

Downstream Petroleum 2005

LANE
**ONE
FORM**

Mobil

CALTEX

Shell

bp

AiP

Australian
Institute of
Petroleum



AIP mission and objectives

AIP was formed in 1976 to promote effective dialogue between the oil industry, government and the community. It replaced a number of other organisations such as the Petroleum Information Bureau that had been operating in Australia since the early 1950s. AIP has gained national and world-wide recognition as a key representative body of Australia's petroleum industry.

AIP's mission is to promote and assist in the development of a strong, internationally competitive Australian petroleum products industry, operating efficiently, economically and safely, and in harmony with environment and community standards. Through the active involvement of its members, AIP provides responsible and principled representation of the industry along with factual and informed discussion of downstream petroleum sector issues.

As well as its policy development role, AIP produces industry codes of conduct for the safe use of fuel at all stages of its storage, handling and use. AIP also runs the Australian Marine Oil Spill Centre (AMOSC) in Geelong that develops preventative strategies for oil spills and responds to major spills to water that may threaten the environment.

AIP encourages decisions on regulations or self regulation which are taken on a case-by-case basis in the best interests of the consumer and the industry so as to achieve excellence in standards of industry safety and product performance; and works to ensure that due diligence is maintained at all times on industry safety, occupational health and environment protection.

Members and Associate Members

BP AUSTRALIA LIMITED

CALTEX AUSTRALIA LIMITED

MOBIL OIL AUSTRALIA PTY LTD

THE SHELL COMPANY OF AUSTRALIA LIMITED

AFTON CHEMICAL

ASIA PACIFIC LLC

ALCAN GOVE PTY LTD

ANTRIM ENERGY AUSTRALIA PTY LTD

ANZON AUSTRALIA LTD

APACHE ENERGY LTD

ASCON PTY LTD

ASP SHIPPING MANAGEMENT PTY LTD

AUSTRALIAN MARITIME SYSTEMS LTD

BHP BILLITON LTD

CHEVRONTEXACO AUSTRALIA PTY LTD

CLAYTON UTZ

CONOCOPHILLIPS

COOGEE RESOURCES PTY LTD

CSIRO PETROLEUM RESOURCES

ENI AUSTRALIA

FUEL DOCTORS AUSTRALIA PTY LTD

FUELQUIP (AUSTRALIA) PTY LTD

ICD (ASIA PACIFIC) PTY LTD

INTEROIL

JOINT FUELS & LUBRICANTS AGENCY (DEPARTMENT OF DEFENCE)

LEEDER CONSULTING

MECRUS PTY LTD

METRIC AUSTRALIA PTY LTD

NYNAS (AUSTRALIA) PTY LTD

OMV AUSTRALIA PTY LTD

ORIGIN ENERGY RESOURCES LTD

PACIFIC ISLANDS FORUM SECRETARIAT

PAPUAN OIL SEARCH LTD

PETRO SOLUTIONS PTY LTD

PETROSPECTION PTY LTD

QENOS PTY LTD

QUEENSLAND FIRE & RESCUE AUTHORITY

ROC OIL COMPANY LTD

SANTOS LTD

SASOL CHEVRON

TAP (SHELFAL) PTY LTD

TEEKAY SHIPPING (AUSTRALIA) PTY LTD

TERMINALS WEST PTY LTD

VAVOLINE (AUSTRALIA) PTY LTD

VERMILION OIL AND GAS PTY LTD

VOPAK TERMINALS AUSTRALIA

WOODSIDE ENERGY LTD

WOOLWORTHS LTD



Change is occurring at every level of the downstream petroleum industry in Australia, from refining through to retailing.

Australian oil refineries are upgrading petrol and diesel plants to produce fuels comparable in quality to leading countries worldwide.

The total investment required by industry to implement the Australian Government's cleaner fuels program will exceed \$2 billion. The final steps will establish minimal levels of benzene in all petrol from 2006 and further reductions in sulfur levels for premium petrol and diesel in 2008 and 2009. Cleaner fuels will make a major contribution to improved air quality.

There have been increases in the prices of crude oil and products during 2004 and 2005 in response to strong growth in demand for petroleum products around the world. These markets were also more volatile than usual in response to natural disasters and civil unrest in other parts of the world. The result was higher crude oil and Singapore product prices pushing pump prices in Australia to record levels. With our linkage to world markets, Australian fuel prices will continue to reflect key market factors such as the tightening balance of product supply and demand in Asia. Strong growth in China, India and other Asian countries is likely to remain a significant factor at least in the medium term. Regional moves to cleaner grades of petrol and diesel will ensure strong demand for these grades.

Despite this pricing pressure in the market, Australian fuel prices remain among the lowest in developed countries, both pre- and post-tax. This reflects the very high level of competition and efficiency within the Australian fuels market in all stages of the supply chain including crude oil supplies, refining, wholesaling and retail operations.

In recent years, a 15 per cent reduction in Australian operational refining capacity has meant that existing demand can no longer be met from our refineries.

Over 20 per cent of petroleum product demand is now supplied by imports, largely from Asia. The level of product imports is expected to grow and Australian refineries will continue to be price takers.

The Australian downstream petroleum industry continually seeks to improve overall fuel supply system reliability. Our industry has an internationally enviable record of reliable supply to its customers despite the unique challenges in distributing fuel in a country as large as Australia. Notwithstanding significant global oil and product supply disruptions during 2005, markets operated efficiently and Australian consumers enjoyed the highest levels of supply reliability. However, the industry recognises the risk of unforeseen events which could disrupt domestic supplies and actively participates in a variety of government sponsored contingency planning processes, such as the National Oil Supplies Emergency Committee (NOSEC).

The retail market has undergone significant change and the supermarkets' petrol retailing plans appear to be largely implemented. Innovative product and retailing offers are being developed, improving the services the industry provides to consumers and helping to ensure transport fuels continue to compete on the basis of price, brand and consumer acceptance. For example, the industry is supporting the Australian Government's biofuels target for 2010, which aims to see up to 10 per cent of Australia's petrol and diesel sold in the form of ethanol or biodiesel blends.

The industry also welcomes the Australian Government announcement to finally complete the decade long process of retail market reform, including repeal of the outdated Sites and Franchise Acts and regulation of a mandatory Oilcode under the Trade Practices Act. The reform package will create greater competition by removing regulation that discriminates against major oil companies, while preserving and enhancing the rights of fuel resellers and improving transparency in pricing and supply.

Dave Reeves
Chairman, AIP

Key messages

- The Australian refining industry is a price taker in the Asia–Pacific region: profits are related to Singapore refinery margins (product prices less crude oil costs).
- Australian refineries are generally smaller than regional competitors and must be more efficient to compete.
- The Asia–Pacific region has moved to a negative regional supply balance due primarily to rapidly increasing demand over a static supply.
- Demand growth and the move to cleaner fuels in the Asia–Pacific region have put upward pressure on prices.
- The Australian downstream petroleum industry has an excellent record over recent decades of ensuring adequate supplies and any regulatory measures to address perceived security of supply issues would prove counter-productive.

Petroleum refining in Australia

In 2004–05, domestic refineries supplied around 77 per cent of petroleum products required by major industries and the fuel distribution network of over 6500 service stations. The reliability of the fuel supply system is outstanding given the unique logistical and geographic challenges in Australia.

