices

Continuous improvement focused upon work processes and practices which optimise the efficiency of each refinery is constantly progressed. This has resulted in “capacity creep” over time whereby each refinery regularly sets new throughput records at both an individual unit and refinery level. It is anticipated that this capacity creep will continue as each refinery continues to identify improved processes and practices.

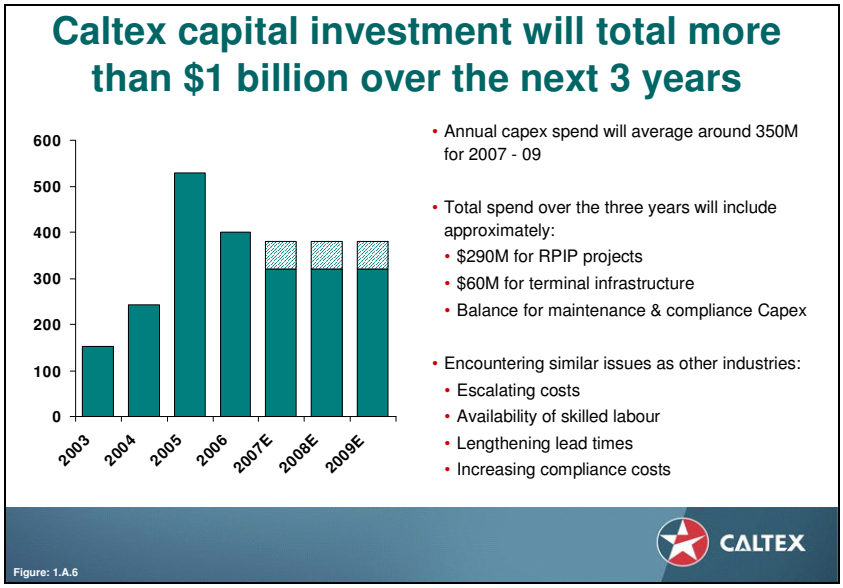
Focus on reliability

In recent years Caltex has significantly increased the amount of funding allocated and spent on preventative maintenance in order to maintain safe operations and minimise lost production due to unplanned shutdown or sub-optimal operations. Increased reliability of the refineries directly contributed towards higher finished product production.

A standard oil refinery reliability benchmarking measure called “Solomon utilisation” measures the degree to which the combined refinery process units are being utilised.



1.A.6 Large investments are planned to meet growing product demand, improve environmental performance and reduce costs [A2]



Capital expenditure (capex) for Caltex will total over $1 billion over the 3 years to the end of 2009. Of this:

- around $290 M will be spent to complete RPIP (by early 2009)
- another $60M is earmarked to strengthen our terminal infrastructure around the country
- the balance (around $200M annually) is for maintenance and compliance capex through the Marketing, Supply and Distribution, and Refining groups.

Caltex is experiencing similar issues as other industries in our capital program – escalating costs, increasing lead times for equipment and a tight market for skilled labour. In addition, increasing compliance costs, particularly related to increasing environmental expectations, are increasing capital costs. In response, Caltex will maintain capital discipline to ensure projects meet necessary financial hurdles or address identified key business risks.

Some of the major projects underway or planned are noted below.

New Lytton refinery diesel hydrotreater unit (DHTU)

At an estimated capital cost of about $250M the Lytton refinery is in the process of constructing a second DHTU with an expected capacity of 3,000 tonnes per day. This new DHTU will allow the Lytton refinery to produce another 22,200 barrels per day of 10 ppm sulfur diesel and thus reduce imports by a corresponding amount. It is anticipated the new DHTU with be on line 1Q2009.

New Lytton refinery sulfur recovery unit (SRU)

In association with the new DHTU, a new sulfur recovery unit is also under construction at a cost of over $55M. This unit will enable the Lytton refinery to significantly reduce sulphur dioxide emissions.

New Kurnell refinery sulfur dioxide mitigation measures

The Kurnell refinery is developing plans to meet more stringent sulfur dioxide emission standards as required under new post-Clean Fuels Project licence conditions.

New Kurnell refinery crude oil tank

At an estimated capital cost of $32M the Kurnell refinery is constructing a new 88 ML crude oil storage tank. With completion due mid 2008, the primary purpose is to increase crude oil stockholdings to allow high levels of production to continue during periods of rough weather which has historically delayed crude vessels from discharging their cargoes in Botany Bay.

New Kurnell refinery diesel tank

At an estimated cost of $13M, the Kurnell Refinery is constructing a new 18 ML diesel storage tank. Construction commenced in 2Q2007 and scheduled for completion by February 2008, this additional tank will allow the refinery to store any off-specification diesel produced during major maintenance activity on some diesel processing units. This allows the refinery to continue producing near normal levels of gasoline and jet fuel during these scheduled major maintenance activities.

Lytton refinery isomerisation catalyst upgrade

At a cost of $4M, a new catalyst is being utilised in the Lytton refinery isomerisation unit to increase the octane-making capability of the refinery. This catalyst produces an addition 2 to 3 octane numbers and helps produce high octane petrol to meet growing market demands for higher octane fuels.

1.A.7 Petroleum products produced at Kurnell and Lytton refineries [A3]

As Caltex is an Australian company and does not have any overseas refining interests, it is not able to comment on characteristics of overseas refineries beyond information that is on the public record. This submission therefore discusses Caltex's Australian fuels refineries only (ie excluding the Kurnell lubricating oil refinery).

The finished product mix at each refinery is largely dependent upon the availability and types of crudes processed by each refinery and the initial structure and process units that make up the refinery. Generally the Lytton refinery runs lighter and sweeter (low sulfur) crude which tends to produce a higher proportion of gasoline and diesel products.

As general guide, the product mix of each refinery does not vary significantly (more than 3% to 5%) unless a particular unit is shutdown for a sustained period of maintenance or structural changes are made to the refinery. Over the last decade, there has not been any significant structural shift in total refining finished product mix even as total production increases. Gasoline production as a percentage has increased marginally but remains around 50%, diesel production remains around 25%, jet fuel production around 13% and with various minor products representing the balance.

1.B Competition

1.B.1 Competition in refining in the Asian region is increasing and imports to Australia are increasing [B1]

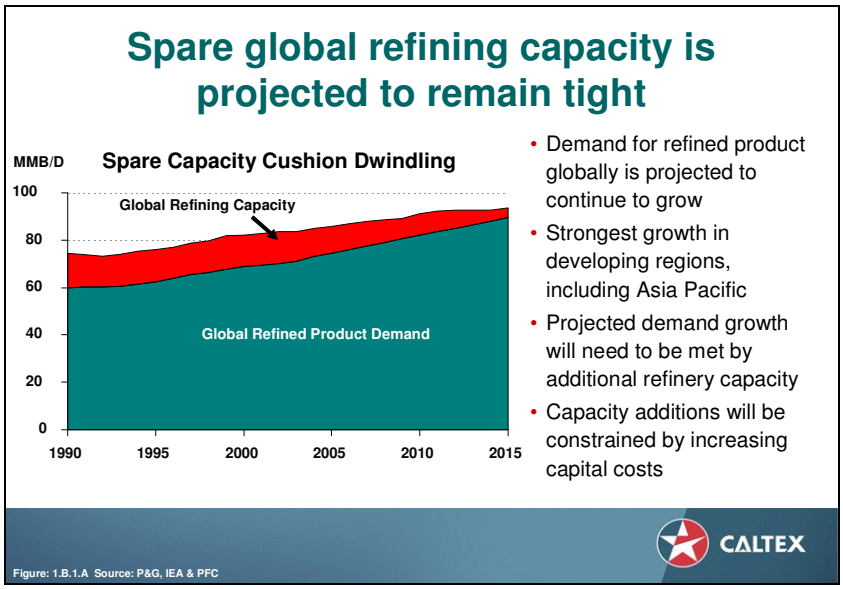
Caltex faces a stiff increase in competition as huge new export refineries – whose construction, operating and unit costs are much lower than ours – come on stream. Some of these facilities in India, China, Korea, Vietnam and Indonesia may seek to buy the crudes that Caltex has traditionally bought from the region, increasing demand for them and reducing available supply. New Middle East refineries will also be seeking to export into the region. These refineries will be designed for heavy sour crudes but may be a competitor for regional light sweet crudes. The availability of these is declining and some new refineries are designed for local crude oil (eg in Vietnam).

The new Asian refineries' increased production may affect Singapore refiner margins. A concern is that they may be able to sell their product into our open market cheaper than Australian refineries can refine it for. Already one litre of fuel in four sold in Australia is imported. Export oriented refining will put extra competitive forces into the region. That can be positive for Caltex because it means it has an additional supply source as an importer but it can also be a big challenge. With industry fundamentals changing there may be further rationalisation of refineries in Australia in years to come. Not all Australia's refineries may weather the change. It is important to Caltex that the Kurnell and Lytton refineries prosper in the changing environment even if some of our competition do not.

The new Reliance Industries Ltd export refinery being built at Jamnagar on India's northwest coast is planned to be at full production by 2009-2010 and points to the magnitude of the challenge. It's refining capacity of 1.2 million barrels a day for the new refinery complex will be almost double that of all seven operating refineries in Australia combined. The premium Caltex currently enjoys because of the advanced Australian specifications of its fuel products is potentially under threat too. Not all refineries in Asia can make product to Australian specs at the moment but the new ones will make these products – and at lower cost.

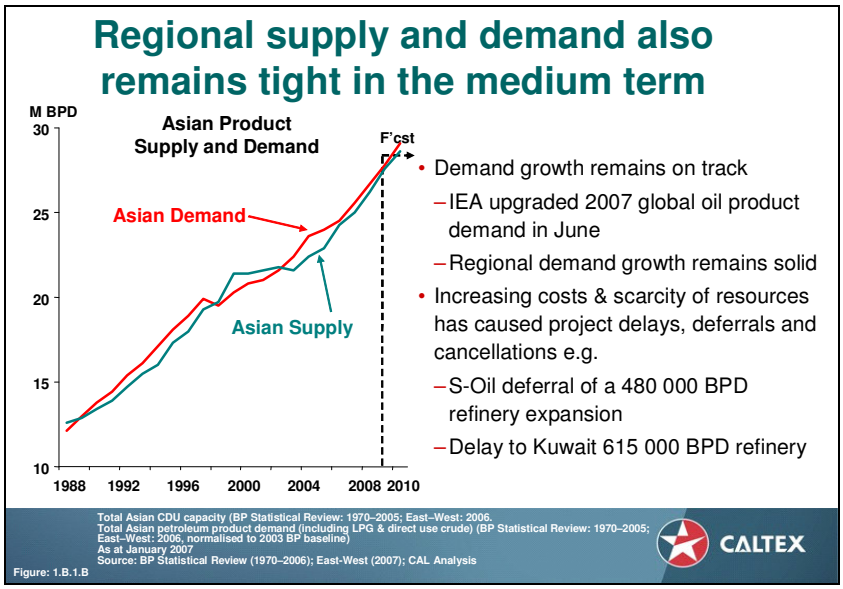
In addition, we're likely to encounter more competition domestically. Some large customers in the Australian market place are seeking to diversify their supply of petroleum products.

At the bulk wholesale level, seven refineries owned by four major oil companies buy and sell fuel and there are a number of importers and import terminal operators including Gull, Neumann Petroleum, Trafigura and Vopak. At the wholesale level, apart from major oil companies, wholesalers include Neumann Petroleum, Gull and Liberty.



Caltex's view is that the global refining industry will remain tight. Demand is projected to continue to grow, predominantly in non-OECD economies, which will underpin the growth in refining capacity. New refinery additions will come on stream – this capacity is needed to meet the projected demand growth but the increasing capital costs and schedule delays will likely constrain these additions, squeezing the available spare refining capacity.

In this environment, we would expect the volatility in refiner margins to increase – supply side shocks such as refinery outages will result in spikes in margins as we saw in 2005 following the hurricane damage to the US Gulf Coast refineries.



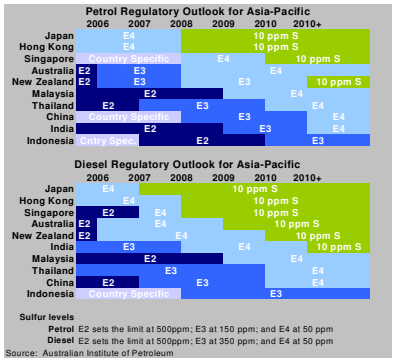
The above chart was first presented in February 2007 at Caltex's 2006 full year results presentation. While the chart has not been updated for this submission, we can comment on trends since February:

- demand has stayed largely on track, with some commentators (such as the IEA) increasing their global demand forecasts for 2007.
- increasing costs, lengthening lead times and scarcity of skilled labour have resulted in announcements of project delays. For example:
  - in Korea, S-Oil has recently deferred its planned 480 000 BPD refinery expansion, citing soaring construction and land acquisition costs
  - the planned 615 000 BPD refinery in Kuwait has been delayed reportedly as a result of high construction costs.

Anecdotally, this supports the view that the overall supply and demand balance for refined product will likely remain tight. While new refinery capacity will come on line to meet increasing global demand, it is not likely to materially exceed demand in the near term.

Demand for petroleum products is growing strongly in Asia, led by China. This is helping to drive up the price of crude oil by increasing competition for regional crude production and has also increased product prices in the region through the demand effect on the petroleum products market. Traditional sources for exports within the region such as China have tightened as more volume is being consumed internally.

Quality premium expected to persist into the medium term



Outlook for Asian Gasoline Standards

	Sulfur (max ppm)		Olefins (max vol%)		Aromatics (max vol%)		Benzene (max vol%)		MTBE (max wt% oxy)	
	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012
Australia	150	50*	18		45/42		1.0	1.0	0.1	0.1
Singapore	500	50	N/A	N/A	N/A	42	3.5	1.0	N/A	N/A
Thailand	500	50	N/A	18	35	35	3.5	1.0		
Japan	50	10					1.0			
Sth Korea	50	10	18	13	30	25	1.0	0.5	1 - 2.3	
USA (Calif.)	30	5	10		35		1.1	0.5	E5.7	E10
Canada (BC)	80	10	N/A		N/A		1.5		N/A	
Malaysia	500	150	N/A	N/A	N/A	42	5.0	5.0		
Philippines	500		N/A	N/A	35	35	2.0	1.0	0.2	E10
Indonesia	1000	500	N/A	N/A	50	40	N/A	5.0	N/A	2.7
Taiwan	80		N/A		N/A		1.0	1.0	2.0	
China	500		35		40		2.5	1.0	2.7	
China (Beijing)	150		25		35		1.0		2.7	

Source: Chevron; IFQC
* - Premium petrol grades only - 95 octane and above

CALTEX

Figure: 1.B.1.C

The quality of Australian fuel is amongst the highest in the region. Generally, 'developed' economies such as Australia, Japan, New Zealand and Korea have tighter fuel standards, which bring positive environmental outcomes for those countries. Developing countries such as China, India, Thailand and Indonesia have less demanding fuel quality standards. These developing economies account for the bulk of demand growth in the region.

Recently, evidence has emerged indicating that Chinese refiners will be unlikely to fully meet Euro 3 standards for gasoline and diesel until 2010. It is likely to be some years before standards in China and other developing countries approach Australian quality.

As a result of the higher quality specified by the Australian Government, a quality premium attaches to this fuel. With further fuel specification changes mandated in Australia over the coming years, we expect a quality premium to persist into the medium term.

1.B.2 Caltex is not highly vertically integrated at the refinery/import level [B1]

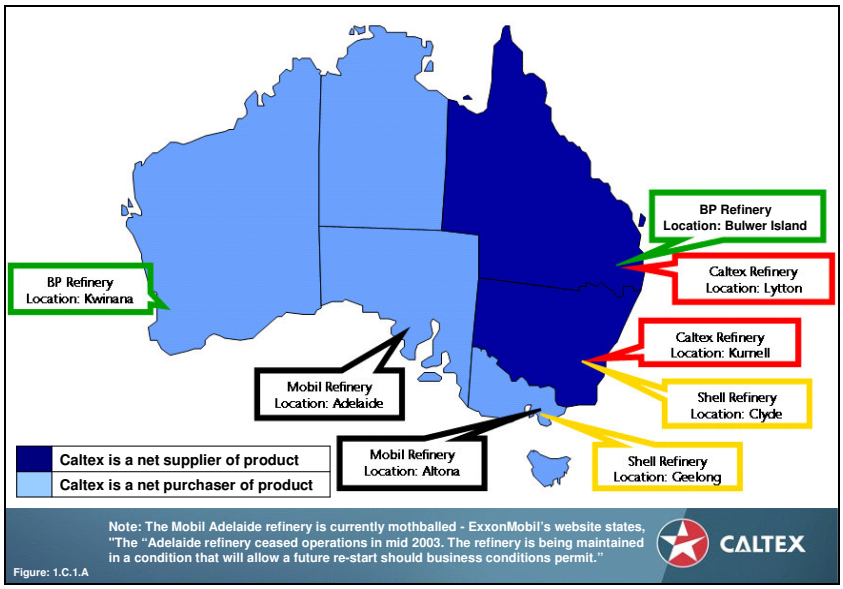
Unleaded petrol demand and supply in 2006

Demand	ML
Marketing sales (incl Woolworths)	6089
Exports	32
Buy/sell sales	1768
Sales to independents	53
Inventory build/(rundown)	(9)
	7933
Supply	
Production	4808
Imports	265
Buy/sell purchases	2810
Local purchases	52
	7933
Figure: 1.B.2	

1.C Pricing

1.C.1 Prices at the refinery level are determined through commercially negotiated, transparent, arms-length contracts, in contrast to the unpriced "refinery exchange" arrangements of the period to 2002 [C1] [C2] [B5]

On a standalone basis, Caltex, Shell, Mobil and BP do not have the infrastructure (such as refineries and terminals) or the logistics to individually supply product to all areas of Australia, without compromising reliability and incurring supplies from Australian refineries or imports.



Prior to 2002, Caltex, Shell, Mobil and BP had commercial arrangements in place to exchange product with each other to save on transport/shipping costs. Under these arrangements, equal volumes of like product would be exchanged to minimise inventory shortages and protect refinery throughput, with only the differing costs of freight and wharfage accounted for. If significant product imbalances built up between the competitors, they could negotiate a price to settle the imbalance if physical correction was not practical. This arrangement was called "refinery exchange" and was replaced in July 2002 with the "buy/sell" arrangement.

The bulk supply price for refined products into a terminal is known in oil industry jargon as the "buy/sell price". Buy/sell prices are commercially negotiated every 6 months on a bilateral arms-length basis between each of the Australian refiners (and potentially other Australian bulk suppliers) either for sale or purchase.

The price varies by location. The "sell" part of "buy/sell" is relevant to states where oil companies have refineries and sell to other bulk suppliers; the "buy" part is relevant where they have no refineries and must purchase from local refiners (or importers).

In contrast to buy/sell contracts, import prices may be negotiated on a cargo by cargo basis or may be supplied under a term contract. Buy/sell contracts are commercial arrangements and the 'buy' party can import product as an alternative. In Queensland, NSW and Victoria, there are two domestic refiners as sellers, which generates competition in addition to imports.

Buy/sell transactions are governed by discrete buy and sell contracts between each buy/sell partner and provide certainty in placing and obtaining product over the contract term as each contract specifies the product type, volume, location and pricing. There is no requirement for buy/sell partners to buy and sell equal volumes of like product from each other. All product costs are accounted for and a payment is made for each month by the net purchaser based on daily (unlagged) Singapore petrol prices in that month. The payment is made in the following month.

Buy/sell contracts are generally limited to a 6 month term due to volume and pricing changes over time between the buy/sell partners. Penalties *may be* enforced for under supply/lifting of product under the contract.

Pricing is negotiated based on an efficient import by the purchaser for supply into that location taking into account the source of the import, cargo mix and cargo size (based on available tankage).

Overall Caltex is a net purchaser of product in Australia. In 2006, Caltex purchased 5,616 million litres and sold 3,723 million litres of products to Shell, Mobil and BP under the buy/sell arrangement. Mobil is Caltex's main buy/sell partner.

1.C.2 Refinery pricing is based on import parity [C3] [C4]

The following table shows the buy-sell price calculation for petrol. The calculation is based on the concept of import parity ie the calculated cost of landing a ship cargo of a petroleum product at an Australian terminal. The international marker used is MOPS95 so to the extent that overseas refineries also use MOPS95 as a marker, buy/sell prices follow overseas refinery prices.

Import prices ie the prices actually charged by overseas refineries, are very close to buy/sell prices. This is strong evidence that buy/sell prices track overseas refinery prices.

Indicative Brisbane buy/sell price for ULP in 2H2006 excluding excise and GST

Assumed Density (L/T)	1356	
Assumed Density (BBLS/T)	8.5	
MOPS 95 (daily spot)	USD/bbl	85.00
Quality Premium	USD/bbl	2.75
subtotal	USD/bbl	87.75
Exchange Rate (daily spot)	USD/AUD	0.74
FREIGHT & WHARFAGE		
Worldscale (WS)	USD/t	9.86
Platts WS index		325
Freight	USD/bbl	3.77
Insurance&Loss (%)		0.35
I&L	USD/bbl	0.19
Wharfage	AUD/kL	1.80
Wharfage	USD/bbl	0.21
subtotal	USD/bbl	4.17
Total Price	USD/bbl	91.92
Total Price	ACPL	78.13

Figure: 1.C.2

Part 2 Importing and international petroleum products market

Key points

- About 25% of Australia's total petroleum products are imported. 18% of petrol was imported in 2006 compared with about 7% in 2001/2002.
- Australia will remain dependent on imports for the foreseeable future. No new refineries will be constructed in Australia as it is more economic for additional refining capacity to be constructed in Asia for export to Australia and other regional markets.
- Substantial import volumes mean the petroleum market is import-competitive not just import-contestable as in the 1990s and this situation will continue.
- The reality of import competition places a strong constraint on prices in Australia and reinforces import parity pricing as the essential basis of petrol pricing in Australia.
- Petrol imports to Australian quality standards are readily available to Australian refiners and independent importers.
- Australian refinery prices (buy/sell prices) are closely related to actual prices paid by Caltex for import cargoes.
- MOPS95 is an appropriate benchmark for Australian petrol prices as this is the actual basis for Caltex imports to Australia. A premium over MOPS95 is required as Australian quality petrol exceeds that of petrol in the MOPS95 price quote.