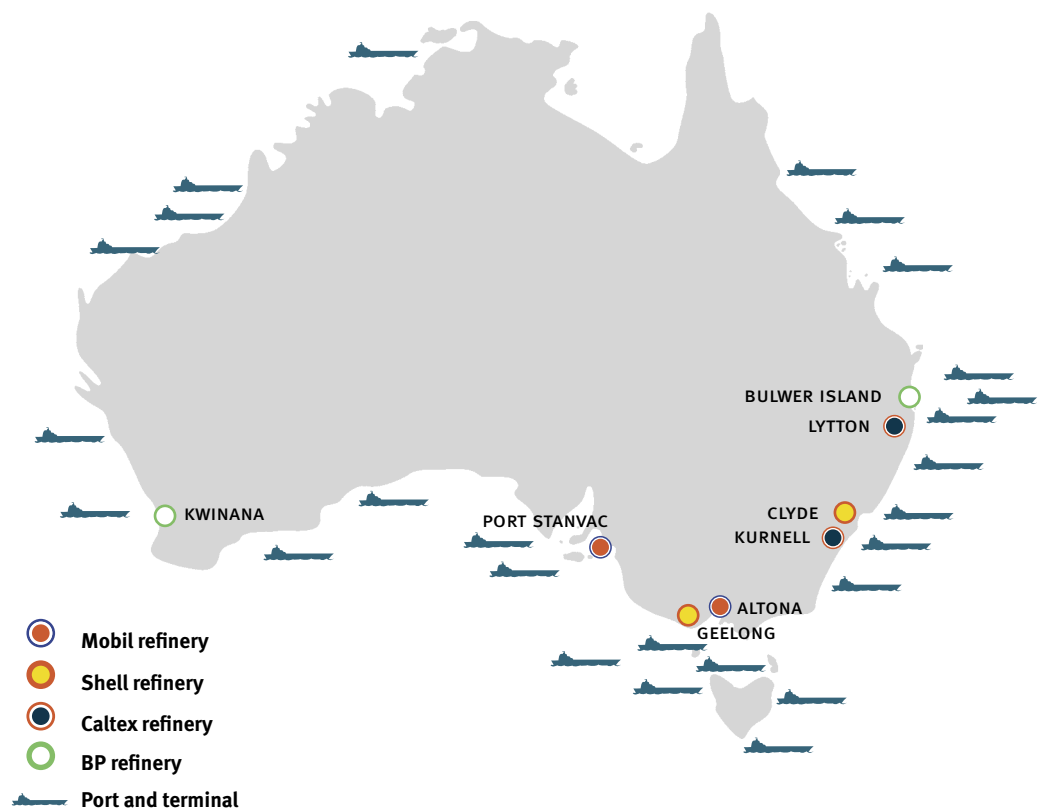
The Australian oil refining industry produces the full range of petroleum products including:

- petrol (44%)
- diesel (32%)
- jet fuel (13%)
- fuel oil (3%)
- LPG (2%)
- lube oils, bitumen and other products (6%).

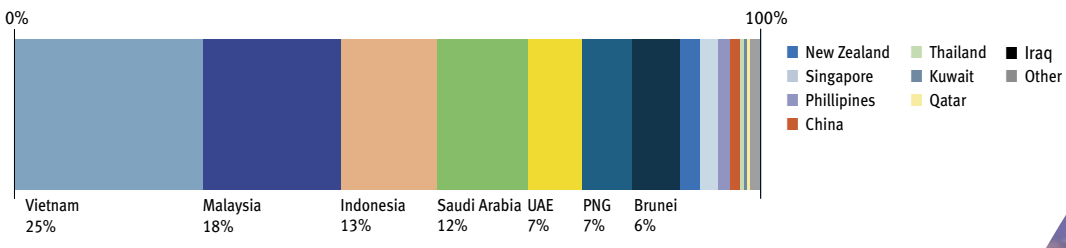
It also produces a substantial volume of product for chemical feedstock.

In 2004–05 Australia consumed 47 150 ML (megalitres) of petroleum products. Australian refineries produced 40 200 ML, of which around four per cent was exported (excluding LPG). Imports accounted for 23 per cent (or 10 820 ML) of total consumption. A proportion of this imported volume was supplied to northern and north western areas of Australia where domestic refineries generally are unable to competitively supply market needs. Import terminals are located throughout Australia. The bulk of imported petrol was from Singapore.

While Australia has substantial crude oil production, around 62 per cent of this oil was exported in 2004–05. Crude oils required to meet the product demand mix in Australia are also imported by domestic refineries mainly from Asia and the Middle East.



Imports of crude oil: 2004–05



Imports of petrol: 2004–05



Australia has seven major operating refineries that were generally constructed in the 1950s and 1960s, although they have been extensively modified since then. These refineries are relatively small with the largest having a capacity of 8000 ML pa (megalitres per year), compared with the four largest Asian refineries which produce between 31 000 ML pa and 67 000 ML pa.

Australian refineries must price their output to be competitive with imports (i.e. import parity) with Australian prices determined by prices in the Asia-Pacific region. There is no tariff protection and all seaboard capitals have import facilities. Profitability of the Australian refining industry is therefore largely determined by refining margins in Asia, and its viability depends on our competitiveness against imports from Asian refiners.

In future, structural imports will meet growing demand in Australia, further strengthening the price relationship with Asian product prices.

The demand for petroleum products in Australia was around 47150 ML in 2004–05 (or around 130 ML per day).

Australian refineries

Refinery	Capacity: (ML pa)
Bulwer Island (BP—Brisbane)	5100
Lytton (Caltex—Brisbane)	6110
Clyde (Shell—Sydney)	4980
Kurnell (Caltex—Sydney)	7210
Altona (Mobil—Melbourne)	4640
Geelong (Shell—Geelong)	6900
Kwinana (BP—Kwinana, WA)	8030
Total	42 970

The Port Stanvac refinery (capacity: 4520 ML pa) was mothballed by Mobil in July 2003. As one of the smallest refineries in the Asia-Pacific region, it could not compete against larger regional refineries. A further decision on the future of the refinery is expected to be made by mid 2006. The capacity of the Altona refinery has also recently been re-rated (down from 7820 ML pa).



6 World refining margins

During 2004 and 2005, there was continuing strong growth in Asian refining margins, driven by sustained economic growth in the region.

The excess refining capacity in Asia in the 1990s was largely reflected in depressed margins in comparison to Europe and the United States.

Future margins will depend largely on the course of economic growth in Asia and the premiums for cleaner fuels.

Petroleum product supply and pricing in Australia will be influenced by a combination of factors.

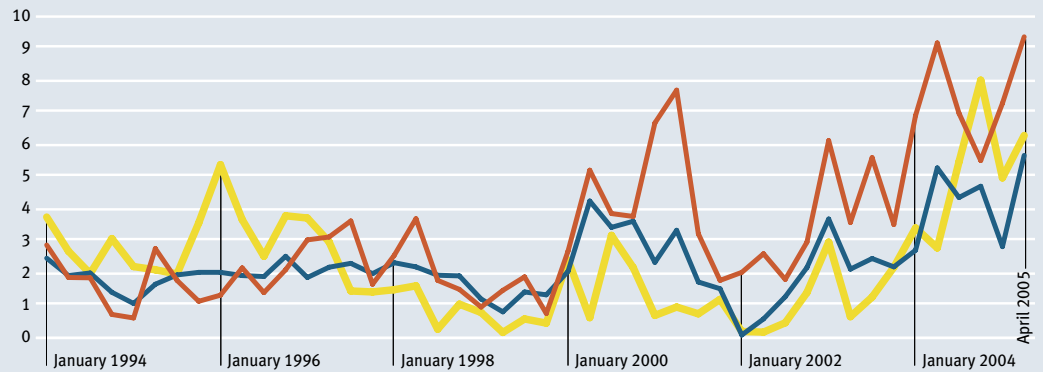
These include the domestic market moving toward greater levels of structural imports, the reduction in excess capacity in Asia and the moves toward cleaner fuels in the region. Import prices for quality fuels will reflect supply availability.

In addition to these longer term structural influences, there are a range of shorter term impacts on refining margins such as disruptions to crude oil supplies and normal refinery operations (for example, hurricanes and civil unrest).