2.A Structure

2.A.1 Caltex is a significant petrol importer [A4]

Volume Kilolitres	2001	2002	2003	2004	2005	2006
Caltex imports as a % of sales	2.3%	2.0%	1.0%	5.5%	6.7%	4.3%
Industry ULP imports				3,412,900	3,393,600	3,429,800
Industry imports as a % of sales				17.1%	17.5%	18.1%

Figure: 2.A.1

2.B Competition

2.B.1 Petrol imports are readily available to Australian refiners and independent importers [A9] [B6] [B7]

The ready availability of imports imposes a fundamental constraint on Australian prices at the refinery level and underpins the concept of import parity pricing. Caltex does not believe supply availability is a barrier for importers.

In the 18 months since new national fuel standards were introduced in January 2006, Caltex has imported petrol from:

- Korea - 3 cargoes
- Singapore 5 cargoes
- Taiwan - 4 cargoes.

The following table provides an estimate of the number of cargoes of Australian grade petrol currently reliably available for purchase each month from within the region. It is based on recent trading experience by Caltex and other traders actively engaged in purchasing petrol to cover Caltex's import requirements. The availability for the region is likely to increase over time. Ample supply is available outside the region eg Mediterranean.

The estimate of 11 cargoes a month does not include cargoes already supplied by Shell and Exxon refineries in Singapore to their subsidiaries in Australia as these are effectively off the market.

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Estimate of availability of Australian grade petrol from regional refineries in 2007

Country and refinery	Australian grade cargoes available per month
Taiwan	
CPC	1-2
FPC	0
China	
Zhenhai	1
Gaojiao	0
Hainan	0
Qindao	0
Korea	
GS Caltex	1
S Oil	0
SK	0
Japan	1
Thailand	
Thai Oil	0
Star Refinery	0
Singapore	
Shell	1
Exxon	4

Singapore Blenders	1
India	
Reliance	0
Essar	0
Total	**11**

Figure: 2.B.1

2.B.2 Large increases in imports and changes in the Australian market have changed the role of independents as importers and off-takers of refined production – but not reduced competition [B2]

In the 1990s, the low level of imports meant the petroleum market was contestable rather than competitive ie pricing was constrained more by the threat of import competition rather than by substantial imports.

An important role of independent importers (ie non-refiners) was to provide cheaper petroleum products into market if a refiner wished to sell domestic production at a higher price than import parity. In the absence of national fuel quality regulation, independent importers could also from time to time undercut local refiners by importing lower quality products from Asian refineries. This was particularly the case during the late 1990s when there was surplus Asian refinery capacity and consequent petrol for sale at low prices.

National fuel quality standards were regulated in the years from 2001 to protect public health, improve air quality, protect water quality and ensure vehicle operability. This had the effect of constraining the availability of petrol to Australian standards but not to the extent of greatly increasing prices.

The role of independent importers has changed as a result of a number of factors:

- the elimination of surplus Asian refining capacity (distressed products not often available)
- introduction of national fuel quality standards (loss of ability in import low quality petrol)
- reduction of small independents (competition by major supermarkets and long-term supply contracts with local refiners).

However, the market remains open and highly competitive as a result of competition between local refiners and the continued ability of traders, large users and non-refinery branded retailers to import petrol and diesel.

Caltex competes for new business at all levels through the Marketing and/or Trading teams. We have been a major supplier to independents since the mid-1990s, initially to Liberty and more recently to Woolworths.

Caltex is a significant importer and net purchaser under buy/sell contracts. Our ability to supply into terminal is limited by terminals' ability to receive large cargoes of imported product. However, all potential customers can seek supply from Caltex terminals under terminal gate price (TGP) arrangements. Discounts off TGP may be available.

2.B.3 Australian quality petrol substantially exceeds the quality of petrol included in the Platts price (MOPS95) [B8]

Caltex does not believe Australian fuel quality standards are a barrier for importers because of the availability of Australian grade petrol, as discussed in the preceding section.

The table below shows the history of changed product specifications for Australian grade gasoline.

Parameter	Grade	Units	2002	2004	2005	2006	2009
Sulfur	ULP/LRP	ppm	500		150		
	PULP	ppm	150		150		50
	SPULP	ppm					50
RON	ULP		91RON min				
	PULP		95RON min				
	LRP		96RON min				
	SPULP				98RON min		
Benzene		%				1.0	
Aromatics		%	45%		42%	42 max	
Olefins		%		18% max	18% max		
Distill FBP		℃	228 max		210 max		
Lead		g/l	0.005 max				
Oxygen		v / v %	2.7 max				
Phosphorous		g/l	0.0013 max				
Ethanol		%		10 max			
MTBE		% v		1.0 max			
DIPE		% v	1 max				
TBA		% v	0.5 max				

Note: 1. Grey areas designate possible specifications that have not yet been regulated.
v/v% equals percentage by volume

Figure: 2.B.3

With regard to the specifications used for the basis of Platts, Australian gasoline has tighter quality specifications in the following areas: summer RVP, distillation, benzene, MTBE, sulfur, induction, Ag strip, and PULP and SPULP driveability index. A detailed comparison of Platts and Australian quality specifications is provided on the next page.

SPECIFICATION COMPARISON Platts Singapore v Caltex Australia

Property (Brisbane/Sydney)	**Platts FOB Singapore Gasoline Specs**	**Caltex Australia gasoline specs**
Research Octane Number (RON)	Min 92.0, Min 95.0,Min 97.0	Min ULP 91
Motor Octane Number (MON)	None specified	Min ULP 81
Lead content,gpb/l	Max 0.013	Max 0.005
Density at 15 deg C, kg/l	Report	Report
Reid Vapour Pressure (PSI)	Max 10.0	Summer Max 9 NSW, Qld 9.7
Distillation, degree C		
Initial Boiling Point	Report	Report
10% evaporated	Max 74	Max 60-65
50% evaporated	Max 127	Max 110-115
90% evaporated	Max 190	Max 180-183
Final Boiling Point	Max 225	Max 210
Residue, % vol	Max 2.0	Max 2
Loss, % vol	Max 2.0	
Odour	Marketable	Marketable
Existent gum, mg/100ml	Max 4.0	Max 5
Benzene content, % vol	Max 5.0	Max 1.0
Sulfur, % wt	Max 0.10	Max 0.015
Doctor test	Negative	Negative
Or Mercaptan sulfur, ppm	Max 15	Max 15
Mercaptan sulfur, % wt	Max 0.0015	Max 0.0015
Copper corrosion (3 hours at 50 deg C)	Max 1.0	Max 1
Ag Strip		Max 2
Induction period, minutes	Min 240	Min 360
MTBE content, % vol	Max 10.0	Max 1
Aromatics, % vol	Report	Max 42 over 6 month period
Colour Undyed	Undyed, light yellow	ULP purple
Alcohol	No additions of any alcohol	No additions of any alcohol
Driveability Index	NA	ULP report

2.C Pricing

2.C.1 Refinery (buy/sell) prices are closely related to actual import prices [C5] [C6] [C9] [C10]

Buy/sell prices are very similar to actual import prices. This validates the commercial reality of buy/sell prices. Quality premiums are negotiated for buy/sell contracts based on competitors supply alternatives including imports.

It should also be noted that all import prices are based on MOPS95 and the quality premium is relatively low as a percentage of retail prices. In other words, Australia's fuel quality standards have provided very substantial public health benefits at a small price premium.

2.C.2 Other components of refinery prices [C11]

Wharfage

Wharfage rates are set by the relevant port authority and are subject to change as the port authority deems fit. Below are the current wharfage rates.

Wharfage Rates	A$/kL
Sydney	1.60
Banksmeadow	1.60
Newcastle	1.60
Silverwater	1.60
Newport	1.60
Hobart	2.48
Adelaide	2.40
Port Lincoln	4.44
Fremantle	2.64
Geraldton	2.64
Darwin	4.25
Cairns	3.00
Townsville	3.74
Mackay	3.47
Gladstone	3.57
Lytton	1.80
Brisbane	1.80
Clyde	0.30
Corio	1.60
Coogee	2.49
Kewdale	2.64
Mascot	1.60
Devonport	2.33

Note that for the Caltex Reference Price (CRP) calculation, Caltex uses a volume-weighted average of state capital city wharfage in its wharfage calculation.

Shipping rates

Monthly average shipping	Acpl
Jan-06	5.21
Feb-06	4.89
Mar-06	3.38
Apr-06	2.56
May-06	4.51
Jun-06	3.80
Jul-06	3.48
Aug-06	4.32
Sep-06	4.53
Oct-06	3.72
Nov-06	2.73
Dec-06	3.42
Jan-07	3.57
Feb-07	2.98
Mar-07	2.98
Apr-07	2.80
May-07	3.01
Jun-07	2.97

Insurance and loss

For CRP pricing, the insurance and loss component is generally 0.35% of the total value of Singapore refined product, quality premium and freight.

Part 3 Wholesale storage

Key points

- In general, industry terminal capacity has become increasingly constrained as a result of increasing demand, reducing local production, increasing imports and terminal rationalisation (eg through closures and joint ventures) to cut costs.
- Caltex currently has no surplus capacity or space for importers and is investing to meet its own storage needs.
- Storage is available at independent terminals and these terminals are being used by both refiners and non-refiners.
- Storage is not a significant barrier to entry by importers into the petrol market – the constraints on new entrants are mainly financial ie. mainly the difficulty to reliably land, store, sell product at a price competitive with large scale operators.

3.A Structure

3.A.1 Caltex terminals [A5] [A6]

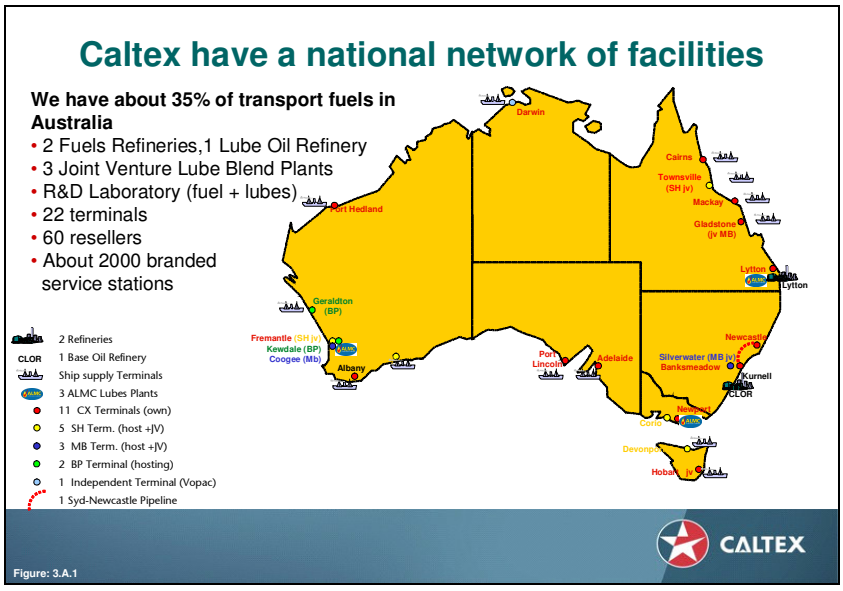
Capacity for storage of refined product at Caltex refineries and terminals

The two Caltex refineries do not have road tanker loading capability for refined products (eg. petrol, diesel) and refinery product storage simply enables product to be imported, passed through their storage system, and supplied into the relevant terminal network.

Caltex has access to 22 seaboard terminals around Australia; some owned and operated by Caltex while others are in some form of joint operating agreement with other parties. The following map provides an overview of the current situation.

Location	Ownership / Operation	Supply Method
Cairns	owned and operated by Caltex	ship
Townsville (SH)	joint venture, operated by Shell	ship
Mackay	owned and operated by Caltex	ship
Gladstone (MB)	50:50 joint venture, operated by Caltex	ship
Lytton	owned and operated by Caltex	pipeline
Newcastle	owned and operated by Caltex	pipeline
Banksmeadow	owned and operated by Caltex	pipeline
Silverwater (MB)	60:40 joint venture, operated by Mobil	pipeline
Newport	owned and operated by Caltex	pipeline/ship
Devonport (SH)	50:50 joint venture, operated by Shell	ship
Hobart (CX)	50:50 joint venture, operated by Caltex	ship
Adelaide	owned and operated by Caltex	ship
Port Lincoln	owned and operated by Caltex	ship
Albany	owned and operated by Caltex	ship
Fremantle (SH)	50:50 joint venture, operated by Shell	pipeline
Port Hedland	owned and operated by Caltex	ship
Darwin	owned/operated by Vopak, Caltex own product	ship

plus hosting at Corio (SH), Coogee (MB), Kewdale (BP), Geraldton (BP), Esperance (SH).



Current utilisation

Utilisation varies depending on total storage capacity by product and total product sales. If utilisation is measured in tank turns, these range from around 5 per annum up to 50-60 per annum. MR ship cargo sizes are about 40 ML which requires ullage of at least that much plus a minimum safety stock for optimal shipping costs, which is around 5-10 days. (This depends on the length of supply chain to that particular location). There is currently no surplus capacity or space at Caltex terminals for importers to land or store product.

Transport to the tanks

Product is generally received by pipeline at Lytton, Newcastle, Banksmeadow, Silverwater, Newport and Fremantle terminals and via ship at all other locations. Lytton, Banksmeadow (via Kurnell), Newport and Fremantle (via Kwinana) are supplemented with supply from ship from time to time, to cover planned maintenance activities at refineries and/or unplanned supply interruptions.

Changes over recent history to capacity/product mix, planned changes to capacity (including reasons, timeline, costs, foreseeable impact on supply)

Gladstone has added one new 15ML diesel tank in 2006. Product mix changes have been minimal, with some smaller changes to storage mix to enable introduction of SPULP (98 octane petrol) in Lytton, Banksmeadow and Newport. There were significant changes several years ago with the phasing out of super (leaded) petrol and LRP, and generally this has gone into PULP storage. Small storage of ethanol has been added in Cairns and Newcastle to facilitate E10 sales. Small storage of B100 has been added in Newcastle and Adelaide to facilitate sales of biodiesel.

3.B Competition

3.B.1 There are no terminal-related restrictions on competition [B7]

Caltex arrangements to use other companies' tanks

Caltex has formal arrangements in place at a number of locations via joint user licence agreements, whereby Caltex has shared access to tanks. These include:

Townsville with Shell
Gladstone with Mobil
Silverwater with Mobil
Devonport with Shell
Fremantle with Shell
Darwin with Vopak

There are a number of independent terminals around Australia at which Caltex has access to pick up product from time to time. The notable locations are:

Neumann's – Whinstanes, Brisbane, QLD
Vopak – Botany, Sydney, NSW
Trafigura – Hastings, Victoria
Marstel Terminal, Bell Bay, Tasmania
Coogee Chemicals, Kwinana, Perth, WA
Gull Petroleum, Kwinana, Perth, WA

Independent importers and import facilities both complement and supplement the national network of fuels terminals throughout Australia eg Caltex has a current arrangement to buy imported product from Mobil and take delivery through the Coogee Chemicals Terminal in Perth.

Caltex arrangements for other companies to use our tanks and limitations to Caltex tankage

Caltex has formal arrangements in place at a number of locations via joint venture agreements.

No barriers to entry, opportunities for entry, and independent terminals

There are no barriers to entry. Generally, terminals are located in port authority precincts and land is either owned and/or long-term leased from the relevant port authority. Land availability varies from port to port, and subject to meeting local requirements (eg. environmental, security) authorities are generally supportive of open access for new entrants. For example, the Marstel Terminals group currently have a development application in progress for construction of a new bulk liquids terminal in Newcastle, and similarly, Vopak has plans in place for expansion in the Botany terminals area.

New terminals require substantial financial outlays, with costs ranging from $10M to about $60M. Local regulatory approvals are also generally required.

The most significant new terminal that has recently been constructed is the Darwin Industry Fuels Terminal (DIFT) completed in 2005. All parties are able to participate in use of this facility. The cost was about $60M for this facility.

Another recent development occurred in Mackay, where Mobil sold its terminal though a tender process with a number of interested parties, including independent interest.

Hastings terminal in Victoria has also been offered for sale in 2006 through an expression of interest process, open to all interested parties.

Does Caltex place any limitations on who we will allow access to storage? Do we experience limitations from competitors?

Existing Caltex storage is currently fully utilised by Caltex's own requirements with no surplus capacity available. In several locations, capacity is so tight that Caltex is reviewing the need to expand. Where Caltex is in a joint venture arrangement with another party, there are contractual conditions that determine storage availability (to those who are bound by the agreement), as set out in the joint venture agreement, which also define the protocols around inventory ownership and product co-mingling.

Do arrangements between competitors affect other competitors? To what extent is storage a competitive instrument? Should there be any changes to access?

Arrangements between competitors are made on a commercial basis and the current joint venture arrangements that are in place are a testament to the fact that commercial opportunities and industry rationalisation has led to more efficient supply chains and lower cost, competitive infrastructure.

Infrastructure is an important element of the supply chain, and ensuring there is sufficient capability to receive, capacity to store and capability to distribute products will continue to be of strategic importance to Caltex. Limitations on entry are largely financial: there are a multiple number of players and strong competition in all major locations and regulatory intervention is not necessary or justified.

Part 4 Wholesale trade

Key points

- The structure of independent retailers and resellers has changed in the past 10 years but competition has if anything increased.
- Within Caltex's network, the proportion of supply to independent resellers (eg Liberty) has decreased but supply to independent retailers (of which Woolworths is by far the largest customer) has more than offset this decrease.
- This shift reflects the broader petrol market where supermarkets are now a major competitive force and small independents (often supplied through independent resellers) in general have a lesser role. This competition has reduced the market share of independent resellers and retailers.
- The change in market structure has not resulted in an increase in Caltex margins at the wholesale level. This supports Caltex's view that the wholesale petrol market remains highly competitive.
- Caltex contract wholesale prices are generally not based on published terminal gate prices (TGPs) but instead are based on a wholesale list price (based on MOPS95), which may be discounted, or directly linked to the import parity price. However, these pricing formulas produce the same competitive outcomes as TGPs and closely track MOPS95 with a lag of about one week. Changes in TGPs are a good indicator of changes in wholesale prices.
- Caltex TGPs, which are for spot sales, closely track MOPS95 (with about a one week lag) as they are formula-linked to MOPS95 with an adjustment for market conditions. Very few sales are made at TGP.
- Victorian TGP regulation seeks to impose constraints on pricing that may differ from commercial reality, thereby distorting competition, and also restricts competition by limiting the frequency of wholesale price changes. Both Victorian and WA TGP regulation should be repealed now that Oilcode has been regulated under the Trade Practices Act and covers the same area.

4.A Structure

4.A.1 Caltex market share [A10]

The data that Caltex obtains from the Department of Industry, Tourism and Resources is no longer split by brand or supplier. As a consequence, Caltex is only able to estimate its own wholesale market share which for the full year 2006, was estimated at 36.9%

4.A.2 Caltex resellers [A10]

Caltex is a bulk wholesale supplier and licenses its Caltex and Ampol brands for use at service stations. Fuel may be distributed directly to service stations from seaboard terminals by Caltex or distributed by branded resellers, which may have 100%, 50%, 37.5% or zero Caltex ownership. Caltex ultimately is responsible for the wholesale price from 100% equity resellers to service stations, although day to day operation is managed by the reseller. Caltex only sets prices at 100% equity resellers.

The following chart shows the change in Caltex reseller numbers and ownership over time.

Caltex branded reseller numbers						
	2002	2003	2004	2005	2006	2007
100% Independently Owned	55	54	54	49	49	47
Partially owned by Caltex	6	6	4	4	3	2
100% Caltex owned	8	7	7	9	10	11
Total	69	67	65	62	62	60

Current reseller arrangements are summarised in the table below.

Caltex 100% Equity	Auer Petroleum P/L	QLD
	Barry Petroleum P/L	ACT
	Caltex Energy	NSW
	Caltex Far North Queensland	QLD
	Caltex South East	VIC
	Caltex Sydney	NSW
	Caltex West Coast	SA
	Cooper & Dysart P/L	WA
	Northern Marketing Management P/L	NSW
	Petro Fuel And Lubricants	QLD
	South East Qld Fuel Supplies P/L	QLD
Caltex 50% Equity	Geraldton Fuel Company P/L	WA
	Link Energy P/L	WA
Zero Equity	Adelaide Fuel Distributors	SA
	Bennetts Petroleum	TAS
	Bonick P/L	QLD
	Buchanan's Bulk Fuels	NSW
	Caltas P/L	TAS
	Caltex Depot	NSW
	Carling Fuels	SA
	Central Coast Fuel Market	NSW
	Central Queensland Petroleum	QLD
	Collison & Everett	NSW
	Country Petroleum	QLD
	Crokers Fuel & Oils	QLD
	Cunderdin Farmers Co-Op Co Ltd	WA
	D M & B P Wiskich P/L	NSW
	DG & RJ Boland	NSW
	Direct Fuel Supplies	WA
	Dunning Investments P/L	WA
	F & R McNabb P/L	NSW
	Fraser Coast Fuels	QLD
	Future Fuels	QLD
	Geographe Petroleum	WA
	Hawkins Fuels	QLD
	Hunts Fuel	SA
	I & M Simpson & Son	VIC
	Indervon P/L	NT
	J Chisholm P/L	VIC
	John Duff & Co Pty	VIC
	K&S Ampol	SA
	Kel Campbell P/L	NSW
	Lovell & Cowen P/L	TAS
	Malcolm Slater P/L	NSW
	Mavin Petroleum	NSW
	McClintock's Fuel Supplies	QLD
	Merriwa Petroleum & Ag Supplies P/L	NSW
	Northern Fuel Distributors	NT
	Oilsplus	NSW
	Purtill Petroleum	NSW
	R & P Matthews P/L	VIC
	Robco Petroleum P/L	VIC
	Slater Fuel Services	NSW

	South West Fuel Centre P/L	NSW
	The Hastings Co-Op Limited	NSW
	Tramby & Hanks	NSW
	Tropic Distributors	QLD
	Tunbridge Petroleum P/L	NSW
	Turner Fuel	SA
	Yenda Fruit And Case Supply	NSW

4.B Competition

4.B.1 The proportion of petrol supplied to independents (resellers and retailers) has increased over time [A11]

Since 2000, the proportion of Caltex volume supplied to independents (ie. companies carrying their own brands) has increased significantly. The volume supplied to Woolworths has increased to about 50% of the total while the volume supplied to independent resellers (for on-sale to independent retailers and end users) has fallen. Overall, the role of independents has if anything increased but their identity and the nature of operations has changed. The emergence of supermarkets as discounters has created a benefit for consumers.

4.B.2 Trends in marketing profitability are consistent with a continued high level of competition [B9] [B10]

Net available margin (NAM) is the price charged to a customer less cost of product (the buy/sell price) and any discounts. Other costs must be deducted from NAM in order to determine profit before tax.

If competition had decreased over the period, one would have expected NAMs to increase on trend. This has not happened, supporting Caltex's view that competition has if anything intensified in the past few years.

Another observation is that NAMs are small relative to retail prices, which helps to explain why Caltex's average after tax profit in 2006 was only 2.2 cents per litre across all petroleum products sold (This figure includes some petrol sales not included in the above chart eg direct contract sales and buy/sell sales, as well as sales of other products such as diesel and jet fuel).

4.C Pricing

4.C.1 Caltex wholesale pricing formulas – overview [C16] [C19]

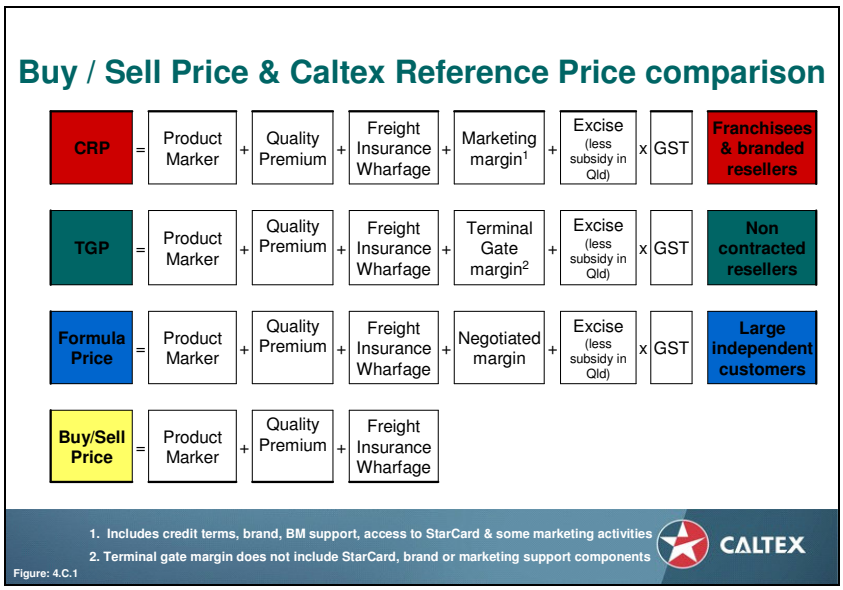


Figure: 4.C.1

There are different wholesale pricing methodologies for franchisees and branded resellers, non-contracted resellers and large independent customers, as shown in the above chart.

The Caltex Reference Price (CRP) includes a national average cost for shipping, insurance and wharfage. Franchisees buy at the CRP and when Caltex provides price support, franchisees are given a rebate off the current CRP. Branded resellers buy at a discounted CRP.

Non-contracted customers (spot sales) buy at the Terminal Gate Price (TGP). The shipping, insurance and wharfage cost is based on transporting the product to and holding at that specific terminal.

Large independent customers such as Woolworths may purchase fuel on a formula price related to Singapore prices. Like TGP the shipping, insurance and wharfage components of the formula are based on the cost of delivering product to the nearest terminal.

Independent resellers are priced via either a) an IPP build-up formula similar to TGP with an agreed supply point margin added or b) CRP less an agreed rebate.

Commission agents earn a set commission or fee per litre sold on petrol, which is owned by Caltex ie there is no wholesale sale.

4.C.2 Caltex Reference Price [C16]

Caltex's ruling wholesale price ("Caltex Reference Price" or CRP) is the basis for pricing petrol sold at wholesale to service stations and resellers. It has bundled into it charges that relate to both fuel and services (eg credit, brand, site rental and equipment fees but not delivery) so is different in concept from Caltex's terminal gate prices, which are for supply of fuel at the terminal loading rack into a road tanker for cash.

A discretionary after sale rebate off the CRP ("price support") may be provided to franchisees to help them meet local price competition. Wholesale prices to resellers and non-franchised retailers are generally discounted at time of purchase and do not attract price support.

Pricing of petrol is not arbitrary or particularly complex. Prices are related to an import parity price calculation and closely follow movements in international petrol prices through the linkage to Singapore prices.

Caltex calculates the CRP for petrol and diesel on a daily basis. To reduce price variability and for ease of administration, the CRP is changed only if the calculated price movement is greater or less than 0.50 cpl. Seven working day rolling averages are used for pricing factors such as MOPS and exchange rates to reduce price volatility. CRP is a single national price and with minor exceptions, only varies by location because of state subsidies.

The CRP for ULP is calculated using the factors shown in the following table.

Assumed Density (L/T)	1356
Assumed Density (BBLS/T)	8.5
MOPS95 7 day rolling Average	USD/bbl
Quality Premium	USD/bbl
subtotal	USD/bbl
Exchange Rate Rolling Average	USD/AUD
FREIGHT & WHARFAGE National Average	
Worldscale	USD/t
Platts	Index
Freight	USD/bbl
I&L (%)	
I&L	USD/bbl
Wharfage	AUD/kL
Wharfage	USD/bbl
Subtotal	USD/bbl
Marketing margin, including terminal and	Acpl
Total Price	Acpl

4.C.3 Caltex terminal gate price (TGP) [C14]

TGP is the spot price for a road tanker load (typically about 42,000 litres) of unbranded bulk petrol supply from the Caltex terminal for cash. The TGP calculation is similar to buy-sell except it uses a 7 day rolling average of Singapore prices and exchange rates, is adjusted daily except in WA where it is adjusted twice weekly, and includes a terminalling cost and competitive wholesale margin for the particular terminal location.

In WA, TGP is calculated twice a week: Monday effective Tuesday to Thursday; and Thursday effective Friday to Monday. This twice a week TGP pricing in WA is to ease the administrative burden created by the WA state legislated requirement for the price boards displayed at each WA declared Terminal to be updated each time the TGP changes.

The TGP price formula is an IPP build up similar to CRP but instead of national average freight and wharfage being included as is the case with CRP, TGP includes port specific freight and wharfage.

Another difference between CRP and TGP is that while CRP has a national wholesale margin for petrol and diesel, TGP margins differ around the country determined by competitive forces in a particular market. Another contributing factor is that current sales are not priced off TGP but rather a combination of CRP and customer specific formulas and TGP margin setting takes actual sales margins arrived at from these two other methods into account.

A terminal gate price (TGP) for each terminal is available on the Caltex web site daily in accordance with Oilcode regulation.

4.C.4 Caltex TGP tracks Singapore refinery petrol price [C12] [C13]

Import parity pricing

The retail price of petrol in Australia is not directly related to the cost of manufacture ie. the price of crude oil plus the margin applied to manufacture the raw materials into finished products.

This is also the case for most goods in market economies, particularly goods that are exposed to import or export competition. Petroleum products, including petrol, are no exception. As discussed in this part of Caltex's submission, the market (ie. supply and demand) determines petrol prices, not costs.

The international market for petrol is the dominant influence over the level of petrol prices in Australia. Local factors including wholesale and retail margins and freight, as well as discount cycles experienced in many major cities, affect prices but to a lesser extent. However price relativities and price variability are often very visible to consumers day to day and may attract considerable media attention.

In general, economic policy in Australia is based on the principle that prices of internationally traded goods within Australia should reflect their international prices. This applies to agricultural and mining commodities as well as manufactured goods. The price support schemes, tariffs and other market interventions applied in Australia's past have largely been removed, with the result that Australia's economy has become more flexible, productive and prosperous.

Import parity pricing for crude oil and petroleum products has been the basis of petroleum product pricing policy since 1988. This coincided with many other economic reforms started under the Labor Government in the 1980s and continued by the Coalition Government. Since price deregulation in 1998, import parity pricing for petroleum products has continued to form the basis for pricing in the petroleum products market.

There are four major elements that affect the prices we pay for petrol in Australia:
1. the price of petrol from Singapore refineries in US dollars
2. the value of the Australian dollar relative to the US dollar – when the value of our dollar increases, this decreases petrol prices
3. Australian Government excise and GST less any state government subsidies
4. gross margins (ie. sale price minus cost of product) within Australia for storage and distribution, wholesaling and retailing.

Changes in terminal gate prices are closely related to changes in the import price.

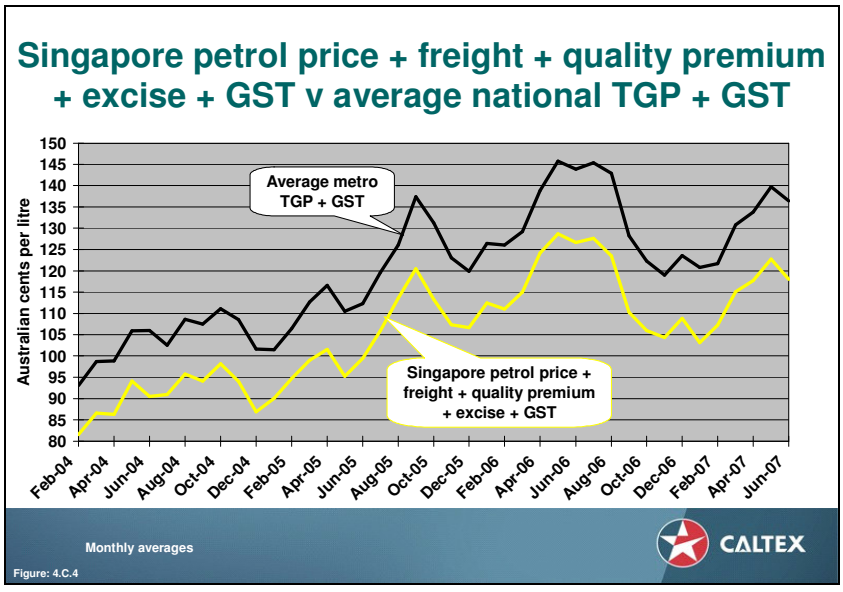


Figure: 4.C.4

As shown by the above chart there is a close relationship between Caltex's terminal gate prices (TGPs – shown here as the national average TGP) and import prices. The difference in price has remained fairly constant over time and changes in TGP are closely related to changes in import prices. This means that changes in TGPs are good proxies for changes in international prices, which is useful for price transparency as TGPs are more readiliy available to the public than international prices.

The import price shown in the chart includes Singapore petrol price (MOPS95) plus international freight plus a premium for Australian petrol quality. Excise has also been added to make the numerical comparison with TGP easier. The gap between TGP and import price shown in this chart is due to insurance on sea freight, wharfage charges, terminal costs and a supplier's margin.

Part 5 Retail trade

Key points

Structure

- The retail petroleum industry is not highly concentrated compared to many other Australian industries. Assertions of an existing or emerging duopoly are unfounded.
- The prevalence of major oil company branded or co-branded sites is often associated by the public with oil company control of sites and pricing. Caltex owns a minority of sites and sets the price at very few sites.
- Shop sales account on average for about 70% of gross margins at service stations, making them convenience retailers far more than fuel retailers. Caltex is Australia's leading convenience store chain.
- Petrol pricing strategies relate not just to fuel sales but also convenience store sales and, in the case of Woolworths alliance sites, possibly Woolworths supermarket sales.

Competition

- Caltex has reduced the number of company owned sites over the past 10 years to improve network financial performance.
- This is part of a trend in service station rationalisation that has been occurring for 30 years aimed at increasing site throughput, diversifying sales and divesting sites with poor economic performance or potential.
- The downstream petroleum reform package has had no significant impact on the structure of Caltex's network and Caltex remains committed to franchising (through wholesale or commission agent relationships for fuel) as a fundamental part of its approach to the market.
- The WA "24 hour rule" restricts competition by not allowing discounters to undercut the prices of competitors. Markets in other states that follow typical weekly price cycles provide similar potential benefits to consumers without the risk of higher average prices induced by the anti-competitive WA regulation.

Pricing

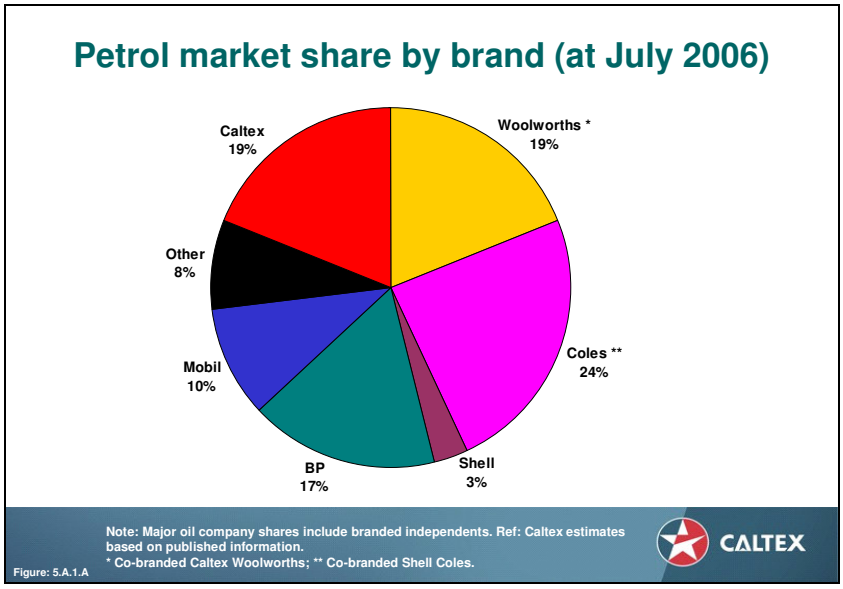
- Petrol in Australia is among the cheapest in OECD countries. Pump prices in Australia follow the same trends as European and US retail petrol prices.
- The landed price of crude oil does not determine the retail price of petrol in Australia – rather, the price of petrol in Singapore forms the basis of the price of petrol in Australia. Pump prices closely follow international prices with a lag of one to two weeks.
- Pump price responses to international prices are symmetrical ie they are not "quick to rise and slow to fall", instead they are "slow to rise" and "slow to fall".
- Notional gross margins (the difference between pump prices and international prices) vary up and down with international price changes but these differences are not sustained over time.
- There does not appear to be any behavioural model of the market underlying ACCC's chart so any conclusions drawn from it may not be meaningful.
- Retail prices do not respond exactly to international prices (MOPS95) on short time scales (up to several weeks) so regulators need to exercise caution in making judgements about any perceived deviations from normal competitive outcomes.
- Price cycles are the outcomes of competitive tension between "discounters" typically driving prices down and "non-discounters" (or "price followers") typically driving prices up when discounting becomes unsustainable.
- The supermarket alliances operate the largest number of service stations that are aggressive discounters. In most markets, non-major oil company brands play a minor role.
- Petrol prices don't all increase at the same time and Caltex is not aware of any collusion in pricing – only fierce competition that benefits consumers.

- Daily petrol sales respond to price cycles, to the benefit of consumers. About 55% of petrol is sold on low-priced days of the week in the three east coast capital cities compared with high priced days.
- 60 per cent or more of consumers take price into account when buying petrol, so benefit directly from price cycles.
- Prices in Brisbane, Adelaide, Melbourne and Sydney did not jump because of the Easter and Queen's Birthday long weekends in 2006 and 2007.

5.A Structure

5.A.1 The retail petrol market is not highly concentrated [A13]

There are relatively few sites directly operated by major oil companies. Supermarkets operate about 20% of sites and franchisees (of which Caltex has by far the largest number) operate about 10% of sites. There is large number of independent sites, over half the total.

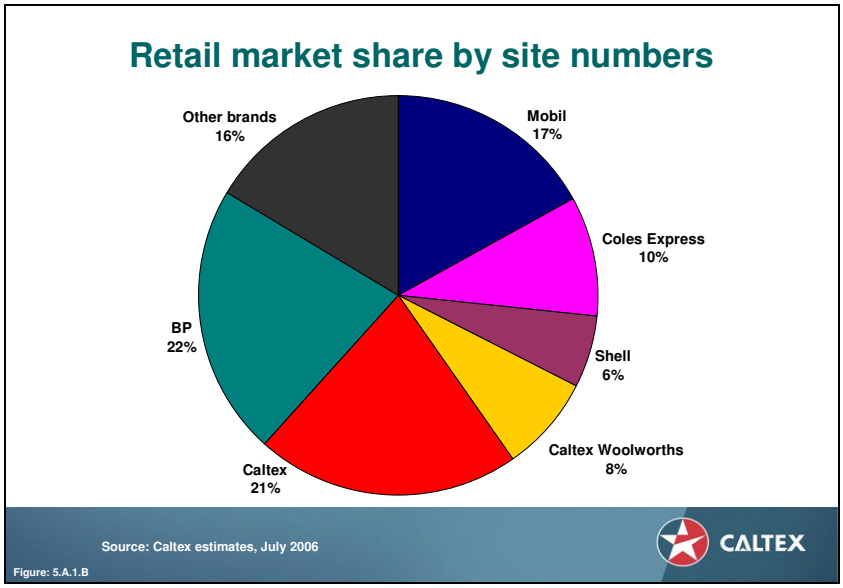


Supermarkets have 43% volume share of petrol market.

The above chart shows petrol market share by brand at the retail level across Australia. There are four major competitors of similar size on a national basis. The fifth major competitor, Mobil, is of similar market share to these four competitors in the states where it has concentrated its operations. Both in absolute terms and compared to other markets in Australia, this is not a concentrated market. Competition is vigorous. There are also several smaller but significant chains operating in particular states.

The brand market shares are based on total sales from all sites that display a company's brand, not who operates the sites. Very few branded sites are operated by the four refiner-marketers; sites may be operated by franchisees, commission agents or independents as well as by the major oil companies themselves.

The combined share of the two supermarket competitors, Woolworths and Coles, is 43%. This is less than the 50% or more commonly stated in the media as that number appears to mistakenly include Caltex's share with Woolworths. All Woolworths sites are co-branded Caltex (for fuel) and Woolworths (for the shop) but prices are set by either Woolworths or (for sites contributed by Caltex to the Caltex Woolworths venture) Australian Independent Retailers Pty Ltd under the direction of Woolworths.



The major oil company brands appear on the largest number of service stations but most are operated by franchisees, supermarkets or independent site owners.

The above chart shows market share by site numbers. This includes many independently operated sites carrying major oil company brands as well as franchised sites.

Coles Express and Caltex Woolworths have relatively few sites however a large market share by volume.

5.A.2 Caltex-supplied network [A13]

National Caltex petrol supply landscape		
	Site Operation Type	**Totals**
Caltex Retail Division	Caltex owned & operated	43
	Caltex commission agent	28
	Caltex franchisee	332
	Independently owned & operated with Caltex brand	100
	Independently owned & operated with own brand	13
Caltex Reseller Division	Caltex owned distributor operated or supplied Caltex branded	299
	Caltex owned distributor operated or supplied Independent branded	76
	Independently owned distributor operated or supplied Caltex brand	441
	Independently owned distributor operated or supplied Independent Brand	167
Woolworths Arrangement	Woolworths (Safeway) Caltex - WOW priced & franchisee or Caltex operated	134
	Woolworths owned & operated with Caltex brand	371
Totals		**2004**

5.A.3 Metro v country site volumes [A13]

Set out below are average percentages of volume supplied to metropolitan areas (vs. country areas) in the non-Woolworths network of sites supplied by Caltex's retail division. We do not have access to the average volume of reseller supplied sites in the country. The reseller supplied sites in the country have smaller average volumes than those supplied by the retail division. (Note: Qld data only includes sites in major regional towns.)

% of total state volume sold in metropolitan areas.

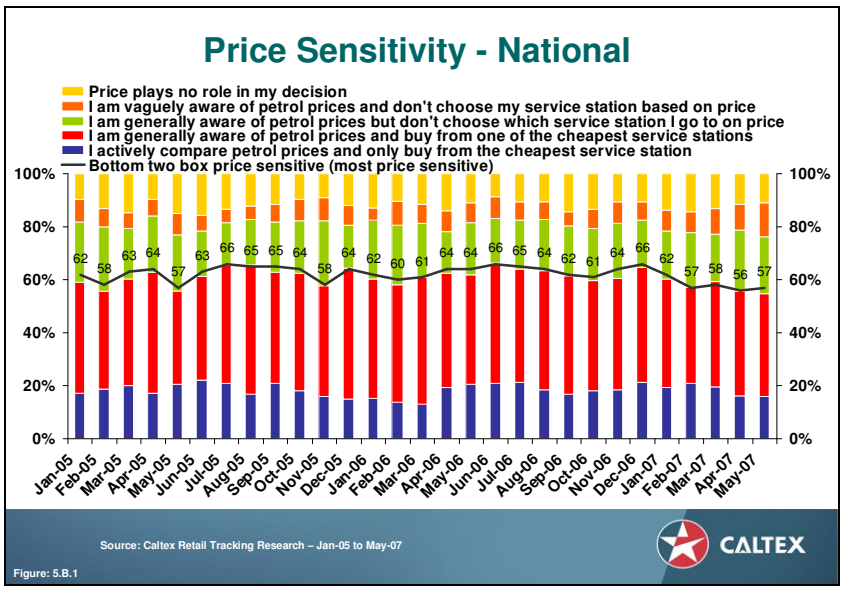
	%
NSW	59
WA	56
VIC	65
SA	62
QLD	49
AVERAGE	**58**

5.A.4 Relative importance of fuel v non-fuel income at service stations [A15]

The importance of shop sales to service station viability is significant, with about 70% of gross margin on average derived from shop sales.

5.B Competition

5.B.1 About 60% of consumers take price into account when buying petrol [B14]



Caltex research, summarised in the above chart shows about 60% of consumers (57% most recently) are price sensitive – about 15% actively compare prices and only buy from the cheapest service station and about 40% are generally aware of prices and buy from one of the cheapest service stations.

The percentage of consumers taking price into account increases for a short period when prices increase but over time there has only been a small increase in this percentage despite a large increase in prices.

About 35% may or may not be aware of prices but don't use price as a factor in choice of service station (nor, by inference, the day of the week on which they purchase petrol).

The large number of people who shop around on price points to the value of price cycles to those who can time their purchases accordingly but also explains the level of annoyance of those that are not sufficiently aware of the price cycle to avoid days on which prices typically increase. The answer would appear to be greater awareness of cycles by consumers rather than eliminating cycles through market intervention, as has been attempted in Western Australia.