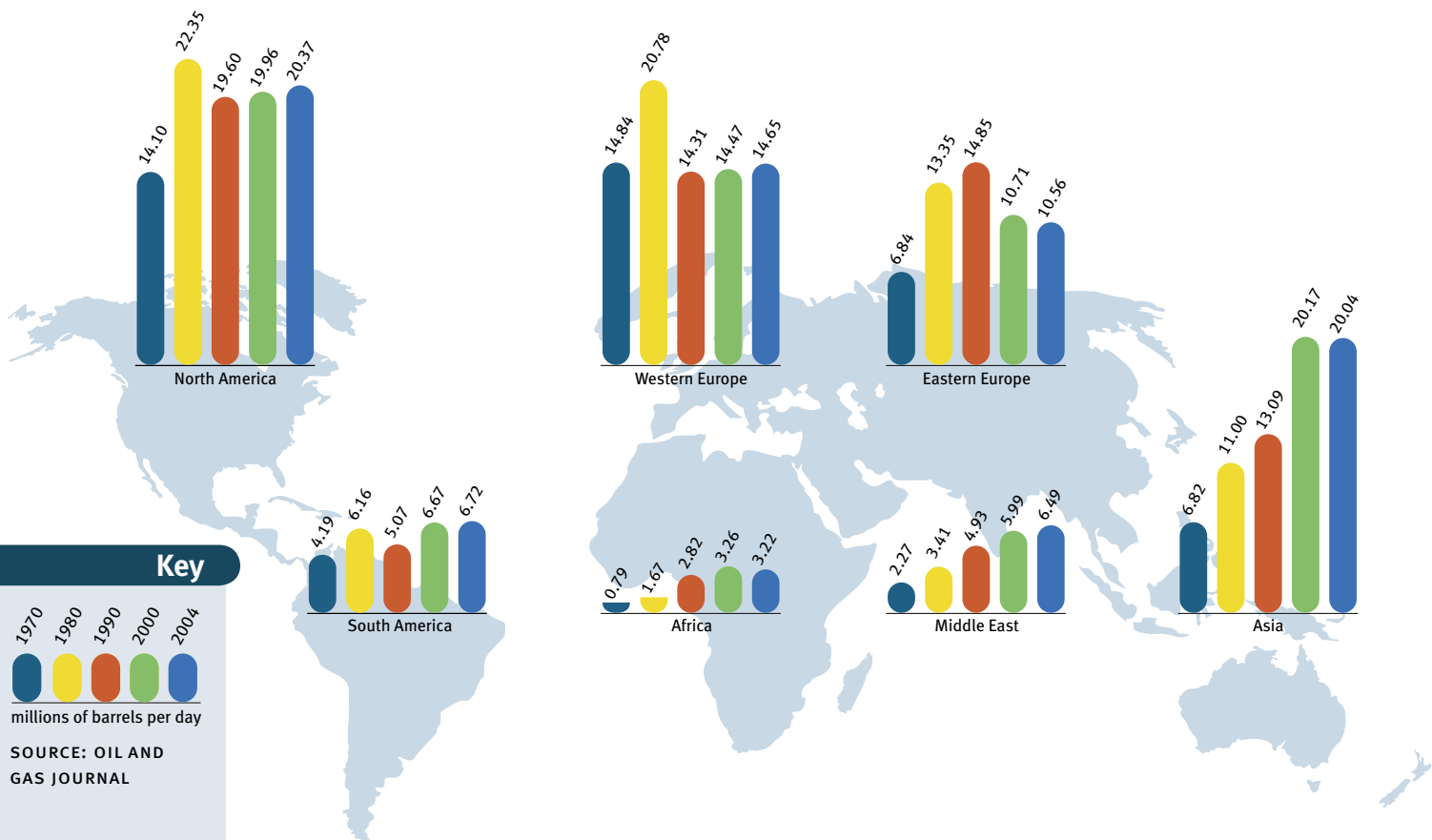
US\$ per barrel:

— ASIA
— UNITED STATES
— EUROPE

SOURCE: BP STATISTICAL REVIEW OF WORLD ENERGY, JUNE 2005



World refining capacity



Key

1970 1980 1990 2000 2004
millions of barrels per day

SOURCE: OIL AND GAS JOURNAL

Petroleum refining in Asia

Asia was traditionally a large importer of petroleum products, but significant additional refining capacity was installed from 1995–2002. As a result, Asia became a net exporter of some petroleum products, notably petrol. Asian product demand patterns caused most refineries in the region to be oriented towards diesel production, creating large volumes of lower quality petrol which were then sold at a discount. Recent rapid growth in product demand, largely in China, has absorbed most of the excess capacity in the region.

A significant portion of Asian refining is directly or indirectly assisted by host governments through measures such as differential taxation regimes for crude and imported products, and mechanisms such as restrictions on import storage capacity.

New and upgraded facilities have also received comparatively favourable taxation treatment from their host countries.



Cleaner fuels in the Asia–Pacific region

Countries in the Asia–Pacific region are mandating cleaner fuels on different timelines over the coming decade. As demand for higher quality fuels increases, refineries in the region will produce these fuels as standard products rather than as boutique fuels for specific markets. This will result in increased supply availability of the cleaner fuels and reduced refinery price premiums.

Euro standards relate mainly to the reduction of sulfur in petrol and diesel, although they also set standards for other product parameters such as benzene and other aromatics, olefins, cetane, density, lead and oxygen.

Petrol regulatory outlook for Asia–Pacific

	2005	2006	2007	2008	2009	2010	2010+
Japan		E4				10 ppm S	
Hong Kong		E4				10 ppm S	
Singapore		Country specific			E4		10 ppm S
Australia	E2		E3			E4	
NZ	E2		E3			E4	10 ppm S
Malaysia		E2					E4
Thailand		E2		E3			E4
China		Country specific			E3		E4
India		E2/E3				E3	E4
Indonesia		Country specific		E2			E3

Diesel regulatory outlook for Asia–Pacific

	2005	2006	2007	2008	2009	2010	2010+
Japan		E4				10 ppm S	
Hong Kong		E4				10 ppm S	
Singapore		E2		E4		10 ppm S	
Australia	E2			E4			10 ppm S
NZ	E2			E4			10 ppm S
India		E3				E4	10 ppm S
Malaysia		E2					E4
Thailand		E3					E4
China		E2		E3			E4
Indonesia		Country specific				E3	

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

8 Asian product prices

2004–05 was characterised by strong demand for oil and oil products which produced some fundamental changes in the market. The strong growth in the world economy, and more particularly growth in China, rapidly increased the demand for oil and petroleum products. Given that demand levels in Asia are generally near capacity for production of products, this strong demand translated into increased refiner margins and hence prices.

In 2005, oil prices reached record levels of \$US71 per barrel and the refiner margin for petrol briefly spiked above \$US19 per barrel in September 2005, following Hurricane Katrina. The refiner margin for diesel production was also strong in 2005 with margins peaking above \$US14 per barrel in June 2005.

Strong refiner margins were a global phenomenon reflecting the tightness of the product market across the world. The improvement in Asian margins followed an extended period of underperformance in Asian refining margins since 1996.

Growth in Chinese demand for petroleum products was 15.6 per cent in 2004 with the largest increases being for diesel (25 per cent) and for jet fuel (21.4 per cent). A significant portion of this increase in demand was due to Chinese economic growth of over 10 per cent.

The International Energy Agency (IEA) estimated that electricity generation accounted for some 300–350 kbd of the total increase in Chinese demand for petroleum products of 860 kbd in 2004. This situation has eased in 2005 and the IEA forecasts a moderation in the increase in demand to 212 kbd for 2005, an expected increase in demand of 3.3 per cent.

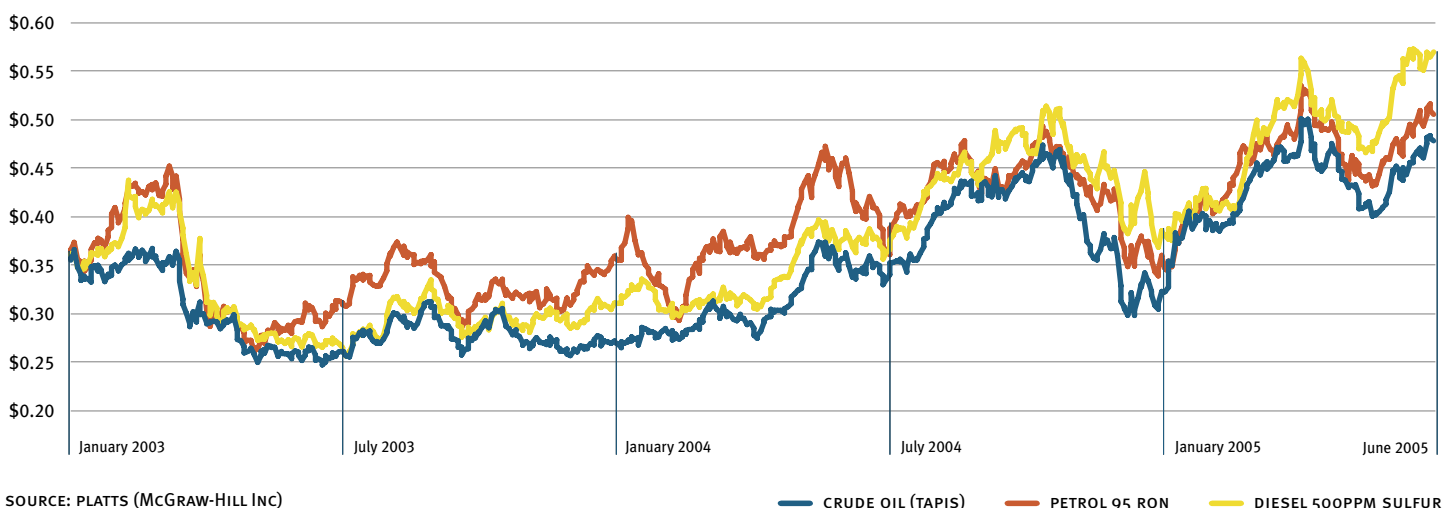
Increasing overall demand for crude oil, particularly in the Asian region, also drove

higher premiums for sweet crude oil over sour (high sulfur) crude oil in recent years. The reason is that the Asian refining sector is largely configured towards straight run capacity with comparatively low levels of desulfurisation capacity. However, in the second half of 2005, premiums for regional light grades such as Tapis moderated.