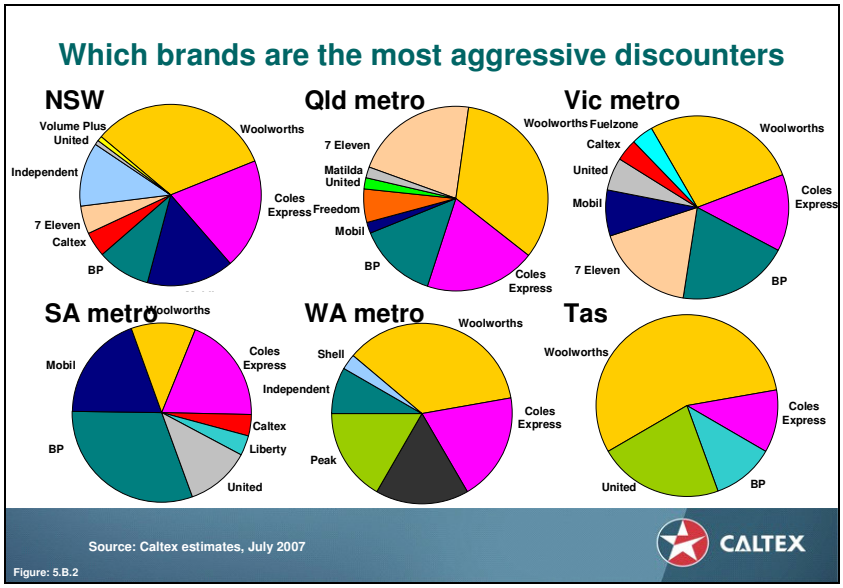
5.B.2 The supermarket alliances operate the largest number of service stations that are aggressive discounters. In most markets, non-major oil company brands play a minor role [B15]

The following table shows, for each brand, the number of local market areas where a service station with that brand is the most aggressive discounter.

Most aggressive discounters by brand in local market areas

Brand	2007 Result	2007 Ranking	2006 Result	2006 Ranking
Woolworths	90	1	80	1
Coles	53	2	58	2
BP	37	3	38	3
Mobil	28	4	27	5
7 Eleven	26	5	31	4
United	10	6	9	7
Caltex	8	7	15	6
Gull	6	8	4	9
Peak	6	9	4	10
Independent	4	10	5	8

Market aggressors are the retailers in the relevant market group that are usually first to discount below other players in the market group and drive the price down through the price cycle with the remaining retailers in the market group usually following and matching this aggressive competitor. The market group aggressors are not the retailers that usually first raise prices when the cycle reaches a low point although they may do so from time to time.



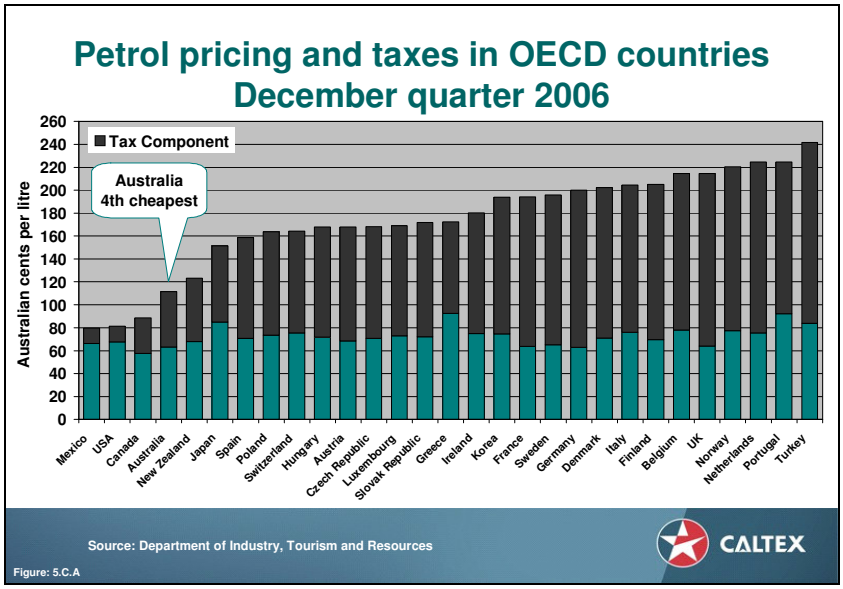
The above chart shows the results of Caltex research in 284 market areas across Australia where the brand of service station that has historically been the most aggressive discounter was identified.

It shows Woolworths and Coles Express sites were identified as the most aggressive discounters in a majority of markets. This is more significant when the relatively limited number of sites under these brands is taken into account (about 20% of the national total number of sites). Both Woolworths and Coles Express rely on petrol sales to drive supermarket sales through their shopper-docket redemption offers.

All Woolworths sites are co-branded Caltex (for fuel) and Woolworths (for the shop) but prices are set by either Woolworths or (for Caltex-contributed sites) Australian Independent Retailers Pty Ltd under the direction of Woolworths. Coles Express sites are co-branded Shell.

BP and 7-11 metro sites (both commission agency operations) in Victoria and Mobil (franchised) and BP in South Australia also had a significant number of aggressive discount sites.

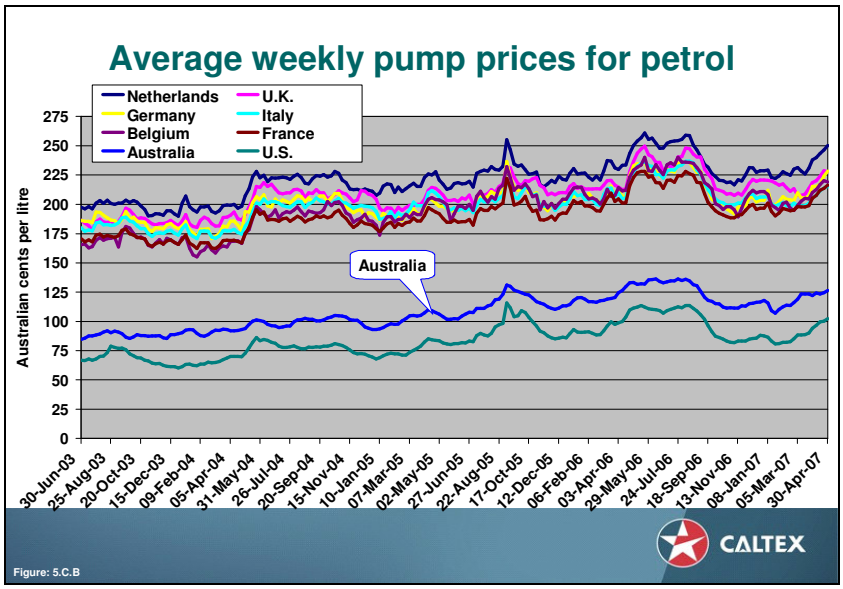
5.C Pricing



Petrol in Australia is among the cheapest in OECD countries.

Australia has consistently had cheaper petrol than most other OECD countries. The chart above shows that the North American countries that do sell the cheapest petrol have a lower tax component when compared to Australia's rate of about 40%.

The lower, green bar shows petrol prices excluding tax. When prices excluding taxes are compared, Australia is still among the cheapest (10th out of 29) of OECD countries, reflecting the efficient and highly competitive nature of Australian refining and marketing, notwithstanding our long supply chain.

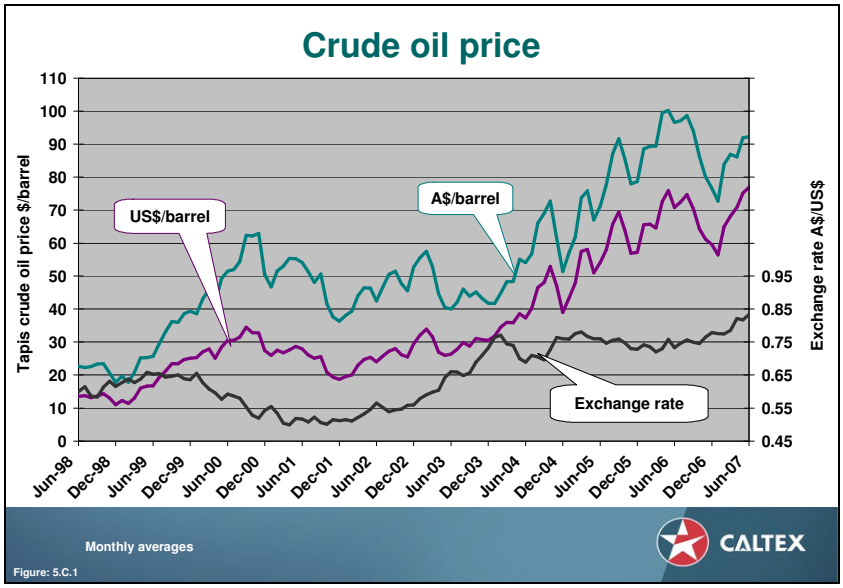


Pump prices in Australia follow the same trends as European and US retail petrol prices.

When the weekly price cycle in Australia is averaged out, pump prices reflect the same trends over time as found in Europe and the United States.

Pump prices in Australia are about A$1 per litre less than typical for Europe and about 20 Acpl more than typical for the US.

5.C.1 The landed price of Tapis crude oil does not determine the retail price of petrol in Australia [C21]



The price of petrol is related indirectly to the price of crude oil as a result of its underlying effect on Singapore petrol prices.

The chart above shows the price of Tapis crude oil since 1998 in US$ and A$ per barrel (159 litres). Tapis, a low density, low sulfur (light, sweet) Malaysian crude oil is used as the benchmark in price negotiations for supply of light, sweet crude oils in the Asian region.

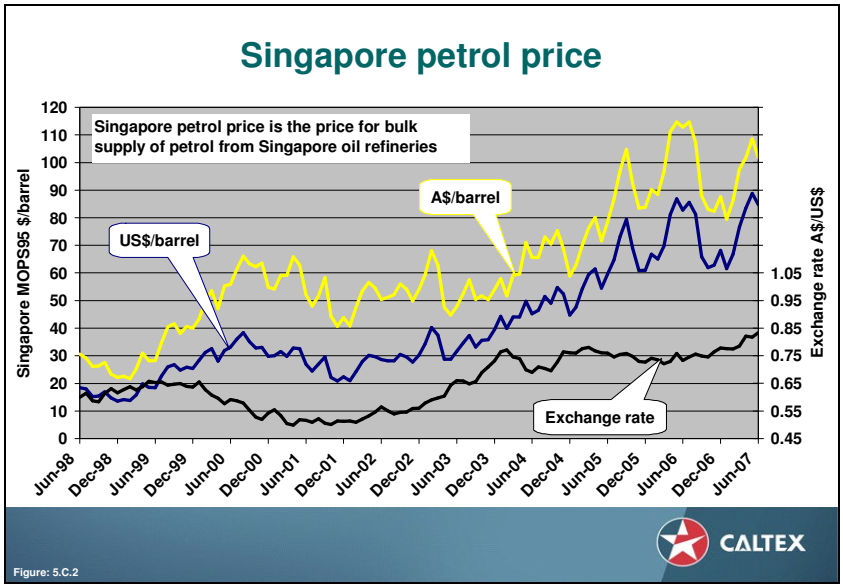
All references to crude oil prices in charts in this submission are to Tapis APPI crude oil.

Australian dollar crude oil prices were typically in the range A$40 to 50 per barrel from 2000 through to early 2004, although there were significant downward and upward movements within this period and a rising exchange rate moderated the impact of rising US$ crude oil prices through to early 2004. Crude oil prices are currently at a very high level of around A$90.

The public's perception of historical petrol prices relates to this period before 2005, under $1/litre in most states and under 90 cpl in Queensland. Since then, crude oil prices have risen by about A$35 per barrel or 22 cents per litre. It is this strong upward trend in crude oil prices, not refiner margins or wholesale or retail margins that has been the main driving force in increasing petrol prices relative to the public's historical perceptions.

In 2006, crude oil prices averaged US$68 per barrel, compared with US$57 per barrel in 2005, an increase of US$11 per barrel. In 2006, Singapore refiner margins for petrol (ie. what a typical refiner receives for turning crude oil into petrol) averaged US$4.98 per barrel, compared with US$5.15 per barrel in 2005, a decrease of US$.17 per barrel. Note that refiner margins are gross margins before the deduction of any costs and therefore do not represent a profit margin.

5.C.2 The price of petrol in Singapore forms the basis of the price of petrol in Australia [C21]



The chart above shows Singapore petrol price (MOPS95) over the same period as the crude oil price chart. MOPS95 is industry jargon for the market price of generic quality 95 octane petrol quoted by Platts (a subscriber based information service) ex Singapore refineries. MOPS stands for Mean of Platts Singapore. Other octane grades are quoted (92 and 97 octane) but MOPS95 is the most common benchmark price. Australian quality petrol attracts a premium over MOPS95.

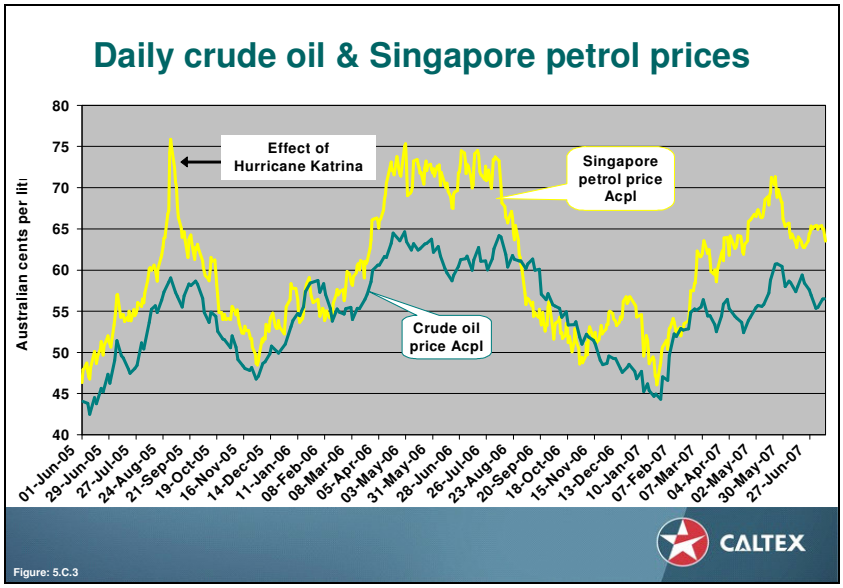
The pattern of prices over time is similar to crude oil, with prices typically in the A$50 to 60 per barrel range from 2000 to early 2004. A spike in March/April 2003 marks the Gulf War and another spike in September 2005 marks Hurricanes Katrina and Rita. From mid 2004, prices rose sharply due to underlying crude oil prices.

The ex-refinery price of petrol is based on the Singapore market price for petrol, adjusted for Australian fuel standards and freight to Australia; the price is not regulated but instead determined by market forces.

The reason Australian petrol prices follow Singapore market prices is that Australian refineries must compete against petrol imports (overall 18 per cent of Australia's petrol was imported in 2006) and Singapore is a major source of petrol for importers.

The crude oil markets and the petroleum product markets are completely separate, distinct markets. Traders in these markets influence the prices based on supply and demand, real and perceived shortages and geopolitical instability. This is the same as for any international traded commodity such as agricultural or mineral commodities or currencies.

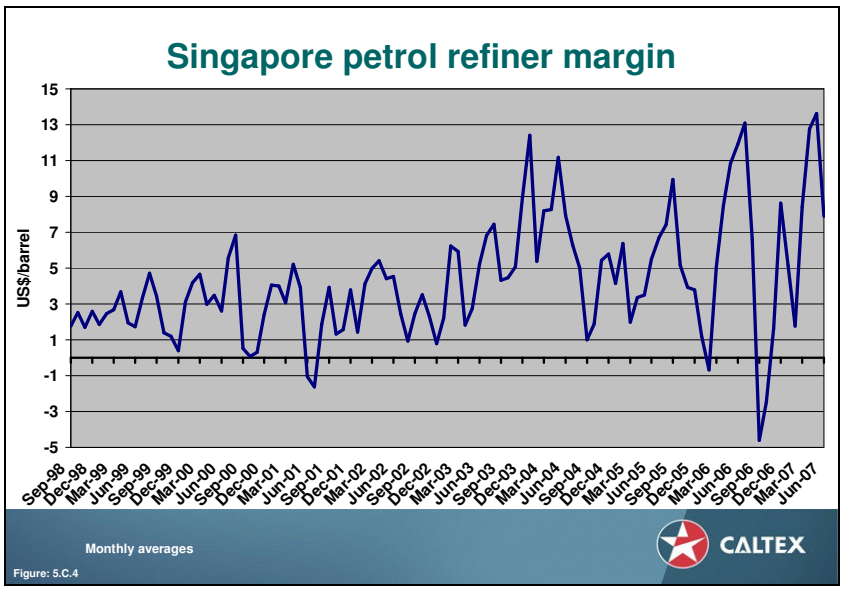
5.C.3 The prices of Singapore petrol and Tapis crude oil do not necessarily rise or fall at the same time or to the same degree [C21]



The chart above shows Singapore petrol price (MOPS95) and Tapis APPI crude oil price, both in Australian cents per litre (Acpl). The petrol price spike caused by Hurricane Katrina in the US is clear but so is the rapid decline almost immediately after the peak. Within two weeks, the price increase completely dissipated, with refiner margins (the difference between petrol and crude oil prices) lower than before the effects of the hurricane.

In September and October 2006, refiner margins were negative ie. petrol prices ex-refinery were lower than the cost of crude oil used to make it. This also occurred in February 2006 and mid-2001.

5.C.4 The Singapore refiner price is a market outcome, and the resultant margin is calculated as the difference between the selling price of petrol ex-refinery and the cost of Tapis crude oil, not determined by refiners [C21]



The chart above shows that the average Singapore refiner margin from 1998 to 2002 was about US$3 per barrel. Since 2003, the average has been about US$5 per barrel, which is about US$2 per barrel or 2 Acpl greater than the earlier period.

The refiner margins shown are gross margins ie. selling price of petrol minus the cost of crude oil – profits will depend on costs of refining.

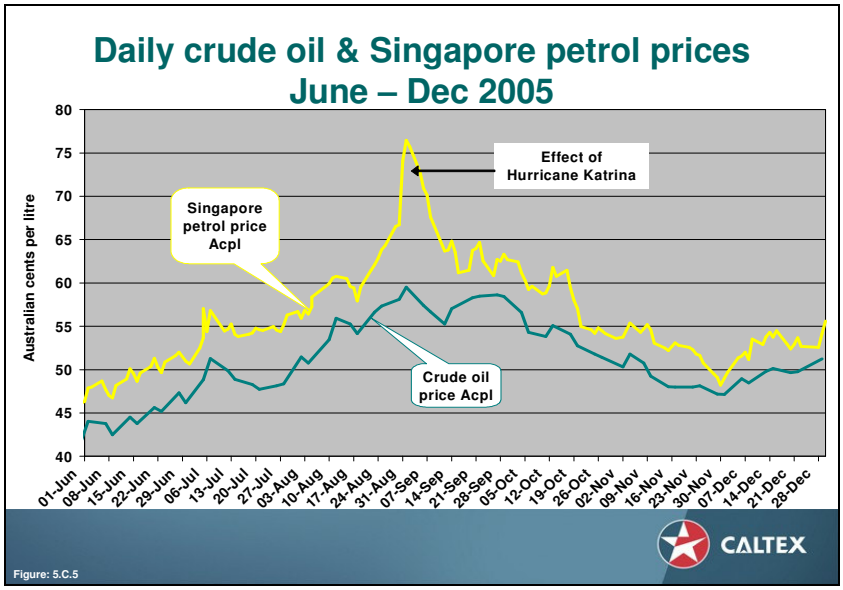
The price of petrol is a market outcome – it is not 'set' by refiners on a 'cost-plus' basis. This is demonstrated by the negative margin for petrol in September 2006 – you could buy petrol cheaper than Tapis crude oil.

From mid-2003, Chinese demand for petrol from fast-growing new car sales pushed up product demand until mid-2004 when demand controls applied by the Chinese Government eased petrol demand and as a result Singapore petrol prices. From 2Q2005, northern hemisphere summer demand (driving season) pushed up petrol refiner margins with Hurricane Katrina striking on 30 August. Margins quickly returned to more normal levels.

Margins fell in early 2006 due to weak demand and increases in underlying crude oil prices, then increased sharply as demand recovered in the run-up to the northern summer (when demand increases) and many refineries in the region undertook planned maintenance.

While petrol refiner margins in mid 2007 are higher than on average early this decade, the increase is not significant in explaining the large increase in pump prices – that is mostly due to higher crude oil prices as discussed earlier.

5.C.5 Petrol refiner margins (Singapore petrol price minus Tapis crude oil price) are the net outcome of many complex market influences - case study on petrol refiner margins [C21]



Petrol prices in Singapore between June 2005 and January 2006 varied greatly from the price of crude oil. For the first couple of months from June through August the difference (the refiner margin) was fairly constant at around 5 to 6 Australian cents per litre (Acpl).

The situation changed dramatically at the end of August 05, although prices had been increasing since July due to hurricane related outages at US refineries and rapidly falling stock levels.

Hurricane Katrina struck the Gulf Coast of the United States on 30 August shutting down about 25% of US crude oil production and 30% of US oil refining capacity. While considerable capacity was quickly restored, Hurricane Rita struck less than a month later, with similar impact.

The result was a dramatic increase in petrol prices on the US market. The Singapore market was also affected, particularly by Hurricane Katrina, as the United States imported petrol from markets around the world to make up for the shortfall in its refining capacity. Although most cargoes to the US to make up the shortfall came from Europe, the effect on markets was global.

In two days the Singapore petrol price increased 10 Acpl only to fall sharply over the next two weeks as some of the damage from the hurricane was repaired and some of the initial uncertainty over the impact on global oil supply became known. Hurricane Rita had much less effect on the Singapore market than Katrina, perhaps because the global market had already started to adjust to the supply uncertainty and redirect oil supplies.

By the end of September the refiner margin for petrol (ie. the difference between the Singapore petrol price and the Tapis crude oil price) was back to about the level experienced in June and July.

At the same time other factors were affecting the Singapore market. In China, petrol prices from refineries are controlled by the state and increases in crude oil prices earlier in the year had outstripped the allowable increase in Chinese petrol prices. This resulted in the earnings of Chinese refiners being compressed sharply between the capped petrol prices and increase in crude oil prices. As a result they tended to export petrol leaving the Chinese petrol market short of supply. By August this was causing considerable consumer unrest and Chinese authorities responded in August by limiting the amount of petrol that refiners were allowed to export (ie. before the impact of Katrina).

This normally would have contributed to higher prices on the Singapore market through less supply being available but from 1 October the Indonesian government increased petrol prices by about

90%. It did this by reducing fuel subsidies that were imposing great strain on its budget because of the increase in fuel prices during the year. As a result the reduction in Indonesian demand tended to offset the reduction in Chinese supply of petrol so that refiner margins for petrol stayed at about 3 to 4 Acpl through to the end of the year.