The strong demand for diesel translated into diesel refiner margins higher than petrol refiner margins for much of 2004–05. This explains why Australian consumers have had the experience of diesel prices being higher than petrol prices. It is also the case that the much smaller volumes of diesel sold in the retail market are not subject to the deep discounting that is experienced in petrol sales.

2004–05 could be characterised as having an unusually high level of uncertainty in oil and products markets. This reflects the relatively fine balance between global crude oil supplies from existing facilities, and global demand for petroleum products from operating refineries. Strong demand growth in recent years has progressively soaked up much of the surplus capacity in both the crude oil and product supply chains. This has meant that unexpected supply disruptions (such as hurricanes, civil unrest etc), and localised surges in demand for particular products, have had a greater impact on crude oil and product prices than in the past.

Asian product prices: A\$ per litre



SOURCE: PLATTS (MCGRAW-HILL INC)

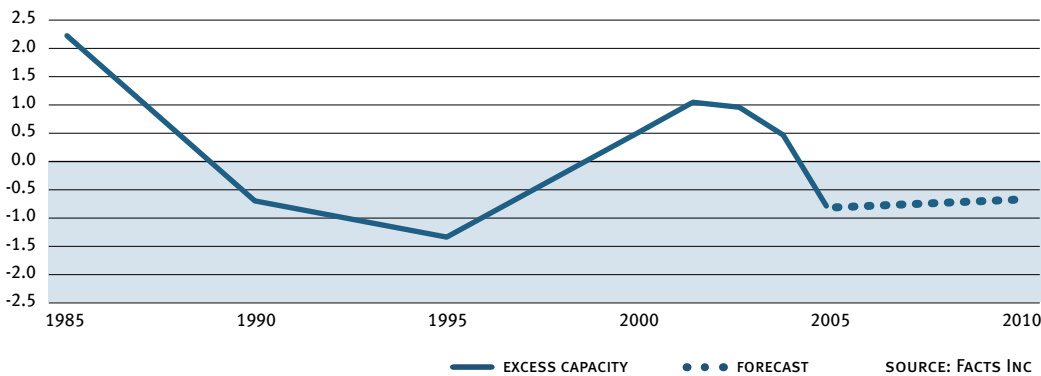
— CRUDE OIL (TAPIS) — PETROL 95 RON — DIESEL 500PPM SULFUR

However, the resilience of the market and the robustness of the supply chain have meant that there have been minimal supply disruptions in Australia. Refineries in Australia have been able to source crude oil from a wide variety of sources in Australia and overseas. Progressive investment in upgrades and de-bottlenecking of the refineries has enabled higher rates of utilisation to be achieved. More sophisticated demand forecasting and distribution supply chain management have also contributed to enhanced supply reliability in Australia.

The increased volumes of petroleum products imported into Australia have also strengthened supply reliability by ensuring the regular arrival of cargoes of products sourced from other refineries, typically under secure, term contracts. Further flexibility in product sources is expected to occur as new refineries come on stream in the Asian region.

By comparison with other countries, the reliability of our fuel supply system is outstanding given Australia's unique logistical and geographical challenges.

Asian excess supply capacity: Millions of barrels per day (petroleum products)



Supply reliability and NOSEC

The Australian liquid fuel supply chain has considerable span and diversity — from crude and product shipments, refinery throughput, extensive terminal and distribution networks and around 6500 retail outlets. In addition to the sector's own ongoing focus on supply reliability, the industry is also working collaboratively with government and other stakeholders to ensure continual reliable supply — including in the unlikely event of a national liquid fuel emergency (LFE).

For example, AIP has been an active participant on the National Oil Supply Emergency Committee (NOSEC) and its task forces. NOSEC is the main executive channel through which Australian governments, in cooperation with industry, formulate the overall management plans to respond to a fuel supply emergency.

AIP has participated in a number of NOSEC activities since its inception including: LFE planning and simulation exercises to test the National Emergency Response Plan and the 2004 review of the LFE Act. Industry is participating in the review of a range of supply issues under NOSEC, including international stockholding commitments, supply risk assessment and options for simplifying the management of an LFE.

A key concern for AIP member companies is that all consumers, particularly those providing services that support the economy and the community, fully understand and are prepared to manage the impact of a supply disruption on their operations.





Key messages

- The cleaner fuels program adopted by the Australian and state governments is facilitating the introduction of advanced engine technologies and delivering economic and environmental benefits through improvements in urban air quality, reductions in greenhouse gas emissions, and improvements in fuel efficiency.
- Cleaner fuels cost more to produce and require major industry investment.
- The cleaner fuel incentives announced in 2003 encourage production of cleaner fuels ahead of mandated standards.
- The introduction of new fuel quality standards means the relative environmental benefits of alternative fuels will reduce.
- For alternative fuels to compete in the market, they must be competitively priced, be reliably supplied and have consumer acceptance.

AIP supports appropriate national fuel standards to facilitate the introduction of advanced engine technologies and so help address scientifically established environmental concerns. AIP has worked closely with the motor vehicle industry and the Land Transport Environment Committee (LTEC) with the object of ensuring that standards are:

- consistent across Australia
- predictable, so that participants in the market have sufficient time to implement and adjust to the new standards.

Certainty of policy in relation to fuel standards is of critical importance for refining companies. Long lead times are required to make the necessary engineering changes and consistent application of policy is essential to provide the framework for refiners to recover their increased costs.

Australian Government reports have identified that cleaner fuels cost more to produce because of additional

capital requirements (e.g. new/revamped desulfurisation units), and increased operating costs at refineries and through the distribution system. Product yields will generally be lower (e.g. due to benzene and octane requirements). Production of cleaner fuels is also more energy intensive (and therefore more carbon intensive).

The *Fuel Quality Standards Act 2000* provides the framework for the regulation of fuel quality standards for Australia. In the 1999 Measures for a Better Environment package, the Australian Government announced a policy of harmonising Australian fuel standards with the European standards. The first round of changes in Australian fuel standards through to 2006 was set in 2001 after a long period of consultation with the relevant stakeholders. These Australian standards are comparable to Euro 4 standards for diesel and Euro 3 standards for petrol (although there are some variations in specifications for Australian conditions).

Environmental benefits

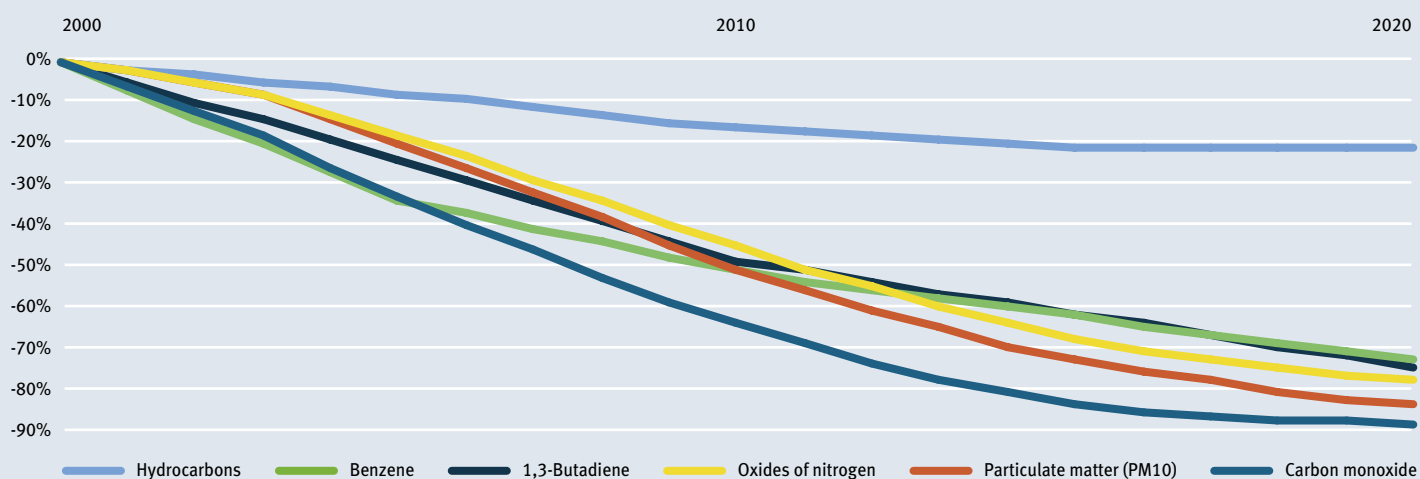
The benefits of reduced sulfur fuels include:

- reduced emissions of hydrocarbons and oxides of nitrogen leading to significant reductions in smog
- reduced particulate emissions
- facilitation of advanced engine technology (including on-board diagnostics or OBD)

AIP believes that the further fuel standard changes due to come into effect in 2008 and 2009 — 50 ppm sulfur Premium Unleaded Petrol (PULP) and 10ppm sulfur diesel — will, when combined with the complementary engine technologies, address virtually all the outstanding air quality issues attributable to vehicle emissions.