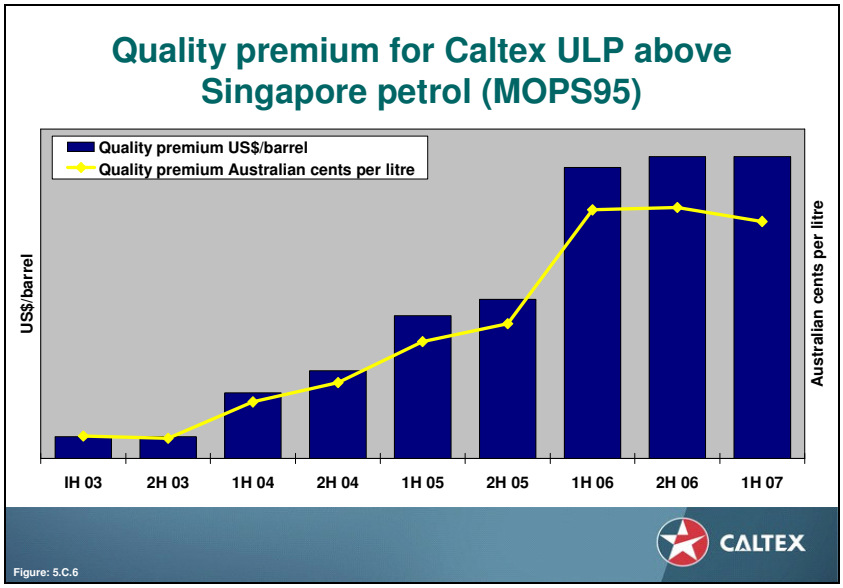
From about the middle of January 2006 the Singapore price for petrol became less than the cost of the crude oil used to manufacture it, ie. refiner margins went negative. This occurred because the Chinese government eased restrictions on the export of petrol from 1 January and restored export subsidies. The price of Tapis crude oil also increased sharply relative to other global crude oil benchmarks (such as WTI), resulting in lower Singapore refiner margins due to higher crude oil costs.

The Chinese move increased supply of petrol into the Asian region at a time when demand was weak due to the Northern Hemisphere winter. Petrol demand in the Northern Hemisphere is highest in the second and third quarters of the year during the northern summer and prices for petrol on the Singapore market typically increase early in the second quarter as refiners build inventory in anticipation of summer demand.

In the second quarter, petrol prices increased due to stock building for the northern summer, planned refinery shutdowns for maintenance, and phase-out of MTBE in the US increasing demand for high octane blendstocks. Regionally Chinese petrol demand has increased in first half 2006 by 14% over the same period in 2005 resulting in exports falling back to only 30,000 barrels per day in June. At the same time petrol imports by Indonesia and Vietnam have been increasing.

This case study is a good example of how volatile the regional price of petrol can be and how natural events like Hurricane Katrina or political events as in China and Indonesia can have a very marked effect on refiner margins for petrol.

5.C.6 Chart 11 The quality premium for Australian petrol has increased with the introduction of tougher Australian fuel quality standards [C22]



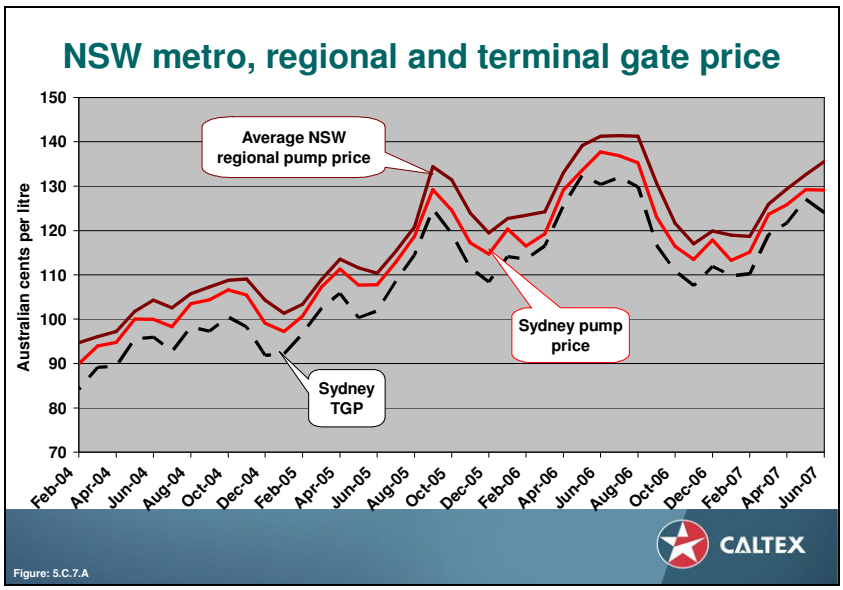
Tougher national fuel quality standards mandated by the Australian Government to help reduce vehicle exhaust pollution have meant that petrol produced for the Australian market is now required to contain a maximum of 1% benzene, down from the previous (unregulated) range of 2 to 3%. Since 2003, petrol standards have also been mandated for the content of MTBE, olefins and aromatics, and final boiling point, which are tougher than former voluntary industry standards. These new standards will significantly improve public health and, in the case of MTBE, safeguard water quality.

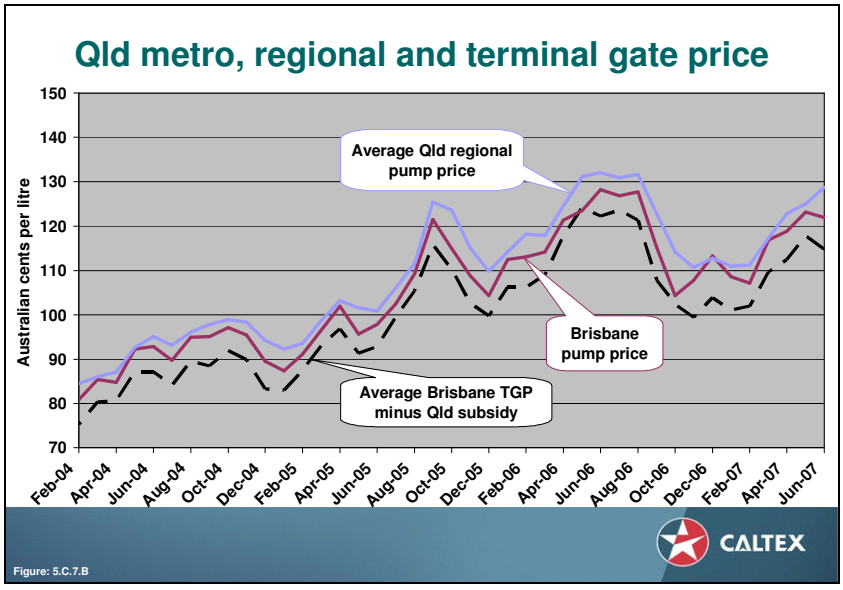
Caltex has invested about $500 million dollars in upgrading its Kurnell and Lytton refineries to enable them to produce higher quality petrol and diesel.

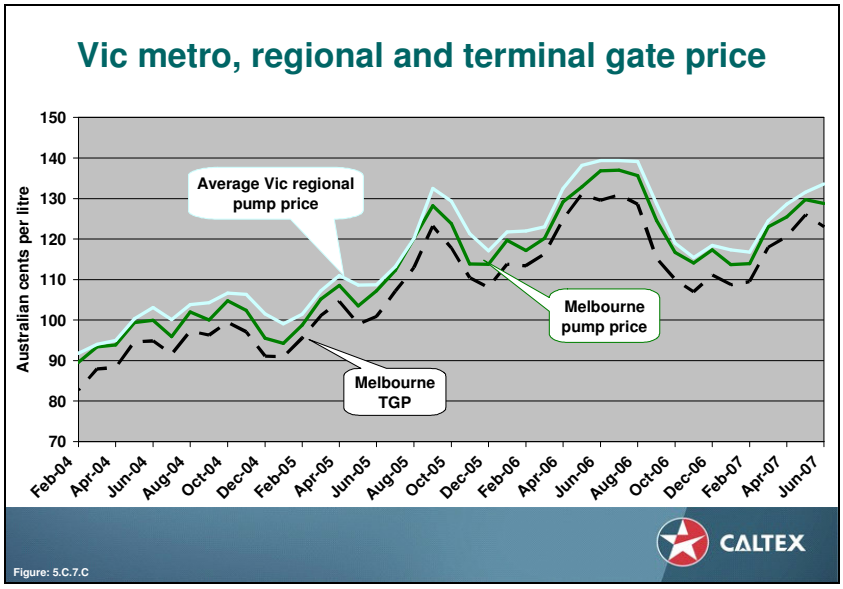
Tougher petrol standards have increased Caltex's wholesale price of petrol by about 2.5 cpl since 2003.

This is similar to the 2.5 cpl increase in Victorian terminal gate prices (TGPs) for petrol relative to MOPS95 found in a May 2006 report by Consumer Affairs Victoria, which failed to take account of the increase in petrol quality since 2003. This means that contrary to the implication that Victorian TGPs have increased by an amount that is unjustified, the increase has in fact been the result of regulated higher petrol quality.

5.C.7 Metropolitan and regional pump prices closely follow terminal gate prices which closely follow changes in international prices [C21]






Vic metro, regional and terminal gate price
Australian cents per litre
150
140
130
120
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100
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70
Average Vic regional pump price
Melbourne pump price
Melbourne TGP
Feb-04
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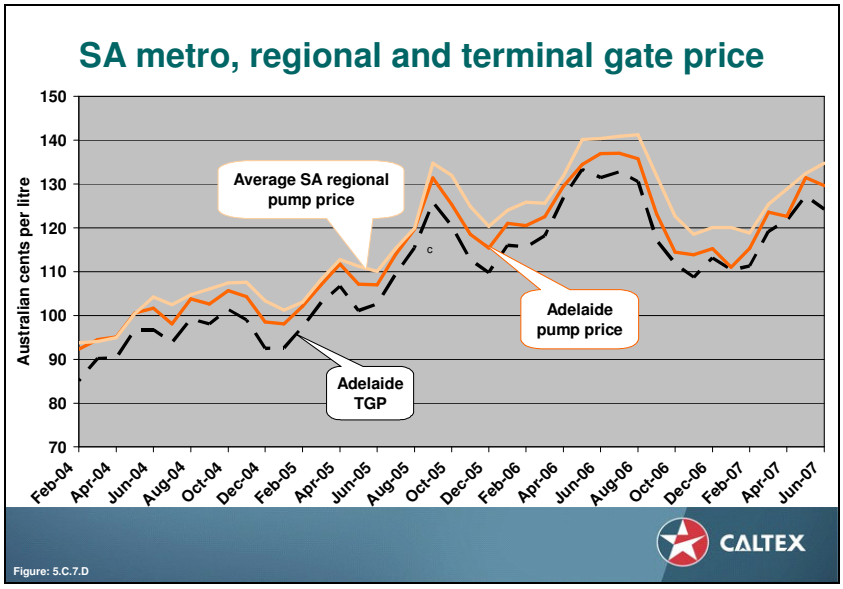
SA metro, regional and terminal gate price
Australian cents per litre
150
140
130
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Average SA regional pump price
Adelaide pump price
Adelaide TGP
Feb-04
Apr-04
Jun-04
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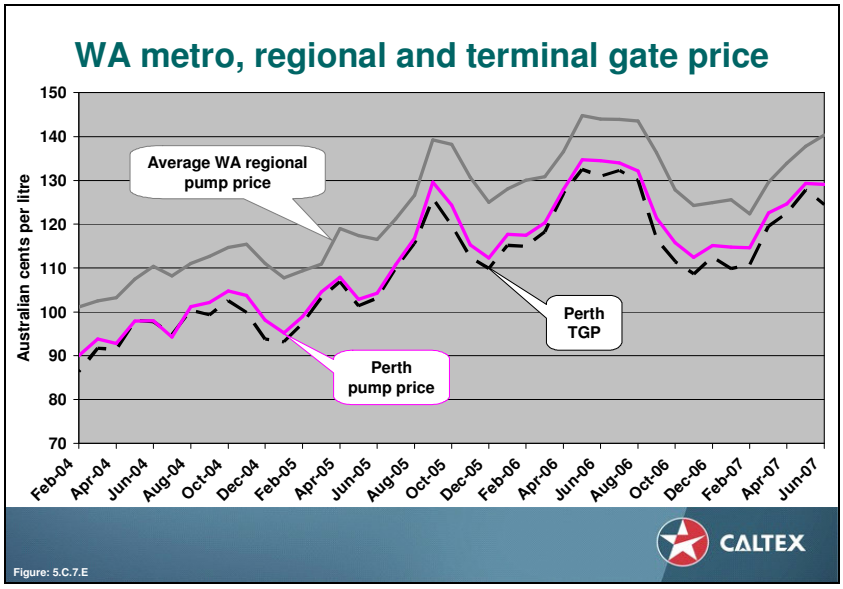
WA metro, regional and terminal gate price
Australian cents per litre
150
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Average WA regional pump price
Perth TGP
Perth pump price
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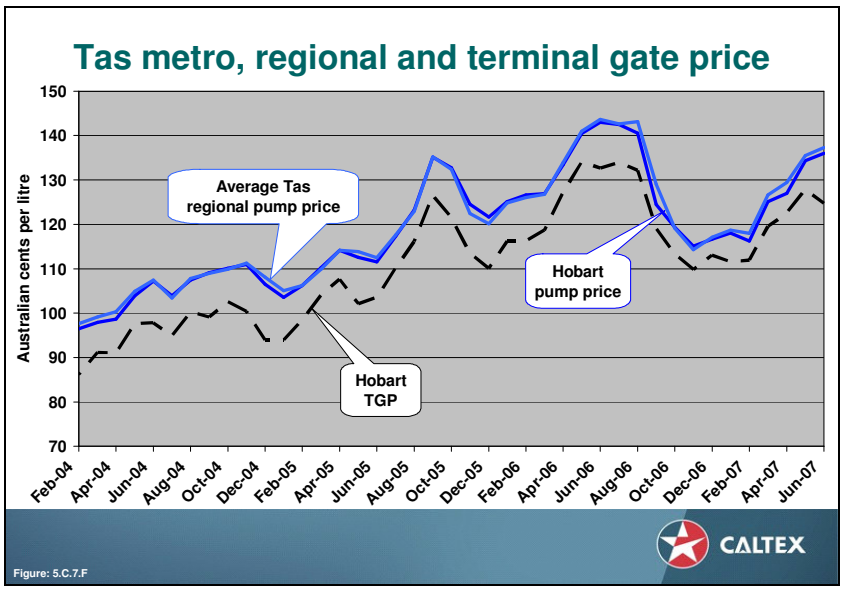
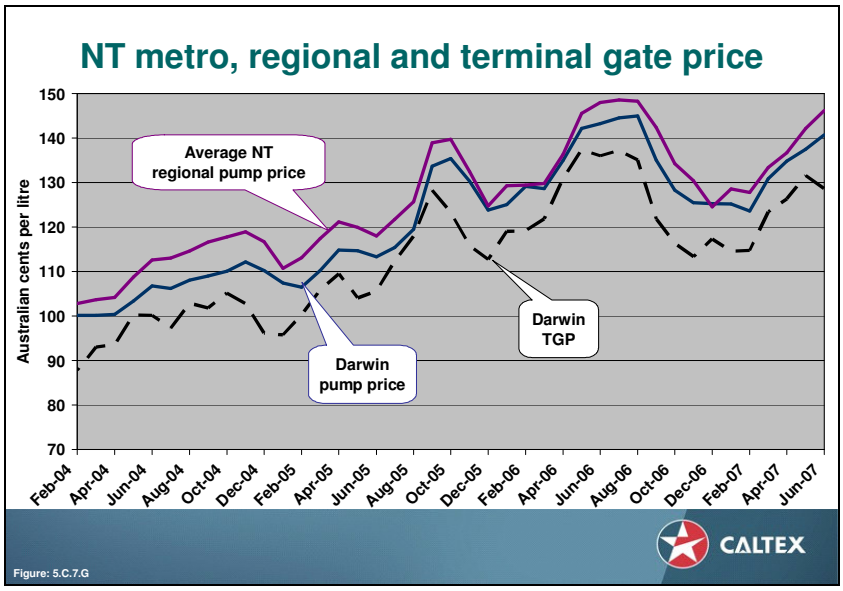




Caltex's terminal gate prices (TGPs), which are published daily, are calculated based on the cost of imports to Australia, terminal costs and a wholesale marketing margin plus excise/subsidies and GST. TGPs are therefore a good indicator of how changes in international prices flow through to ex-terminal wholesale prices in Australia.

TGPs are spot prices for bulk supply of fuel ex-terminal and are therefore a reasonable proxy for wholesale prices. Actual wholesale prices typically include charges for brand, credit, and site and equipment rental but also may be discounted according to competitive conditions in various markets and customer size.

For each state, monthly average regional and metropolitan prices (AIP data prepared by Orima Research) are shown, together with capital city Caltex TGPs. The differences between regional and metro prices are due to wholesale and retail margins and freight.

The data for the charts is as published by the Australian Institute of Petroleum (AIP) on its web site. (Note the Queensland TGP does not include the state retail subsidy of 9.2 cpl including GST, so pump prices appear low relative to TGP.)

The charts, being state averages, do not show the variation between individual country towns, which are often the subject of media and political interest. In almost all cases, these differences are the result of local competitive factors, including site volumes and site density, the presence of discounters including supermarkets and the impact of new entrants seeking to establish volume.

Retail margins (pump price less wholesale price) are typically higher in the country compared with major capital cities, mainly due to lower fuel volumes and shop sales over which to spread service station operating costs.

Distribution costs (included in the wholesale gross margin) may be significant for country areas where fuel must be stored in depots and double-handled, rather than being delivered directly from coastal terminals.

Freight is typically 1.5 to 3 cpl greater for country than city delivery.

As shown in all the charts, there is a very close correlation between pump prices and international prices (represented by TGPs) over time.

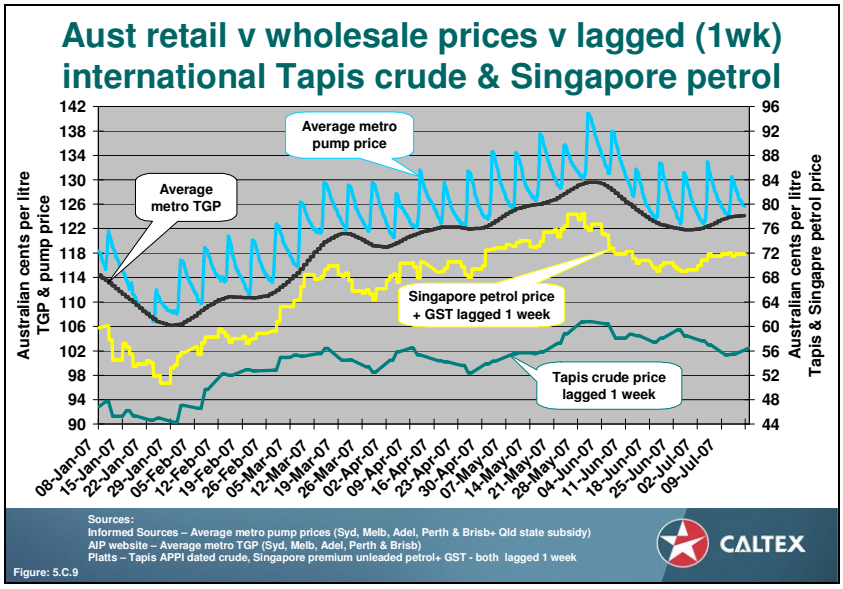
It is clear that pump prices do rise and fall with international prices. The turning points of each price series are closely matched and all states and territories show a similar close relationship.

However, close examination shows that as international prices increase, gross margins (represented by the difference between pump prices and TGPs) tend to be compressed, with losses being recovered through higher notional gross margins when international prices fall.

The increase in margins is often larger for regional prices than metro prices but in both cases, the increase is not sustained over time and the close correlation is restored.

5.C.8 Relationship of retail prices (pump prices) to terminal gate prices, Singapore petrol prices and crude oil prices [C12] [C13] [C21] [C22]

Comparison of data series



The above figure shows for each day from 8 January 2007 to 15 July 2007:

- the arithmetic average of industry retail prices for five capital cities (Brisbane, Sydney, Melbourne, Adelaide and Perth) as provided by Informed Sources Pty Ltd
- the arithmetic average industry terminal gate price (TGP) of AIP member companies as published on its web site by AIP
- the ex-refinery price of petrol from Singapore (MOPS95) as published by Platts plus 10% GST (note this does not include the Australian quality premium), lagged one week
- the price of Tapis crude oil lagged one week.

All figures are converted to cents per litre (cpl) where necessary using daily exchange rates. As MOPS95 prices are not published on weekends or public holidays, Saturday and Sunday prices are set the same as the preceding working day. As Tapis prices are published only twice a week, prices for days on which Tapis is not published are set in the analysis at the preceding published price.

The reason for lagging the MOPS95 prices and adding GST is to provide an approximation of the relationship between TGP and MOPS95 that exists in Caltex's pricing formula (a 7 working day rolling average) and may exist in competitors' formulas, for the purpose of illustrating the close relationship between TGP and lagged MOPS95.

5.C.9 Response of retail prices (pump prices) to terminal gate prices [C12] [C13]

5.C.9.1 Observations on the data

A number of interesting observations can be drawn from the chart in the preceding section:

- retail prices display the familiar sawtooth pattern that has occurred in Australia for many years
- the retail price cycles are not uniform as Perth typically has a two week cycle and other cities (for example Sydney and Adelaide recently) may have periods of two weeks or more in which there is no price cycle – these affect the average prices, which means care must be taken in comparing Australian industry average peaks or troughs from week to week
- troughs of price cycles are typically about equal to industry average TGP, which suggests that the most aggressive discounters (most often the two supermarkets) discount down to a minimal cash margin at the bottom of a price cycle (and from time to time in certain markets may retail at below cash cost, although this market behaviour is not shown in this chart)
- TGPs closely follow MOPS95 prices, consistent with the existence of largely formula-driven price relationships between the two variables
- TGPs and retail prices do not follow crude oil prices because MOPS95 may deviate from crude oil prices for periods of months or years – note the increasing difference between refinery and crude oil prices in the March to May period
- on occasions when TGPs decrease sharply as a result of sharp decreases in MOPS95 prices, troughs of price cycles do not fall as low as TGPs and this pattern may persist for two or more weeks (and the reverse also is true – retail prices in larger capital cities may fall below TGPs when TGPs increase sharply but this effect is not shown on the Australian average chart above)
- the amplitude of price cycles (peak minus trough values) may vary because peaks and troughs vary independently of each other – peaks and troughs are most often driven by different groups of competitors, which might be called "discounters" and "non-discounters" according to their basic pricing strategies.

5.C.9.2 Causes of deviations of retail prices from wholesale and Singapore prices

Rolling average weekly retail prices, which may be derived from the daily retail prices shown in the chart, reflect a combination of competitive forces as discussed above. As a result, an increase in the rolling average weekly retail price relative to TGP (hence MOPS95) may be due to higher troughs relative to TGP, higher peaks relative to TGP, or a combination of both.

Examination of retail price cycle peaks and troughs relative to TGP can indicate which group of competitors is causing the rolling average retail price to deviate from average TGP or MOPS95. Clearly, changes in the depth of discounting are an important factor from time to time.

However, a deviation from the typical pattern of troughs relative to TGP does not mean anything abnormal is occurring. For example, if a discounter set retail prices on the basis of a historical inventory cost, or relative to the previous day's retail price by a fixed amount, one could expect the retail price to fall more slowly than TGP.

The reverse would also be true, so that retail prices could increase more slowly than TGP when TGPs increased sharply.

For retail prices to track TGPs downwards would require a discounter to apply a complex pricing rule that took account of current retail prices in the market, its current TGP and the day of the week ie the stage of progress through the typical weekly price cycle. Such a complex rule may be implausible for daily retail operations. In other words, deviations from TGP may result from the application of necessarily simple competitive pricing rules. This is a matter the ACCC could explore in its inquiry.

5.C.10 Response of retail prices (pump prices) to Singapore petrol prices [C21] [C22]

5.C.10.1 The retail price is not rigidly related to the Singapore petrol price

As discussed above, there is a close relationship between industry average retail prices and TGPs, with retail price troughs typically close to the TGP line. There is a less close relationship between retail prices and MOPS95.

Each competitor has its own pricing system (made up of a set of pricing rules) and there is presumably no single set of pricing rules used across the industry. In Caltex's case, the rules are partially deterministic (based on fixed formulas) and partially heuristic (based on Caltex's experience of optimum responses to competition). Competitors will have different rules and differing marketing strategies, creating differing responses to MOPS prices.

As the relationship between retail prices and MOPS95 is not deterministic for Caltex and certainly not for the industry as a whole, examination of the relationship between these variables must be empirical ie based on examination of historical data.

The ACCC should not expect that retail prices will be the exact outcome of a set of pricing rules – in particular, there will not be a precise relationship between retail prices and MOPS95.

Considerable caution needs to be exercised by the ACCC to allow for market variability (including the extremes of market variability) before drawing conclusions as to whether particular observations constitute normal or unusual market behaviour.

5.C.10.2 Modelling the market is important for monitoring purposes

Market observations can be purely empirical or based on an underlying theoretical model. In order to create insights into the market, a realistic model should be used for monitoring purposes. The ACCC is in a unique position through its inquiry to obtain information to help determine such a model – competitors are prevented by law from seeking such information.

To explain what we mean, consider a simple (not necessarily realistic) model in which the retail price is set equal to the TGP five days earlier plus a fixed margin. If retail price was plotted against TGP and TGP was quite volatile, the relationship (correlation) between the two lines would be quite poor. If the implied retail margin on the chart (ie the difference between the two lines) increased substantially on a particular day, the most likely reason would be the charting methodology, not any underlying issue with the market.

On the other hand, if the retail price was plotted against the TGP with a five day lag, a very close relationship between the two lines would be expected. If the implied retail margin on the chart (ie the difference between the two lines) increased substantially on a particular day, the most likely reason would be some underlying issue with the market, not with the charting method.

This simple example illustrates the importance of having an accurate model of the market for analysing and charting the data, if meaningful conclusions are to be drawn.

For the Australian market, various models are possible. It is highly likely that retail prices are not directly related to MOPS95 although TGPs or other wholesale prices may be. For example, the Caltex Reference Price (CRP) is rigidly related to MOPS95, although discounted wholesale prices (MGPs – market group prices) are set relative to CRP in response to local competition. Caltex TGPs are rigidly related to MOPS95 through an import parity formula then adjusted for competition to arrive at a published price.

Factors affecting the wholesale price model may be:

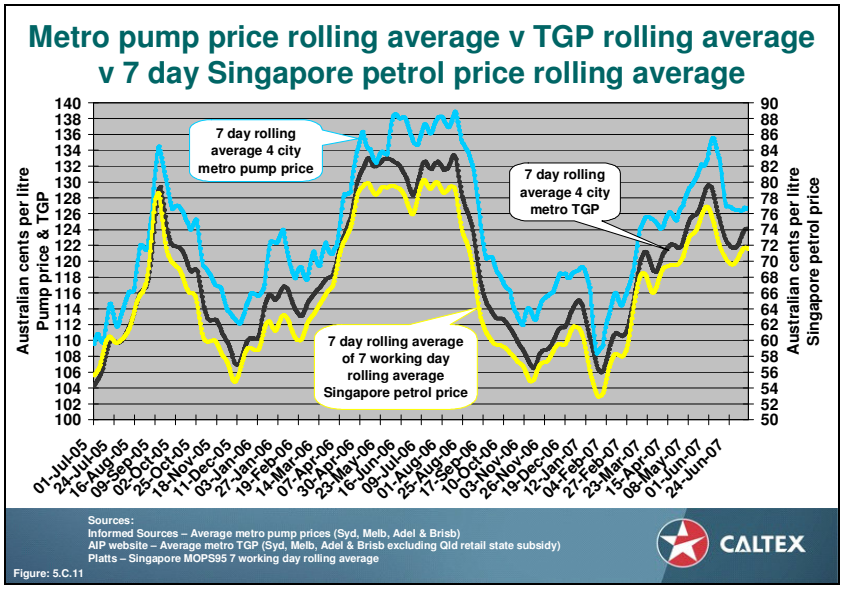
- choice of MOPS benchmark, although MOPS95 is believed on the basis of public information and buy-sell contracts to be the most common benchmark

- averaging period (if any) to smooth out MOPS volatility – Caltex uses seven working days, which equates to 9 to 11 calendar days (longer if there are public holidays in which MOPS data is not published)
- frequency of price revision (although TGPs are published daily)
- daily or less frequent adjustments in response to competition.

Various models are possible. For example, retail prices during a discount cycle could be: based on a set reduction in cpl per day; a proportional reduction of the gap to TGP; a reduction relative to the most recent buy price (an inventory based model); or some other model.

It is also important to recognise that prices may be the outcome of a combination of competitive pricing models. Different competitors will typically competitively determine the troughs and peaks of price cycles – the two supermarkets are the most common aggressive discounters so most often determine the depth of price cycles, and major oil companies including Caltex are more likely to determine (in a competitive sense) the peaks of price cycles – so the average price is a combination of competitive forces.

5.C.10.3 Rolling average retail price closely tracks Singapore price



Interpretation of daily data is complicated by the weekly price cycle and the fact that wholesale prices are based on a rolling average of Singapore prices, not daily prices. As a result, it may not be meaningful to assess the responsiveness of retail prices to MOPS prices over short periods of time as closely as desired by the ACCC if daily data is used.

Caltex therefore has removed the weekly price cycles by taking a 7 calendar day rolling average of retail prices for Brisbane, Sydney, Melbourne and Adelaide. Perth has a two week cycles so has been excluded from this analysis. (It could be included by using a 14 day rolling average.)

To compare retail, terminal gate and MOPS95 prices graphically, Caltex has used the following model of the market:

- the underlaying retail price (ie excluding the discount due to the price cycle) is based on the same day's TGP
- the TGP is based on the previous 7 working days' MOPS95 prices (eg a Wednesday TGP would be based on the Tuesday MOPS95 price and the six preceding working days prices for MOPS95).

This means that retail prices are related to a 7 working day rolling averages of MOPS95 prices. It follows that the rolling average of retail prices must be based on the rolling average of the rolling average of MOPS95 prices. This data is shown in the figure above.

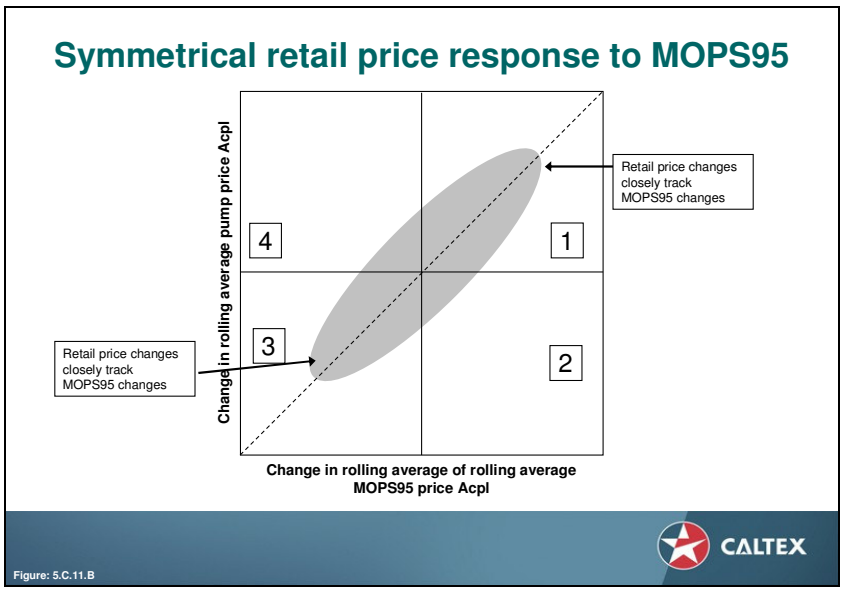
This is quite different from the ACCC's chart (Issues Paper p8) which compares the rolling average of retail prices with the rolling average of MOPS95 prices lagged one week. **There does not appear to be any behavioural model of the market underlying ACCC's chart so any conclusions drawn from it may not be meaningful.**

The figure above shows a close relationship between retail, TGP and MOPS prices. However, careful examination shows that the turning points of the retail price series often lag the TGP and MOPS series by about a week.

There are at least two possible explanations: that retail prices reflect TGPs with a lag of several days rather than the same day's TGP, which is quite plausible (so Caltex's model should be changed); or the TGP rolling average used by key competitors is longer than 7 days, say 14 days. The latter possibility is examined later in the section of the submission.

With information on pricing systems of competitors (such as may be provided by the ACCC inquiry), the pricing model analysis could be modified and tested. The ACCC should certainly be in a position to formulate a realistic (if necessarily simplified) monitoring model.

5.C.10.4 Retail price response to upward and downward MOPS movements is symmetrical

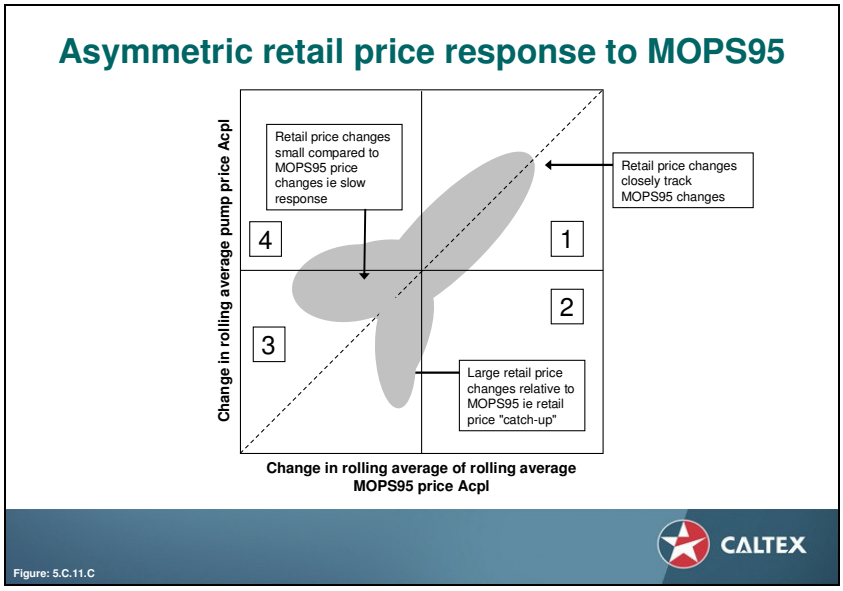


It is often alleged that retail prices are "quick to rise and slow to fall" in response to international price changes. However, Caltex research in 2006 based on weekly average data (see elsewhere in this submission) supported our view that the response is symmetrical.

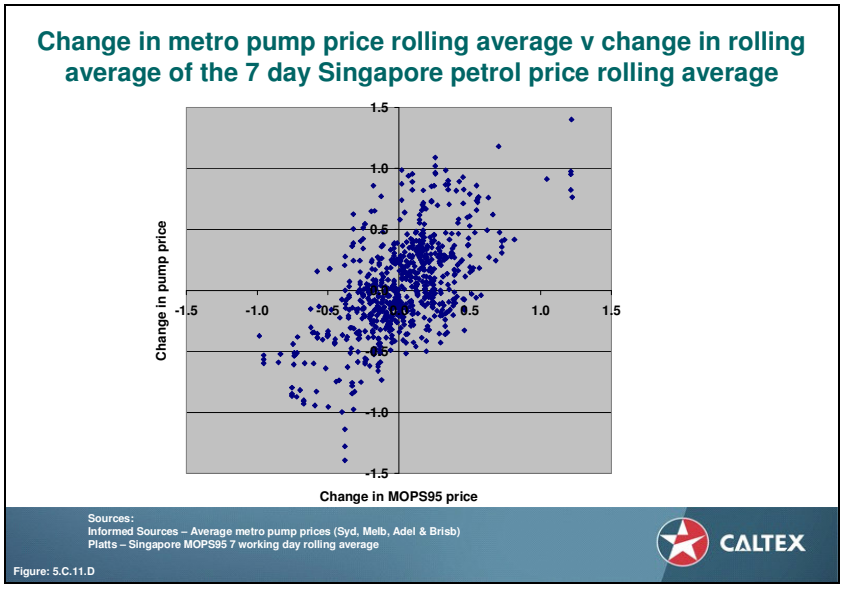
This can be empirically tested using Caltex's data on rolling average prices as discussed above.

The figure above illustrates what would be shown if the response was symmetrical ie prices increased in response to a MOPS95 increase in the same way as prices decreased in response to a MOPS decrease.

An exact relationship between retail and MOPS95 prices would be the dotted line bisecting quadrants 1 and 3. In reality, the relationship is not deterministic so a symmetrical response should be shown by a cluster of points equally distributed around the line. Some points would be in quadrants 2 and 4, representing missed turning points and for a symmetrical response an equal number of points should be in each of these quadrants.

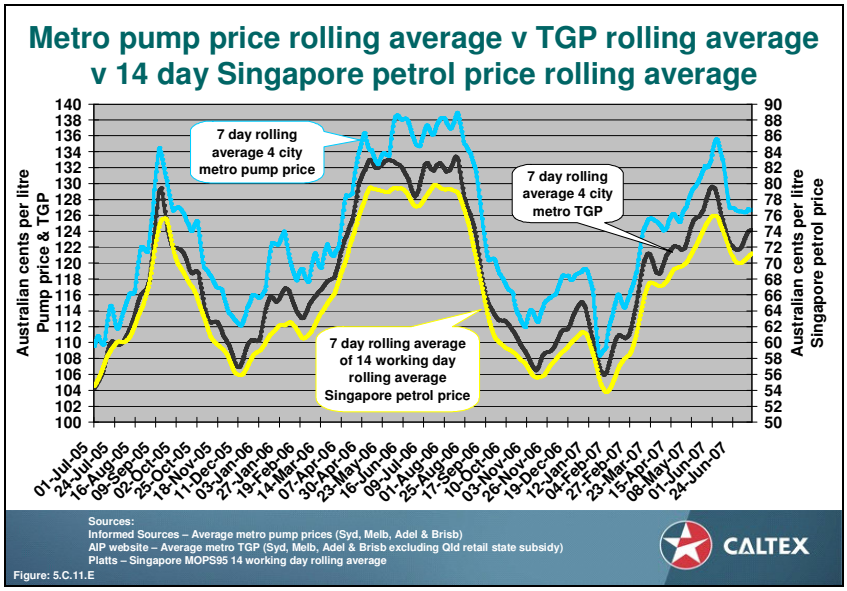


The above figure illustrates what an asymmetric response would look like. In quadrant 1, retail price changes would be similar to MOPS price changes. However, in quadrant 3, there would be many small retail price changes relative to MOPS changes ("slow to fall") but a few large retail price changes as they "caught up" to MOPS over a short period. There would also be more data points in quadrant 4 (retail prices increasing while MOPS decreased) than in quadrant 2.



The above figure plots the changes in rolling average retail price from the chart in Subsection 5C.10.3 against the changes in rolling average of the rolling average MOPS95 price.

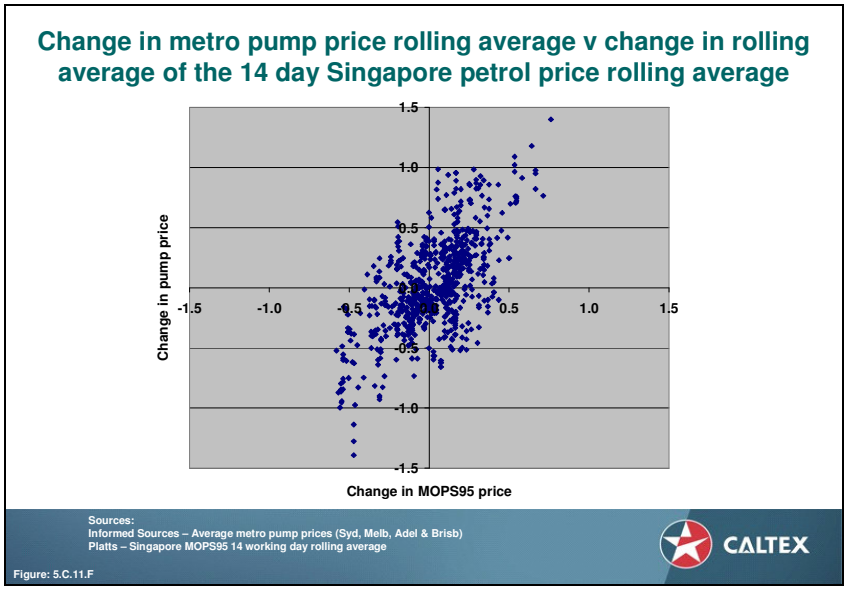
The points in quadrants 1 and 3 demonstrate the characteristics of a symmetrical response, as do the points in quadrants 2 and 4. The data do not show the characteristics of an asymmetric response.



Given the lag in retail prices versus TGP and MOPS using a 7 day rolling average, a model was tested with retail price related to a 14 day rolling average of TGP and MOPS, as shown in the figure above.

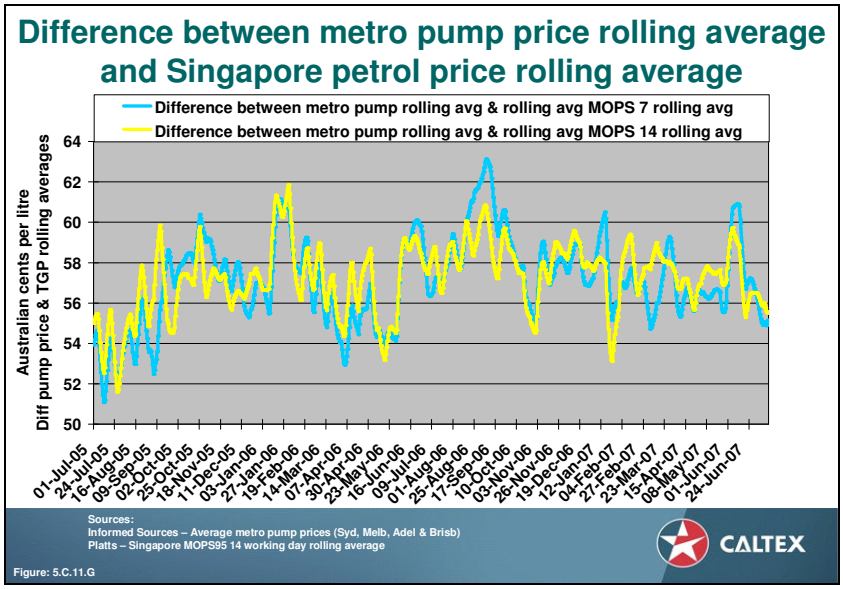
This generated a better match of retail and MOPS turning points (peaks and troughs) but a poorer fit of TGP to MOPS.

Overall, the best fits were a 7 day rolling average for TGP versus MOPS and a 14 day rolling average for retail v MOPS.



The above figure shows the closer relationship between retail prices and MOPS95 by using a 14 day rolling average of MOPS95 instead of a 7 day rolling average.

5.C.10.5 Monitoring outcomes are dependent on model used



The above chart plots, for the two models used (7 and 14 day rolling average MOPS95 price), the difference between rolling average retail price and the rolling average of the rolling average MOPS95 price.

The ACCC has highlighted two occasions (in June and January 2007) on which it considers there was a marked disparity between retail and MOPS95 prices on the basis of its own techniques of rolling average analysis. It considered these differences sufficiently anomalous to make public statements about them.

The chart above (7 day rolling average MOPS95) shows peaks in the price difference occurred but similar differences had occurred several times since mid-2005. The peaks were within the historical range of volatility and do not seems remarkable in hindsight, particularly considering the differences decreased rapidly after the peaks.

If the 14 day rolling average line is examined, there are no significant peaks around the two dates.

As the 14 day model has better fit than the 7 day model, this reinforces the point made earlier that **apparent peaks may be the result of the monitoring model and not represent any unusual operation of the market**.

Any market model will generate a pattern of rolling averages and these may differ considerably between models, as demonstrated by the above chart. So an incorrect model of what is "normal" may produce incorrect indicators – by way of rolling averages – by which to judge what may be "abnormal" price outcomes.

Conversely, any technique for tracking data – such as the rolling averages used by ACCC – implies an underlying model (even though it may not be possible to specify working backwards what that model is). As a result, an assessment of historical and current data based on this technique may throw up apparent anomalies in market behaviour that don't actually exist – they are the outcomes of an unrealistic model (specified or implicit) – not outcomes of the market.