Further significant reductions in hydrocarbon emissions are also being achieved through petrol vapour pressure controls and vapour recovery systems.

Reduction in vehicle emissions from cleaner fuels



12 Costs of meeting petrol and diesel standards

Investment exceeding \$2 billion is being made by the downstream petroleum industry to implement the Australian Government's cleaner fuels program (not including 10 ppm sulfur petrol).

The cost will vary significantly between refineries. Overall, however, the industry is investing around \$200 million per year for cleaner fuels through to 2010. There will also be significant increases in operating costs associated with meeting the cleaner fuels standards, ranging up to 1 cent per litre for changes in some standards. For example, the move to 10ppm sulfur diesel on 1 January 2009 will involve significant increases in investment and operating costs, over and above the costs for the mandatory 50ppm sulfur diesel standard that applies from 1 January 2006.

The investment for the proposed introduction of 10 ppm sulfur petrol is complex and expensive. AIP considers that the availability of vehicle technology requiring this fuel should be clearly identified. Any mandated requirement for 10 ppm sulfur petrol would mean that the whole PULP pool would need to move to 10 ppm sulfur, even though the vast majority of vehicles did not need the lower sulfur fuel and would not benefit from it.

Cleaner fuels incentives for early production

The Diesel Sulphur Excise Differential (DSED) was introduced at 1cpl from 1 July 2003 for the production of diesel containing a maximum of 50 ppm sulfur (ultra low sulfur diesel – ULSD).

The incentive increased to 2 cpl from 1 January 2004. The ULSD standard became mandatory on 1 January 2006.

In the 2003 Federal Budget the Australian Government announced additional measures to encourage the import and early production of low sulfur fuels. Premium unleaded petrol (PULP) with less than 50 ppm sulfur attracts

a 1.1 cpl incentive from 1 January 2006. Diesel with less than 10 ppm sulfur is expected to attract a 1.0 cpl incentive from 1 January 2007 to accelerate availability of this fuel and meet the needs of the most advanced diesel vehicles.



Fuel for Aboriginal communities

Petrol sniffing is a major concern in remote Aboriginal communities.

Since the early 1990s Comgas, a form of aviation fuel suitable for automobiles, has been available in many Aboriginal communities. While Comgas was very low in aromatics, it also had a high lead content. At the beginning of 2005 BP began production of a new form of unleaded fuel, Opal, which contains low levels of aromatics. This fuel is the first of its kind in the market place and is available from all suppliers to the communities.

In the 2005 Federal Budget, the government announced the extension of the Comgas financial assistance scheme to a further 23 remote communities—in addition to the 37 communities already participating in the scheme. In late 2005, the Australian Government announced further funding of \$9.5 million to tackle petrol sniffing in Central Desert Indigenous communities, and a renaming of the Comgas Scheme to the *Petrol Sniffing Prevention Program*.



Alternative fuels

Alternative fuels that are used or have been proposed for use in Australian motor vehicles include:

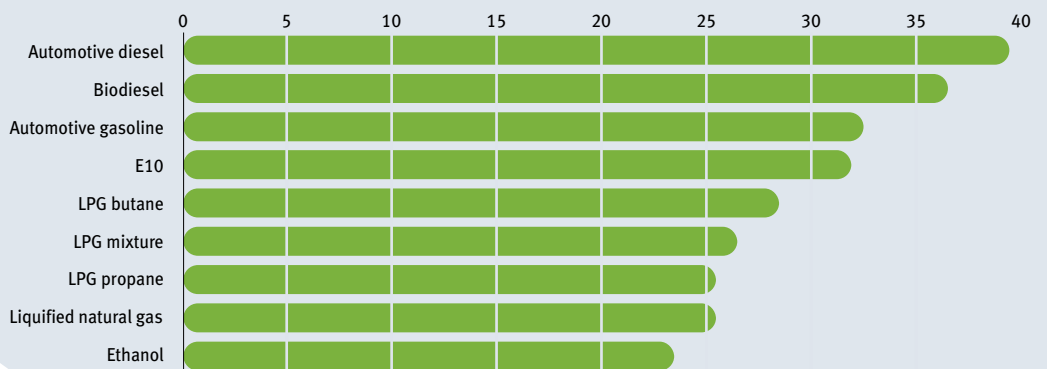
- Biodiesel blends
- Ethanol blends in petrol up to ten per cent
- Liquefied Petroleum Gas (LPG)
- Compressed Natural Gas (CNG)
- Liquefied Natural Gas (LNG).

For any alternative fuel to enter the fuel mix in a sustainable manner it must be competitively priced, have a reliable supply and be acceptable to consumers.

Governments have decided to support alternative fuels for a variety of policy reasons, such as regional development. AIP believes that such assistance must be transparent, particularly where it has an impact on long term investment in the fuels market. The perceived environmental advantages of alternative fuels need to be judged against the dramatic reduction in vehicle emissions enabled by the cleaner conventional fuels and the introduction of new vehicle technology.

The Australian Government policy on the use of ethanol in petrol includes: a 10 per cent cap on the level of ethanol in petrol; mandatory labeling of ethanol blends; an excise rate which reflects its energy content (discounted by 50 per cent) and environmental performance; and a 350 ML target for biofuels in the fuel mix by 2010. A key driver for increased ethanol use is the restoration of consumer confidence. The industry is working closely with the government to implement decisions arising from the work of the Prime Minister's Taskforce on Biofuels, including action plans that will contribute to the achievement of the biofuels target.

Energy content of automotive fuels: Megajoules per litre



Key messages

- Petrol prices have declined in real terms over the last 25 years and Australia has one of the lowest pre-tax petrol prices in the OECD.
- In general, close to half the price of petrol is made up of taxation from GST and excise.
- The entry of the supermarkets into fuel retailing has increased the competition in an already highly competitive industry.
- The market reform package (including the repeal of the Sites and Franchise Acts and introduction of a mandatory oil code) is essential to ensure that all participants in the market can compete fairly.

Prices and taxes

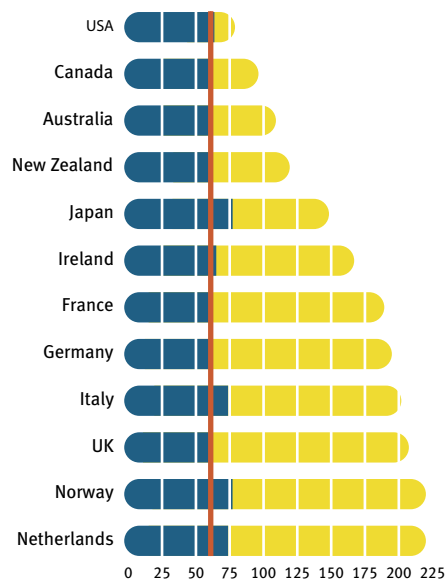
In 2004 and 2005 Australia had among the lowest petrol and diesel prices in the OECD both before and after tax. Over the past 25 years, the pre-tax cost of petrol and diesel has declined significantly. Retail fuel prices are highly competitive and apply to almost half of the fuel sold in Australia. The remainder of fuel sales are to commercial, industrial and agricultural consumers and most of this volume is subject to vigorous competition under regular commercial tenders.

The impact of fuel taxes on individual consumers varies with the application of government measures such as the Energy Grants Credit Scheme.

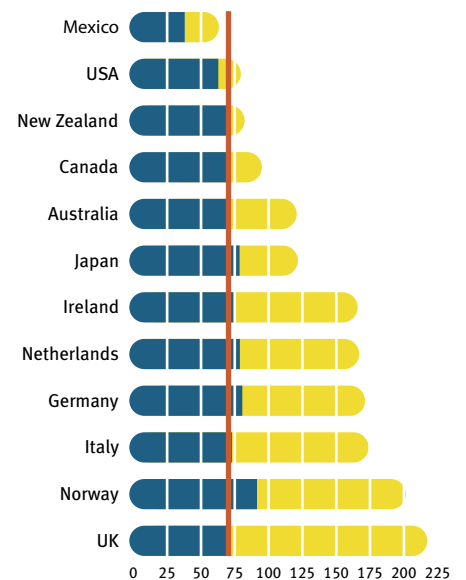
In 2004, the government announced that a new fuel tax credits system will be introduced from 1 July 2006 that will substantially reduce the excise burden on business and households. Under the new system, all off-road business use of all fuels will become excise free over time and all fuel used in heavy vehicles will receive excise relief from 1 July 2006. The combination of high levels of efficiency in domestic refining and relatively favourable taxation treatment of diesel and petrol users gives the Australian economy a significant competitive advantage in the use of fuel compared with most OECD countries.