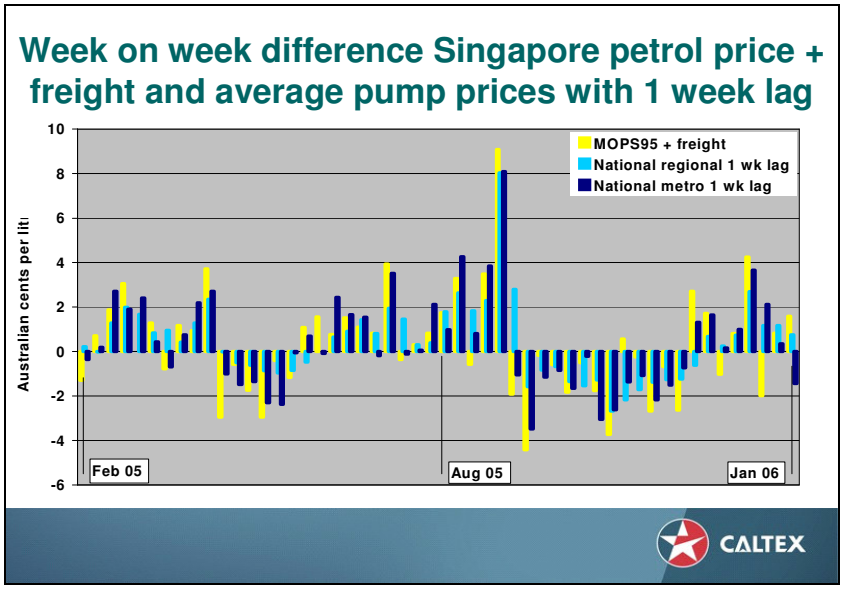
In other words, ACCC's tracking technique implicitly assumes a model of a "normal" market which may be wrong – so the assertions of potentially abnormal pricing may also be wrong because they are due to the model, not the market.

5.C.10.6 Implications for monitoring

The discussion of data in the preceding sections suggests a number of factors that should be taken into account in monitoring petrol prices:

- a realistic (albeit simplified) model of market behaviour needs to be specified
- data analysis (eg rolling average charts) should be constructed on the basis of this model
- peak and troughs need to be examined separately, not just average retail prices
- national average prices are only a rough indicator and state by state analysis is necessary before conclusions can be drawn
- any atypical events eg prolonged periods of discounting should be taken into account in interpreting aggregated numerical results
- the historical volatility of market data needs to be taken into account and an appropriate amount of time allowed for market correction before conclusions are drawn about market behaviour - this could be up to several weeks.

5.C.11 Response to international prices – 2006 research [C21] [C22]



There is a one week lag between changes to international prices and their impact on metropolitan and regional pump prices.

There are two issues in examining the response of pump prices to international prices – the timing of the price changes and the size of the price changes.

The chart above analyses the timing of price changes. (The next chart analyses the size of price changes.) The chart considers the correlation of national average metro and regional pump prices (weekly average across all brands) one week after a change in the Singapore price (MOPS95) plus freight (since the calculated import parity price includes freight to Australia).

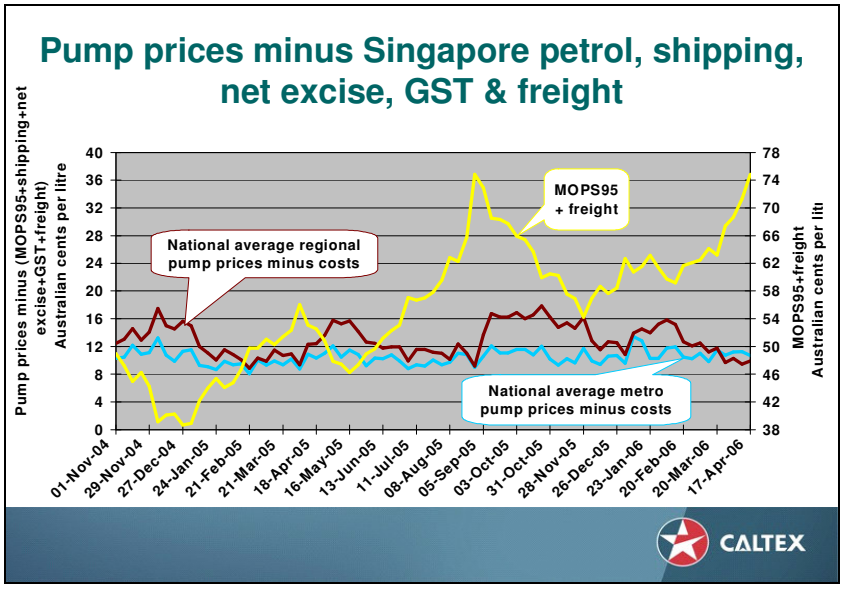
As shown by the chart, changes in Singapore petrol prices or Australian/US dollar exchange rates typically take one week to flow through into either increases or decreases in pump prices. These changes are often masked by weekly cycles in pump prices in major capital cities.

A criticism commonly levelled at oil companies by the public is that petrol prices are quick to rise but slow to fall in response to international prices. This is clearly not correct – prices change equally fast in both directions, with rare exceptions.

The one week lag could be explained by wholesale pricing formulas. Caltex uses a 7 working day rolling average to smooth out daily MOPS95 fluctuations when setting wholesale prices and time required for stock turnover at service stations could further extend the response time. Other companies may also employ similar averaging of MOPS, which was used by the ACCC in price regulation up until 1998.

The chart shows changes in pump prices (with a one week lag) and Singapore prices are well correlated, with matching of turning points in most cases. However, the amplitude of metro price changes tends to be less than MOPS changes and regional prices show less amplitude than metro prices ie. country prices respond quickly in both directions but the response is damped.

While the correlation with international prices is quite strong, other factors can greatly affect the correlation on a week by week basis, including weekly competitive price cycles.



Notional gross margins vary up and down with international price changes but these differences are not sustained over time.

The above chart shows national average metro and regional pump prices minus MOPS95, shipping, net excise, GST and freight ie. retail and wholesale gross margins.

The chart shows that as international prices increase, gross margins fall. As international prices decrease, gross margins recover. Some commentators tend to focus on periods in which margins are increasing but fail to make public comment on periods when margins are falling. However, it is clear from the chart that margins return to a historical level over time.

In metro areas, the variations are smaller than in regional areas. Caltex can't offer a definitive explanation for regional pump price behaviour as we operate very few sites in the country. However, a plausible explanation is as follows.

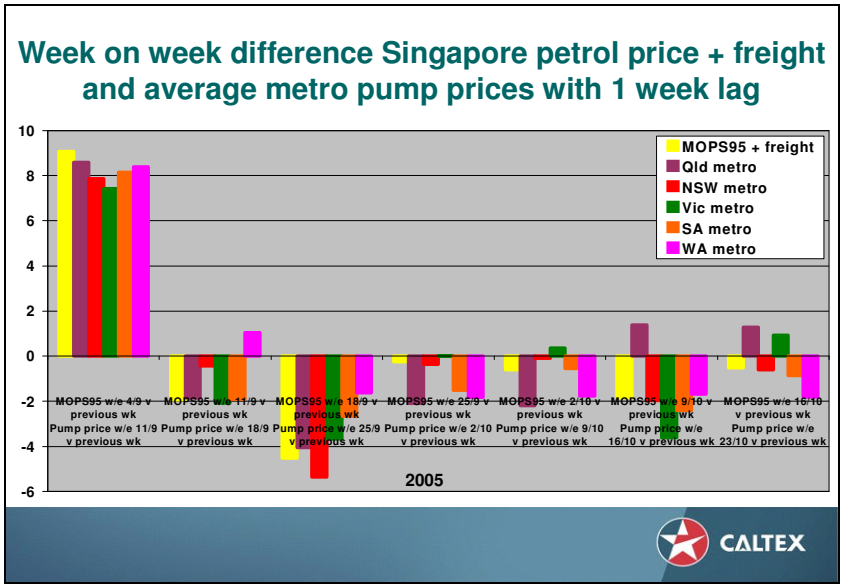
There is less competition in regional and rural areas than in metro areas where major supermarket chains have a strong presence. While benefiting motorists through lower prices, supermarket chains have built volume at the expense of smaller, typically independent, service stations and they also have a stated policy of pricing against the lowest competitor in a country town.

As a consequence, the volume gained by any non-supermarket service station from discounting could be short-lived as a result of the pricing responses of competitors, so the net result of discounting could be no volume gain but a reduction in retail margin. For this reason, pump prices, through normal competitive forces, are likely to move slowly in response to a decrease in wholesale prices with a consequent impact on retail margins.

Similarly, when Singapore prices fall, hence wholesale prices (the two are typically rigidly linked), country pump prices follow more slowly than in the city. A similar effect occurs when wholesale prices increase as a result of increasing Singapore prices – an individual retailer cannot raise pump prices easily without loss of volume, so retail margins are compressed. Note that changes in CRP are rigidly linked to wholesale prices to resellers, so Caltex wholesale prices to resellers respond quickly to falling international prices. However, as discussed earlier, this decrease in wholesale prices may take longer to flow through to customers because of the need for retailers to recover margins lost when prices increased.

The large price spike induced by Hurricane Katrina and considerable uncertainty about the global supply outlook may have had a greater impact than normal on margins, as retailers anticipated a prolonged period of high wholesale prices. Higher margins may have been necessary to cover higher cash costs for petrol deliveries, particularly if additional working capital was difficult to obtain from lenders.

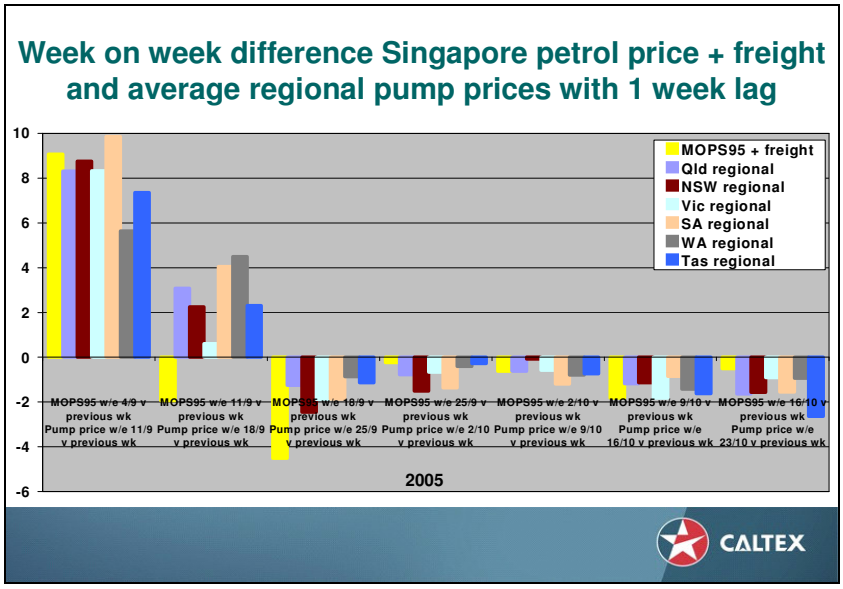
Case study – impact of Hurricane Katrina on Australian retail prices



Pump prices in metropolitan areas closely followed the rise and fall in international prices after Hurricane Katrina.

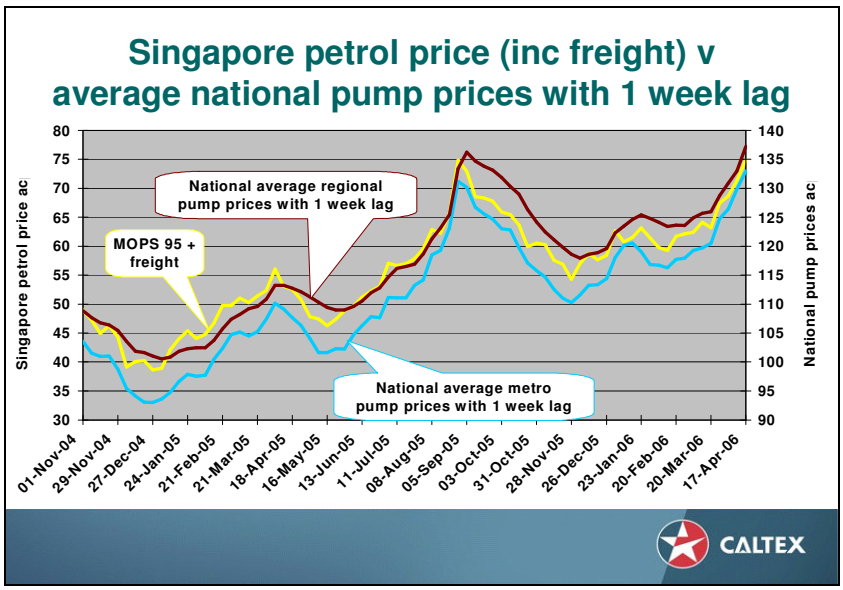
The above chart shows a short period after Hurricane Katrina struck on 31 August 2005. Changes in metro pump prices for petrol (lagged one week to account for the flow-through of international prices) are shown against changes in the international price, represented by MOPS95 plus freight.

The first set of bars shows that the Singapore petrol price (plus freight) increased 9 Acpl in the week after Katrina struck and metro pump prices rose on average about 8 Acpl the following week. A week later, the Singapore price fell 2 Acpl and most prices fell a week later by the same amount. Similar patterns occurred the following week. The clear message from the chart is that metro pump prices increased and decreased closely in line with Singapore prices in both directions.



Pump prices in regional areas generally followed the rise and fall of international prices after Hurricane Katrina with the exception of the second week.

The above chart shows the same period as the previous chart, this time for regional prices. The pattern of response here is quite different from metro areas in the second week after Hurricane Katrina struck. Regional prices on average matched the increase in Singapore prices in the first week but in the second week, regional prices increased rather than decreasing with Singapore prices. The direction of the change was correct in the third week but the amplitude less (consistent with history) and in the following weeks the changes were fairly well matched. This meant that on a cumulative basis, country prices stayed relatively high against Singapore prices rather than falling as for metro prices.



Pump prices in regional areas eventually returned to their historical relativity to international prices.

Following the initial steep rise in international prices due to Hurricane Katrina, regional pump prices did follow the subsequent fall, however did not fall to similar margin levels relative to international prices until the end of December.

Historically on every occasion that metro prices decrease, the margin between regional and metro prices increases, for up to 3 months. When metro prices increase, the margin is greatly decreased.

The increase in the regional/city pump price difference post-Katrina, which is also an increase in the regional pump price relative to Singapore prices, is consistent with this earlier experience. Over time, prices average out and the regional/metro relationship is highly correlated, as shown on the chart.

5.C.12 Price arrangements and price support [C27]

Caltex sets a national Caltex Reference Price ("CRP") for each type of fuel based on recognised international markers including the Singapore price for refined product, international shipping freight rates, exchange rates, wharfage and customs and product quality premiums. Port specific markers are volume weighted to determine a national average and a rolling seven working day average is used for each marker. The CRP is reviewed daily and moves when the calculation of the markers provides for a CRP that is either 0.5 cents per litre above or below the previously set CRP.

All retail site customers of Caltex are charged the CRP for the fuel they order plus freight where they have elected to have Caltex arrange delivery to the retail site.

A state based pricing manager employed by Caltex monitors prices of competitors. If the pump price of a Caltex retail customer does not allow the site to earn a reasonable fuel margin taking account the site's net buy price, Caltex may provide price support, in accordance with the terms of an agreement with the retail customer to a level allowing an assumed reasonable fuel margin to be earned.

The operational details of this process are that Caltex operates a tactical pricing system (TP) which is standard in both metropolitan and regional areas. Within this system the physical market is broken up into discrete and uniquely numbered areas we call market groups ("market groups"). Each market group will contain one or more Caltex branded sites which are Caltex customers. Each market group will also contain details of the competitor locations in that group which are graded in importance and uniquely numbered.

Caltex subscribes to a third party service called Fuelwatch which is provided by Informed Sources (Australia) Pty Ltd. The Fuelwatch service provides independently obtained pump price information for each product sold at each location of all subscribers to Fuelwatch. Almost all of the major retail fuel chains subscribe to Fuelwatch.

The pump price information received from the Fuelwatch service is downloaded into TP every 30 minutes between 5am and 11pm.
The petrol market regularly faces competitive price pressure and in the normal course of business Caltex may receive a request from a retail customer for price support, or may make a decision to offer price support to a retail customer on a market group by market group basis to allow those customers in each Market Group to remain competitive. The amount of price assistance is calculated as the applicable CRP plus freight less the supported buy price that would allow the sites in the market group to earn an assumed reasonable margin – this supported buy price is described as the market group price (MGP) and is communicated electronically to the Caltex customers in that market group using the TP system.

The TP system used in all states is the same except that in Queensland the pricing system is designed so that for the purpose of determining the MGP the pump price is always recognised to be lower by the amount of the government retailer subsidy being currently 9.2cpl (GST incl) due to each site's eligibility to claim the subsidy.

When a decision is made to offer or alter the price assistance for a market group an electronic message is sent by Caltex to the sites within the market group advising of the MGP, the amount of assistance, and the effective time. Another part of the message also advises that the assistance is conditional with a stipulated maximum pump price. The assistance is based upon metered sales through the pumps.

Retail customers receiving price support from Caltex always remain free to post pump prices at less than the maximum supported price.

Point of sale (POS) equipment at each site records volume sold through the pumps at each price level and relays this information to Caltex to calculate the dollar amount of assistance due to each site which is then paid within 24 hours by Caltex.

Unleaded petrol is used as the basis for price assistance decisions, with the advised maximum resale pump prices for proprietary premium petrol grades (Vortex 95 and Vortex 98) being created by adding a defined differential to the unleaded petrol MGP and maximum resale pump price .

5.C.13 What would be impact on a competitor of stopping price cycles as a marketing strategy? [C35]

If Caltex chose to price the sites where it controls prices at a fixed margin above MOPS95 then we **anticipate** the following potential actions by our competitors and franchisees:

Impact on competitors

On the first occasion when Caltex did not cycle to a weekly peak and set a price somewhere in the middle of a usual cycle, we would expect our competitors in the relevant market groups to immediately match our prices. Within a few hours or perhaps days we expect that they would start discounting below our board price. With only one player keeping prices steady, a price cycle would continue from this lower starting point and in all likelihood would continue down until the following week. There is strong potential for the cycle to go deeper than usual having commenced at a lower base. There appears to be very little likelihood that the cycle would be shallower than normal.

In this first week, Caltex would generate considerably lower sales during the period of the cycle and would not generate increased sales at the beginning of the cycle week.

We expect this pattern would be repeated for many weeks before any competitors decided to match our pricing behaviour. If one competitor elected to match our pricing behaviour there would still be a strong likelihood that another competitor would wish to continue to try and undercut our prices and cycle down with the remaining competitors.

It is hard to see all competitors electing to match each others' behaviour and cease cycling.

Impact on franchisees

Caltex is the last major oil company to supply a network of many individual franchisees who must make their own pricing decisions. We only set the retail price at fewer than 40 metropolitan locations in Australia. Our current pricing arrangements allow for franchisees to receive price support to enable them to meet competition in their area or market group. Whilst they rely heavily on shop sales for their income, the fuel income is still significant and, more importantly, drives customers into their shop.

If Caltex decided to price its own stores and commission agents at a flat price our franchisees would not necessarily follow our pricing behaviour. Indeed we would be under enormous pressure to continue to provide price support so that the financial viability of our franchisees was protected.

Our competitors would be unlikely to know exactly which sites bearing Caltex branding were operated by Caltex and which were operated by franchisees.

Caltex's current position on price cycles

The weekly price cycle has many negatives for Caltex:

- our public reputation suffers
- supply chain asymmetry as we try and get more deliveries to sites in the high volume days reduces transport efficiencies
- forecourt congestion occurs on high volume days
- intense competition reduces our margins
- our franchisee price support mechanism is extremely complicated and a possible competitive disadvantage for Caltex
- there is a significant cost in obtaining site price data and in having staff review site prices many times every day. (There is no day where prices are not monitored).

5.C.14 Daily petrol sales respond to price cycles, to the benefit of consumers [C33]

The following analysis of daily petrol sales in response to price cycles was contained in Caltex's 2006 submission to the Senate petrol pricing inquiry.

Petrol prices in many metropolitan areas vary in a weekly cycle. The pattern is not absolutely consistent from week to week and there may be periods where discounting continues over two or more weeks.

According to the ACCC web site, prices in Brisbane, Sydney, Melbourne and Adelaide in March to June 2006 typically were lowest on a Tuesday and highest on a Thursday, with Wednesday by implication being a day of transition from low to high prices. For Perth, prices were most commonly lowest on a Sunday and highest on a Wednesday.

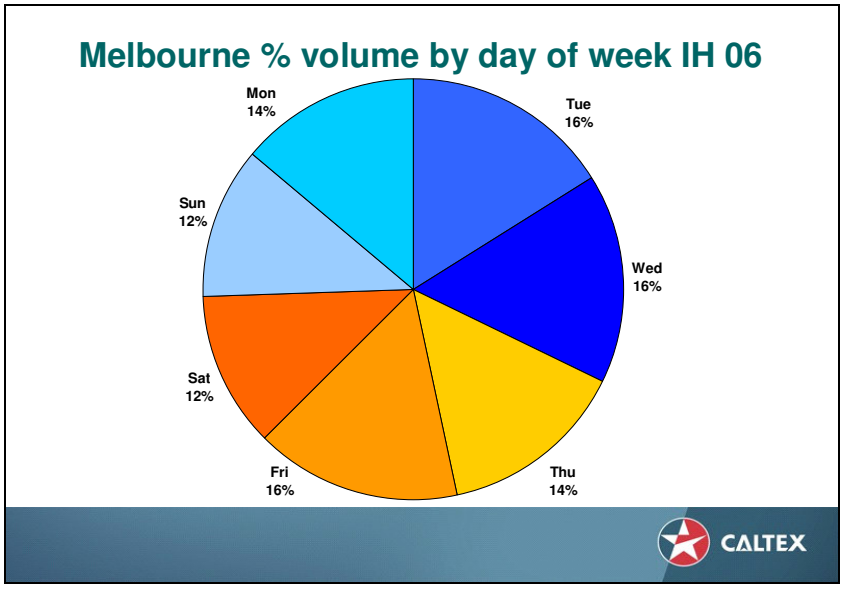
Caltex has analysed average Caltex prices by day of week for Brisbane for January to April 2006 and Melbourne from January to June 2006. This analysis shows the highest average Caltex prices on a Thursday and lowest on a Tuesday, which is consistent with the ACCC data for March to June.

Also analysed were average Caltex daily sales volumes. The results show that Caltex volumes are highest on Tuesday and Wednesday when prices are lowest and fall sharply on Thursday when prices have cycled upwards. Weekend volumes are lower despite lower prices, probably reflecting the closure of most businesses.

The daily volumes show that motorists are sensitive to prices and modify their purchasing behaviour to take advantage of price cycles. It is therefore reasonable to conclude the weekly price cycles typical of many metropolitan areas benefit many consumers who wish to take price into account in their purchase decisions.