Petrol and diesel prices and taxes in OECD countries: June quarter 2005

Petrol



Diesel



PRE-TAX PRICE TAXES AUSTRALIAN PRE-TAX PRICE

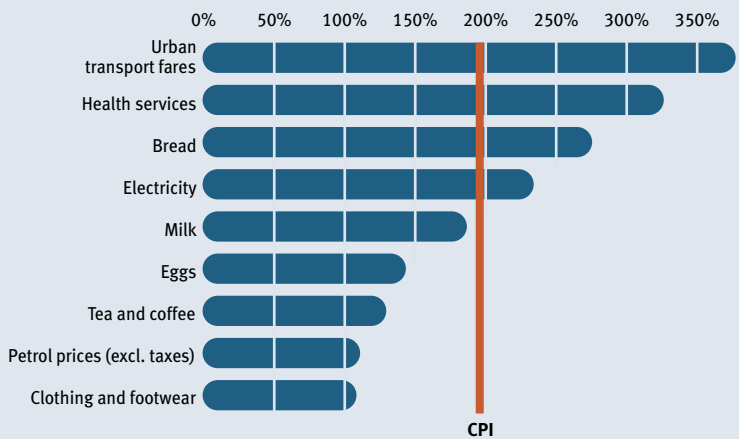


Wholesale price transparency in the petroleum market is assisted by the voluntary publication of Terminal Gate Prices (TGP) for petrol and diesel by all AIP members. TGP is the price at which any person with the necessary safety clearances can purchase fuel from fuel supply terminals by the tanker load. While TGPs are a requirement of Western Australian and Victorian legislation, TGPs are also published for most products available from capital city terminals across Australia.



Relative price changes

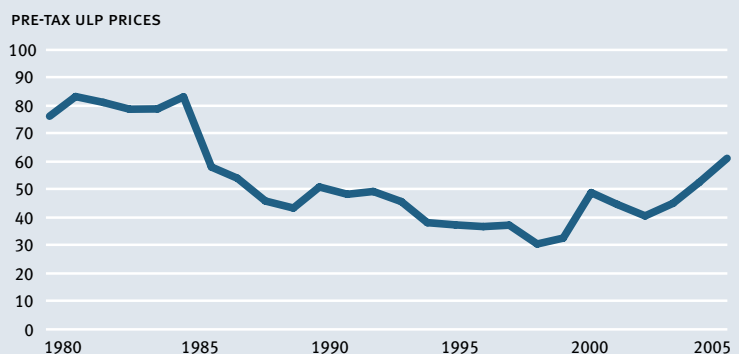
Percentage change in prices: 1980–2005



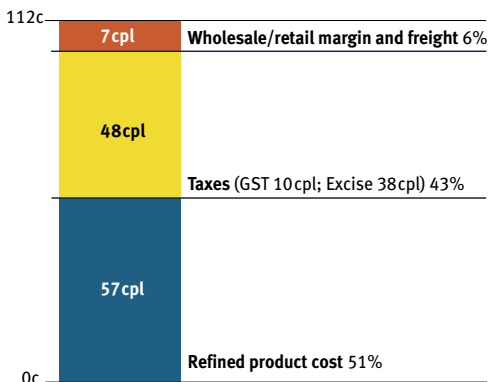
SOURCE: ABS DATA

Since 1980, the increase in petrol prices paid by consumers has been less than the increase in the CPI and less than price increases for other significant household consumables, when taxes are excluded.

Changes in petrol prices: cents per litre (constant \$2004)



Components of national average retail petrol price: 30 June 2005



The components of the retail ULP petrol price at the end of 2004–05, highlight the proportion of the price received by fuel producers and fuel retailers. On 30 June 2005, the tax component (GST and excise) of the final price of petrol was about 43 per cent or 48 cpl.

16 The retail sector

The downstream petroleum retail sector has undergone significant changes in the last ten years in almost every aspect of its operations – but particularly in relation to industry structure.

The retail market share of AIP member companies has decreased and there is much less vertical integration within the industry.

In January 2005, AIP member companies directly operated only around 300 service stations across the country.

The estimated number of retail sites has reduced from 8000 in 2000 to 6500 in 2004. This process reflects the move towards larger, more efficient sites offering a variety of fuels, products and services. Since 2000, the number of independently operated,

branded service stations has declined by 23 per cent. The number of AIP member company branded service stations operated under franchise arrangements has halved over the same period (to 958 sites in 2004) as many of the sites in this category became part of the supermarket alliances.

The convergence of fuel retailing and convenience store shopping has advanced through the supermarket alliances which have emerged since 2003 between Shell and Coles Myer and between Caltex and Woolworths.

Downstream market reform

As part of its 2004 Energy Market Reform package the Australian Government announced that it intends to repeal both the Petroleum Marketing Retail Sites Act 1980 and the Petroleum Marketing Retail Franchise Act 1980.

The *Petroleum Marketing Retail Sites Act 1980* (Sites Act) restricts the total number of service stations operated by AIP member companies to about five per cent of the market. The *Petroleum Marketing Retail Franchise Act 1980* (Franchise Act) sets out the obligations and entitlements of service station franchisees and franchisors.

The repeal of these Acts is to be accompanied by the introduction of a mandatory Oilcode under the *Trade Practices Act 1974* (TPA) which provides for: regulation of fuel re-selling agreements; a national terminal gate pricing (TGP) regime; price transparency and documentation measures; and a dispute resolution process.

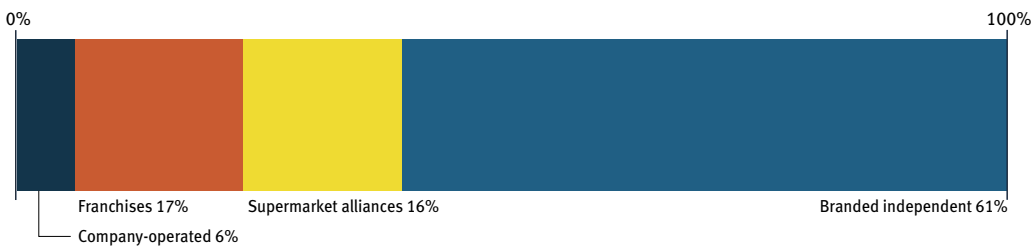
AIP sees many benefits from these reforms:

- repeal will remove barriers to greater competition in the market and consumers will benefit from more effective competition
- the Acts limit the ability of the four oil majors to compete with unregulated supermarket chains
- there will be greater price transparency at each stage of the supply chain
- small business (commission agents) will gain improved tenure, while the tenure of franchisees will be maintained
- both Acts have been found by a number of government reviews (including by the ACCC) to be outdated and ineffective
- the Acts currently place compliance costs on the companies concerned without benefit to the community as a whole.

The retail petroleum market reform package will ensure that competition continues to be vigorous, providing ongoing benefits to the consumer. Rural and regional service station operators will continue to enjoy local competitive knowledge and generally have lower overheads than major service station networks.



Types of AIP related service stations: June 2004



The supermarket alliances now handle almost 50 per cent of petrol sales in metropolitan areas. There have been very strong consumer responses to the

supermarket shopper docket discounts and according to the ACCC there are now over 200 shopper docket fuel discount schemes in place.



Myths about market reform

Opponents of the repeal of these Acts— especially the representatives of the branded and non-branded independent sector — have argued that there will be a reduction in competition within the market and the oil majors, particularly through supermarket alliances, will establish a dominant presence in the retail sector.

In particular, opponents argue that:

- *“Shopper docket discounts are a form of below cost selling which is alleged to be predatory pricing.”*

These schemes have been thoroughly investigated and upheld by the ACCC on the basis that lower prices benefit consumers.

- *“Independent service station operators are unable to purchase fuel at the same price as the supermarket chains.”*

Supermarket chains are purchasing billions of litres annually from oil companies and can therefore negotiate lower prices than single service stations or small chains. On the issue of access to supply, any person with the appropriate health and safety clearances can purchase 35000 litres from an AIP member company terminal at the Terminal Gate Price (TGP).

- *“The TGP price should be set at a flat rate for all and no discounting should be allowed.”*
This proposal would damage competition.

- *“Repeal of the Sites Act will result in direct ownership and operation of sites which are currently run by branded independents.”*

This claim does not reflect the strategies of AIP member companies or trends in industry structure and it should be noted that, even under the restrictions of the existing Act, only one company has taken full advantage of the ownership limits allowed.

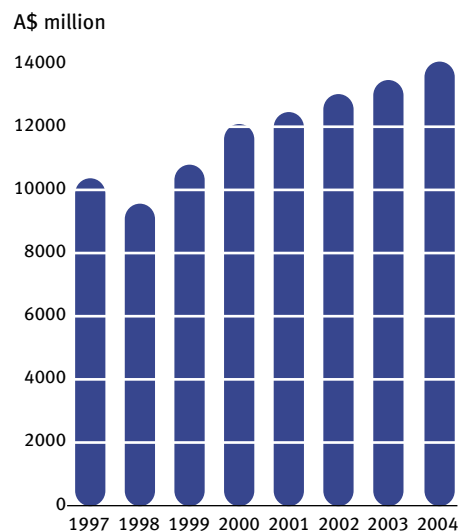
- *“Repeal of the Franchise Act will undermine the preservation of property rights for existing franchisees.”*

The mandatory Oilcode provides for franchisees to retain tenure for nine years. The claim that the oil majors will want to further reduce their franchisee sites is not reflected in the business planning of AIP member companies.

Financial and performance data are for AIP member companies only unless otherwise stated.

Asset value

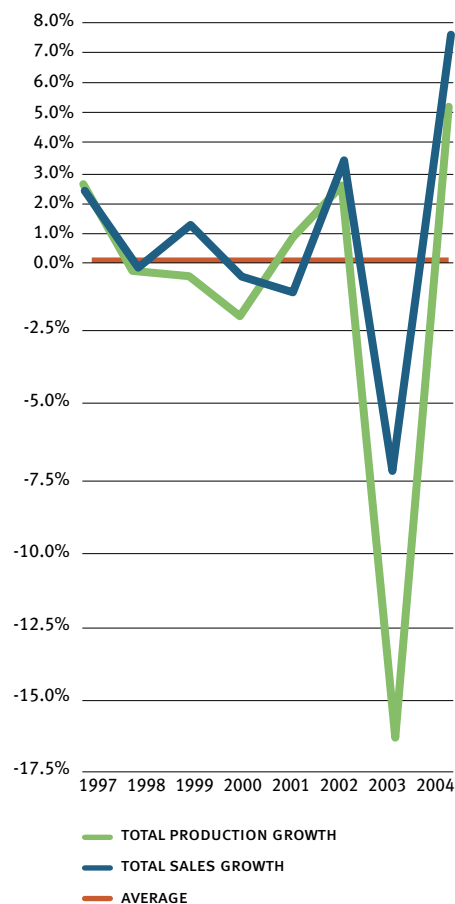
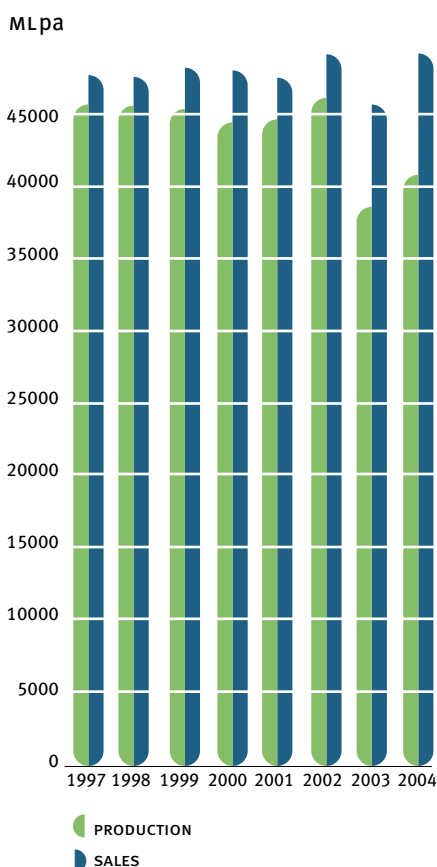
At the end of 2004 the assets of the downstream petroleum industry were \$13.9 billion across the refinery and marketing sectors. The total value of assets rose from \$13.4 billion in 2003. Asset values have increased by over \$4 billion since 1998, driven by a strong industry investment program.



Production and sales

Sales increased 7.5 per cent or 3500 ML in 2004 following a decline in total sales of almost the same volume in 2003 (incorporating an underlying decline in exports since 2002). The 2004 performance reflects strong growth in the domestic economy.

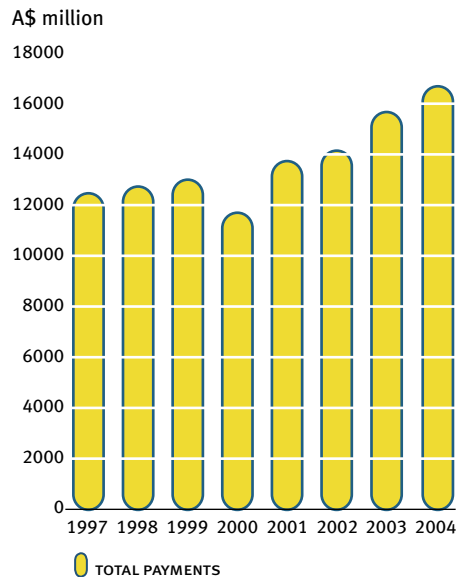
Despite an increase in production of 5.2 per cent in 2004, imports continued to grow as a proportion of total sales as production did not keep par with demand growth. The volume of refined product from overseas rose from 7000 ML in 2003 to 8400 ML in 2004. Imports accounted for 18 per cent of domestic sales in 2004.



Payments to governments

The contribution of industry and consumers to government revenues totaled over \$16.5 billion in 2004. This included excise payments of over \$14 billion. Government taxes, including GST, account for almost half the cost of petrol at the pump. Income tax payments rose by \$110 million over the 2003 level (with payments of \$340 million in 2004), while payroll and land tax also rose slightly over the previous year.

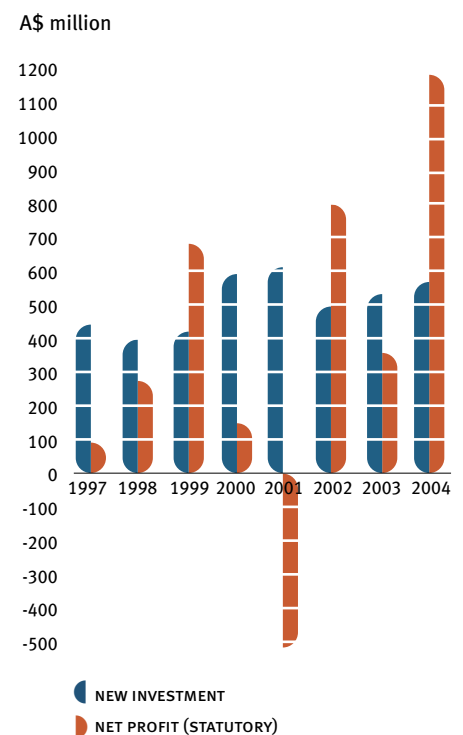
Fuel excise provided over 7.5 per cent of Australian Government taxation revenue in 2004.



Investment and profits

As a capital intensive industry, downstream petroleum routinely requires large and ongoing investment in plant and equipment to continue safe and reliable operations. The introduction of cleaner fuel quality regulations contributed significantly to greater than average investment in 2004. It is expected cleaner fuels investment will continue to underpin investment requirements. In 2004 the industry invested an extra \$55 million over 2003 levels, bringing total new investment for the year to \$579 million. New investment has averaged around \$500 million per year since 1997.

Following a sharp decline in statutory profits in 2003, because of stock losses from falling oil prices, net statutory profit in 2004 rose to \$1184 million. This reflected in part a substantial increase in sales over the previous years and stock gains in 2004 after stock losses in 2003. The underlying net profit in 2004 was \$912 million. This has reversed previous results where investment exceeded the net profit for the industry.



20 Profitability measures

Returns on assets improved considerably in 2004, making it one of the few years in the last decade when the industry's rate of return rose above the long term bond rate.

Profits are presented as earnings before interest and tax (EBIT) on total assets for both a statutory and underlying return. The statutory return is reported in company accounts and complies with reporting requirements under relevant legislation. The underlying return removes the impact of stock gains and losses to derive a profit result which is not influenced by international crude oil prices. Removing stock valuation effects provides a clearer picture of the fundamental economic performance of the industry.