Contrary to some assertions, prices do not increase to “take advantage” of higher petrol demand on weekends. In fact, both prices and volumes are on average lower on weekends than weekdays.

5.C.15 About 55% of petrol is sold on low-priced days of the week in the three east coast capital cities compared with high priced days [C.33]



The above chart is based on the same data for Melbourne as above but shows sales volumes by day as a percentage of weekly sales. The volume in the three days preceding Thursday – these are the lowest priced days of the week – is 54% of the weekly total. The volume in the three days after Thursday totals 46%.

Another way of expressing this data is that about 16% more petrol is sold in Melbourne on lower priced days than on higher priced days.

Similar charts could be constructed for Sydney and Brisbane. For Sydney, the volume in the three days preceding Thursday – these are the lowest priced days of the week – is 55% of the weekly total. The volume in the three days after Thursday totals 45%. 22% more petrol is sold in Sydney on lower priced days than on higher priced days. For Brisbane the corresponding figures are 56%, 44% and 25%.

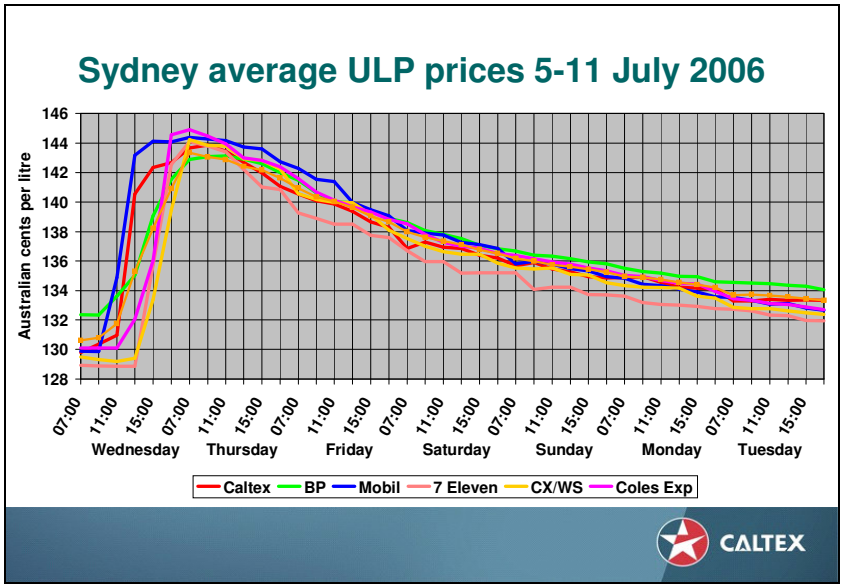
If we take the average across all three cities, the volume in the three days preceding Thursday – these are the lowest priced days of the week – is 55% of the weekly total. The volume in the three days after Thursday totals 45%. 21% more petrol is sold in the three cities on lower priced days than on higher priced days.

Price sensitive motorists can save money by watching the price cycle and, if they can, buying petrol when it is cheaper – this is typically Tuesday in large metropolitan areas. In Perth, Sunday is typically the best day to buy.

The following table provides some volume data for 2007. It can be seen that total average volume on the three cheapest days (Sunday to Tuesday) is 45% of the weekly total and on the three highest priced days(Thursday to Saturday) 36%. On Wednesday, the price transition day, 19% of the volume is sold probably representing a last minute rush to purchase before all prices typically increase.

Petrols volumes for June 07 NSW metro	
Day	**Average daily volume %**
Sun	11.56
Mon	14.16
Tue	19.16
Wed	19.49
Thu	11.42
Fri	13.10
Sat	11.11
Totals	100

5.C.16 Petrol prices don't all increase at the same time and Caltex is not aware of any collusion – only fierce competition that benefits consumers [C28]



Petrol prices are often discounted in major capital cities – and heavily – as a result of intense competition for customers. Service station dealers concentrate on petrol discounting to drive overall petrol sales volumes and associated shop sales. Supermarkets also use low petrol prices and shopper dockets to drive supermarket sales.

Petrol prices don't all increase at the same time - but sometimes it does look like this because, once a price increase is made by one competitor, other competitors may follow very quickly, as shown in the above chart. The data in the chart is from Informed Sources.

Pump prices often appear to jump up together after they have been discounted heavily for several days. Both discounting and price jumps are the result of a highly competitive and price-sensitive market where competitors' prices are readily visible on price boards.

In a competitive market, what goes down must come up. Deeply discounted prices on a Monday or Tuesday benefit the 60 per cent of motorists who take price into account when buying petrol. Petrol is "on special" every week – but the early week discounts are unsustainable.

Some petrol retailers – in particular the supermarket chains – are discounters. We believe they discount petrol to drive sales through supermarkets or service station convenience stores, as well as increasing petrol volume.

Other petrol retailers don't lead discounting but follow very close behind and match the prices of the discounters. Caltex receives electronic data on the market prices of competitors every 30 minutes from an independent price monitoring service and reviews its prices several times a day. Australia's consumer watchdog, the Australian Competition and Consumer Commission (ACCC), receives information daily from the same monitoring service.

The market works in various ways but the following is typical. At the high-priced point in a cycle, pump prices in an area will be similar, with the operators of all service stations closely watching their competitors' price boards. When one station reduces its price to increase sales, competing service stations act quickly and also reduce their prices to avoid losing sales to a competitor with a lower petrol price. This pattern is repeated over several days.

Not long into the cycle, oil companies will often provide discounts (known as "rebates" or "price support") off the initial wholesale purchase price paid by franchised dealers in order to help them meet the competition and cut prices at their sites.

Without rebates, franchised dealers would soon face losses as pump prices fell. With rebates, over the course of a discount cycle, dealers' retail margins typically do not vary substantially, although dealers are free to set their own margins. Rebates are available to all franchise locations, both city and country.

After several days of the discount cycle, with prices decreasing, one wholesaler will no longer be able or willing to sustain the low wholesale prices and will advise its franchised dealers that rebates will cease from a particular time. Prices may also increase at company-operated or commission agent sites. Franchised dealers are free to set their pump prices at any level but typically they will increase them in line with the increase in wholesale price. Other wholesalers, observing the pump price increase, may also cease rebates or increase the pump prices under their control, so that all pump prices may increase in rapid succession.

This behaviour is neither anti-competitive nor illegal and in fact results in lower prices on average over the cycle. Consumers benefit as they have the opportunity to buy petrol at the low point of the discount cycle.

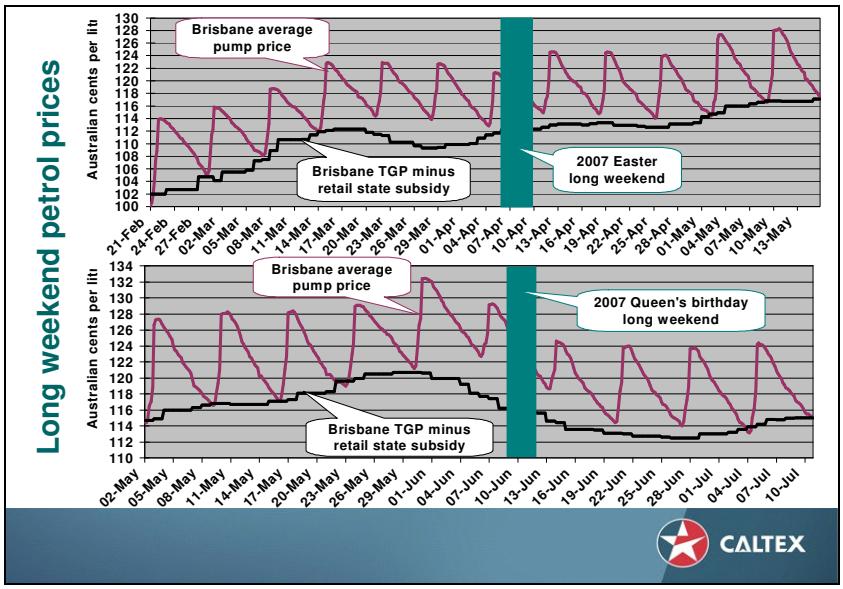
The ACCC investigated price variability in its December 2001 report and concluded “it is likely that consumers in aggregate benefit overall from price cycles.” The ACCC also did not support any of the options it considered to limit price cycles as it was concerned that any such intervention could have the effect of increasing prices.

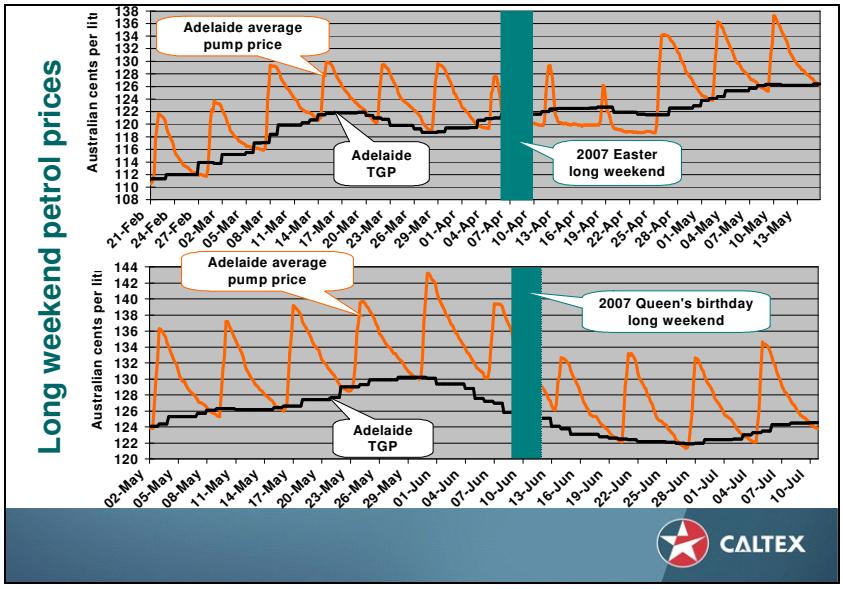
5.C.17 Prices do not jump because of long weekends [C25]

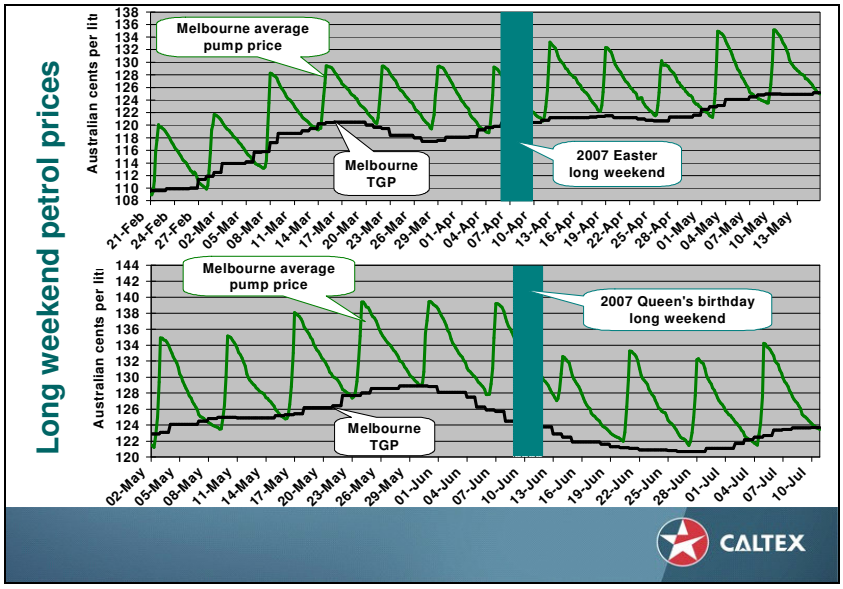
In the lead up to, and throughout, holiday long weekends pump prices follow their typical weekly cycles. This normal behaviour is typical of all holiday periods in major metropolitan areas.

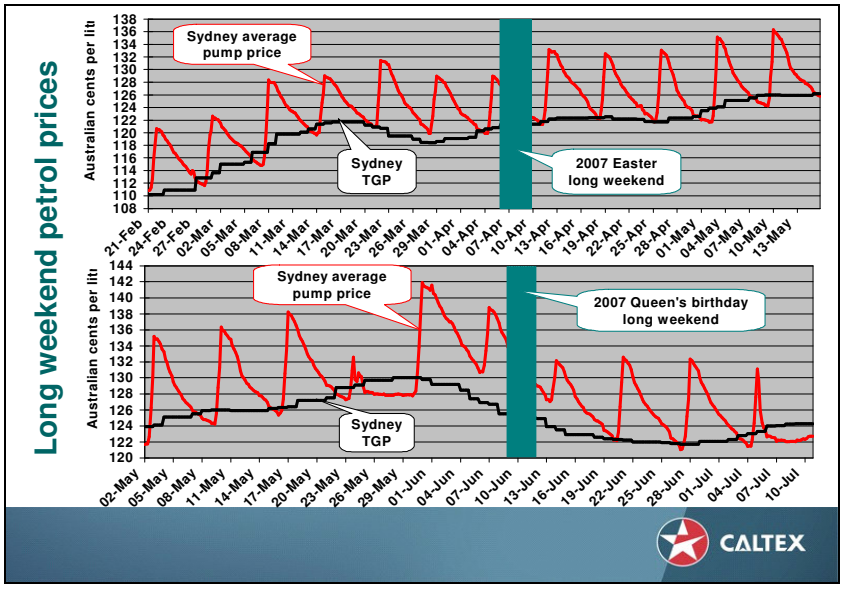
The following series of charts for capital cities show that contrary to the assertions of some commentators, pump prices did not jump up because of the Easter or Queen's Birthday (June) holiday weekends in 2007. (There is no June long weekend in Perth)

In each chart, the pump price at the trough of the cycle is typically similar to the terminal gate price ie. the bulk wholesale price ex-terminal. Pump prices at the top of the price cycle could be 10 cpl or more above TGP, although these prices are rapidly discounted over the course of the week and sometimes two weeks or more.






Long weekend petrol prices
Australian cents per litre
Melbourne average pump price
Melbourne TGP
2007 Easter long weekend
Melbourne average pump price
Melbourne TGP
2007 Queen's birthday long weekend
CALTEX


Long weekend petrol prices
Australian cents per litre
Sydney average pump price
Sydney TGP
2007 Easter long weekend
Sydney average pump price
Sydney TGP
2007 Queen's birthday long weekend
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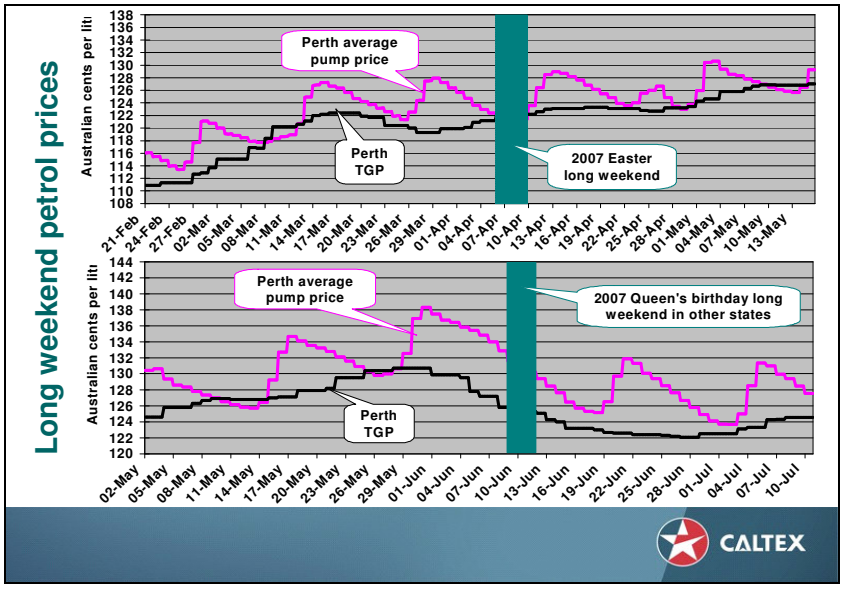
Long weekend petrol prices
Australian cents per litre
Perth average pump price
Perth TGP
2007 Easter long weekend
Perth average pump price
Perth TGP
2007 Queen's birthday long weekend in other states
CALTEX

Part 6 Current impediments to efficient petrol pricing and possible methods to address them

6.D.1 ACCC questions [D1 to D8]

In its issues paper, the ACCC asks whether there are impediments to efficient petrol pricing and a number of questions are asked.

1. Are there any impediments to pricing in general?

   Yes – regulation in WA is unnecessarily prescriptive in relation to terminal gate pricing and should be repealed in favour of the TGP provisions in the Oilcode. As discussed later in this section of in the submission, the WA FuelWatch regulation is anti-competitive because it prevents normal discounting and should be repealed.

2. Is there any anti-competitive conduct (i.e. such as price collusion or taking advantage of market power) at any of the three levels of the industry?

   No.

3. Are there impediments to importing fuel into Australia?

   No.

4. Does the relatively small number of players in the market influence the degree of competition at certain levels of the industry?

   No.

5. Is there adequate competition at the wholesale and distribution level?

   Yes.

6. Do government regulations impose constraints on efficient pricing?

   See Q1 above.

7. Is there adequate competition in the retail petrol market? How is that influenced by characteristics of the market? Some of these characteristics could include:
   • price cycles that occur in the major metropolitan cities;
   • the provision and withdrawal of price support; and
   • the role of the supermarkets in changing the structure of the retail market.

   There is adequate competition.

8. Are petrol prices at the various levels sufficiently transparent and is this an impediment to efficient pricing?

   There is a high degree of transparency at all levels of the market: Singapore prices are readily available (albeit on subscription), terminal gate prices are published daily and retail prices are published by various means including subscription services and the media.

6.D.2 The 24 hour rule and FuelWatch – Western Australia [D6]

In January 2001 the Western Australian Government introduced legislation around fuel pricing in an attempt to promote greater price transparency in its state, reduce the volatility of metropolitan retail prices and reduce the differential between city and country fuel prices.

The government introduced a system commonly known as the 24 hour rule whereby retailers in Western Australia must provide information to the Department of Consumer and Employment Protection by 2pm each day about the prices that will apply for the following day's trading. Retail prices must remain at the stated level for the full 24 hours to which they apply (6am – 6am). Prices are made available to consumers on the FuelWatch website the afternoon prior to the period in which they apply. There are substantial penalties for non-compliance, the law is vigorously enforced and retailers have been prosecuted for discounting petrol contrary to the law.

The theory behind the 24 hour rule was that increased transparency would allow consumers to easily identify where to buy the cheapest fuel and an inability to change prices frequently would ensure that prices remained as advised on the government website sufficiently long to allow purchase at that price.

For consumers, the anti-competitive nature of the 24 hour rule is more likely to lead to higher average fuel prices than would be the case in absence of the rule. In other metropolitan areas in Australia, consumers benefit from intense competition in markets in which retailers continuously discount fuel to respond to local competition, until the discounting can no longer be sustained and prices return to a profitable level. This cannot happen as effectively in Perth.

For site operators, the inability to be flexible with board prices in response to unpredictable daily volumes, as well as local competition, can negatively impact on the viability of that operation. Independent operators may be forced to leave the market in such an anti-competitive environment.

The administration costs of the program should be taken into account, although to what extent they are offset by fines is unknown.

The ACCC first investigated the 24 hour rule in 2001 and, in its assessment, wrote, "This option is not supported because it is likely to adversely affect independent retailers, which over time could lead to a lessening in the degree of competition, as independent retailers may exit the market. This, in turn, could lead to higher average retail petrol prices."[2]

ACCC's research showed that for the June and September quarters in 2001, average retail petrol prices in Perth were higher than those in Sydney and Melbourne, where their average retail petrol prices had in fact been lower in the previous two quarters.

In a letter to the Hon John Kobelke MP of 9 August 2002, the then ACCC Chairman Professor Allan Fels wrote, "In light of the important role of independents in promoting competition, the ACCC notes with concern the adverse impact of some of the Western Australian fuel arrangements on independents. The 24-hour rule reduces the ability of independents to lower prices during the day to meet their competitors. If they fail to predict the right price for the following day, they are virtually left out of the market for that day, with no benefit to their business or consumers. This is especially a problem for the smaller independent operators who cannot average their returns across a number of sites unlike the major oil companies."

In 2001 the ACCC believed, "it is likely that consumers in aggregate benefit overall from price cycles".[3] This opinion was again confirmed in April 2003 when the ACCC wrote of the 24 hour rule, "it is likely to have reduced rather than increased competition because it adversely affected independent operators".[4]

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[2] *Reducing fuel price variability*, Australian Competition and Consumer Commission 2001, December 2001, p 72

[3] *Reducing fuel price variability*, Australian Competition and Consumer Commission 2001, December 2001, p 4

[4] Australian Competition & Consumer Commission News Release, *ACCC concerned some petrol pricing arrangements lead to higher retail prices*, 23 April 2003

Impediments to efficient petrol pricing

Quantitative analysis of the impact of the 24 hour rule on prices in Perth relative to other capital cities is difficult because of the number of complex influences on prices:

- Competition is different in each capital city, affected by factors including market structure (number and type of competitors, service station density and urban design), consumer demand characteristics and supply-side (wholesale) competition.

- Wholesale contract prices may vary, for example due to differences in international freight and other costs, and product quality.

- Price relativities may also vary over time due to differences in the timing of market entry of new competitors (particularly Woolworths and Coles), changing fuel standards, and possibly changing wholesale contract terms.

- Pricing data (for example, unweighted averages of all service station prices for each day of the week) may not properly reflect pricing differences between cities for the purposes of policy analysis of the 24 hour rule, as prices should be volume weighted to take account of higher volumes at lower priced service stations.

- The larger amplitudes of price cycles in other capital cities such as Sydney or Melbourne mean that each high priced day is weighted at 1/7 of the weekly average price yet significantly less volume is sold on high priced days. In Perth, with less price volatility, daily volumes might be more similar. This could distort price relativities by overestimating average prices in capitals other than Perth.

- As explained in Caltex's 2006 Senate inquiry submission, between 2H 04 and September 2006 the average cost of shipping from Singapore to Perth was 1.3cpl cheaper than shipping to Sydney. During the same period the average retail price of petrol in Perth was 1.3cpl cheaper than Sydney. The lower shipping rate into Perth could be one factor in explaining the price relativities of Perth to other capital cities.

It is inescapable that the 24 hour rule is essentially a legal prohibition on discounting and it is difficult to see how consumers could benefit financially from such a rule. Caltex as a matter of principle is opposed to any regulation that lessens competition so remains strongly opposed to any rules that limit wholesale or retail price movements.

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