Improvements in stock values and sales volumes have increased the

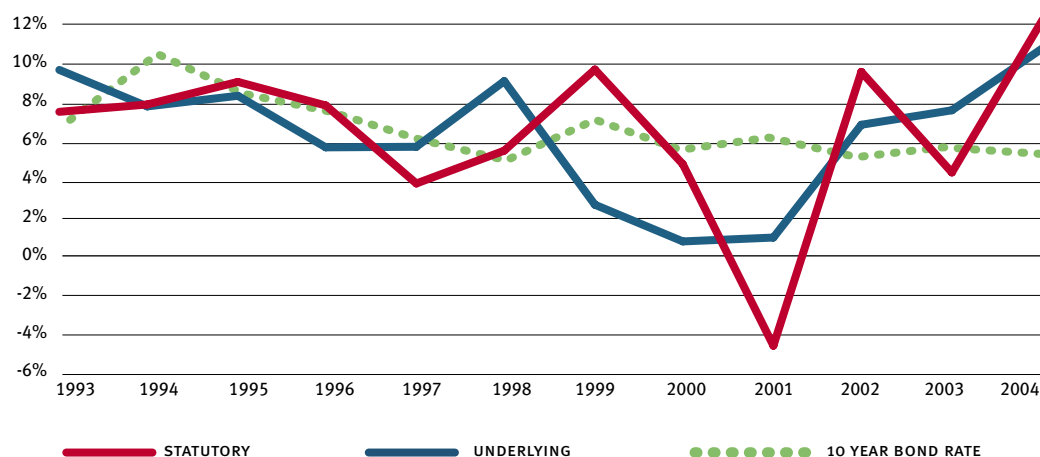
statutory returns by nearly 12.2 per cent from 2003.

Underlying returns also continued to improve from 7.5 per cent in 2003 to 10.7 per cent in 2004.

In 2004 the underlying net profit per litre was 1.8 cents, 0.2 cents higher than in 2003. The profit result on a per litre basis demonstrates the proportion of the pump price which represents profits to the industry.

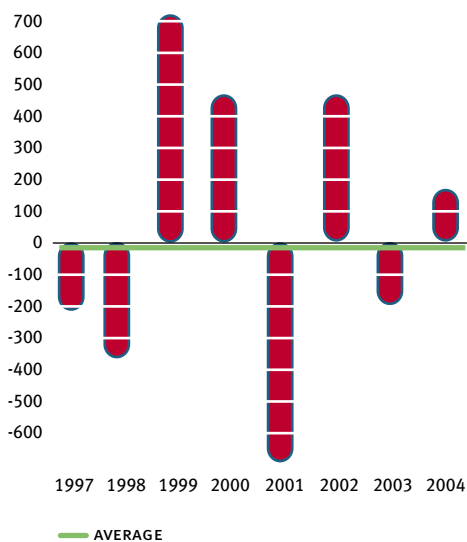
The profit results for the industry are encouraging and move the industry towards a sustainable future in Australia. Reasonable profitability is a precondition for further investment. The downstream industry is largely cyclical so current profits are not necessarily an indicator of continuing profits.

Return on assets



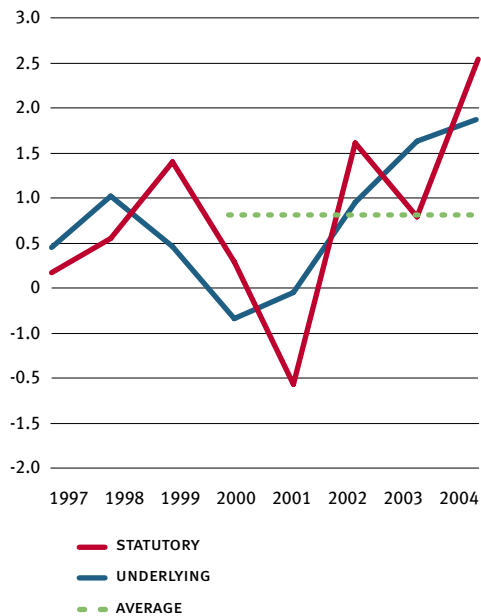
Stock losses and gains

A\$ million



Net profit per litre

Australian cents per litre

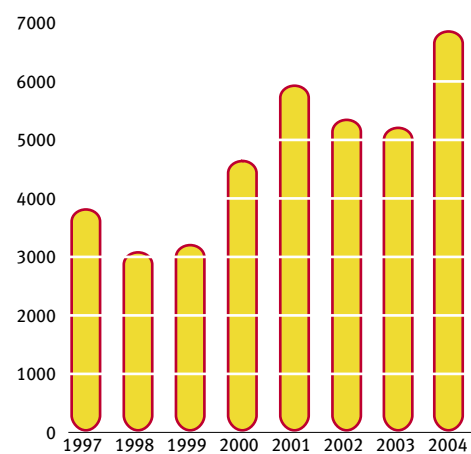


Debt position

In 2004 the industry's borrowings rose to \$6.8 billion, about 23 per cent higher than 2003 levels. The average borrowings since 2000 have been about \$5.5 billion. The industry is facing major investment to meet higher requirements in fuel standards.

Total borrowings

A\$ million





AIP publications

The suite of AIP codes of practice and guidelines comprises over 30 publications.

They cover: fuels management; underground tanks; remediation of contamination; road tanker standards and operation; service station security; pipelines and tanks; and management of waste including effluents and used oil.

2004 and 2005 publications include:

- **GL15:** Access to service stations for people with disabilities.
- **CP6:** Vehicle bottom loading and vapour recovery
- **CP13:** Road and rail tanker gas-freeing and work authorisation
- **CP14:** Transport of petroleum products by road
- **CP26:** Design and operation of low pressure liquid hydrocarbon pipelines.

AIP and its member companies are committed to safe and environmentally sound practice in their operations.

AIP member companies in Australia share the general community concern for conservation of the environment, and seek to protect air, water and soil from contamination through their operations. In doing so, their aim is to:

- treat with care all materials that may cause pollution
- achieve a zero accident rate
- maintain open communications with governments and local communities
- support market mechanisms for conservation and wise use of our valuable energy resources.

Key strategies to support the achievement of these objectives include:

- the maintenance of a suite of codes of practice and guidelines covering operating practices, standards for equipment design, installation and operation
- training and accreditation programs
- individual programs targeted at specific issues.

Oil spill response

Each of the companies involved in production of crude oil and in refining and distribution of petroleum products has major programs in place to minimise the risk of a marine oil spill. Company personnel are also trained to respond to any oil spill so as to minimise any environmental

impact. These petroleum industry activities for part of Australia's national oil spill response arrangements coordinated by the Australian Maritime Safety Authority (AMSA).

Additional industry expertise and resources are provided through the Australian Maritime Oil Spill Centre (AMOSC). AMOSC was set up in 1991 as a wholly owned subsidiary of AIP. Its roles are:

- the provision of equipment and personnel on a 24-hour basis to respond to a major oil spill
- provision of oil spill training services
- provision of advice on spill equipment.

Waste management and recycling

Lubricants are not completely consumed in use and result in waste oil that needs to be collected and recycled. AIP members have adopted a product stewardship role for their products and are actively supporting the collection and recycling of waste oil and its packaging.

The Australian Government has introduced a product stewardship scheme for waste oil to support recycling, funded through an excise on sales of lubricants.

AIP is also a signatory to the National Packaging Covenant. After the successful trial of a collection and recycling program for used plastic oil containers in Victoria, AIP has rolled out the program to NSW, Queensland and South Australia.



Health Watch

Since 1980 AIP has sponsored the development and operation of an epidemiological program called Health Watch which tracks the health of over 19,000 present and past employees of the Australian petroleum industry.

The information from the Health Watch study is important in identifying factors within the industry that may be a risk to the health of the industry workforce and ways in which these risks may be addressed.

The Health Watch study has always been conducted independently, first at the University of Melbourne and then, from 1998, at the University of Adelaide. In 2005 the study was transferred to Monash University to take advantage of synergies with other major epidemiological studies.

AIP is continuing to support the Health Watch study because it is valued by the petroleum companies, their employees and the community at large.

The results of the 12th Health Watch report were most encouraging.

- Once age differences have been taken into account, the death rate for both men and women in the petroleum industry is significantly less than in the general Australian population. This holds for all major categories of diseases which cause death.
- The latest analysis shows that the risk of leukaemia of all types is no greater than in the general population (contrasting with previous Health Watch reports). This is true even of acute non-lymphatic leukaemia, which has in the past been associated with exposure to benzene. While the industry has taken steps to reduce employee exposure to benzene and to petroleum products in general, Health Watch has concluded that it is uncertain whether benzene exposures in the petroleum industry in this country have ever been high enough to cause this form of leukaemia.
- Higher reported rates of melanoma (skin cancer) and prostate cancer could not be related to conditions in the work place and the death rate for these cancers is not elevated among petroleum industry employees. Where conditions relating to exposure to asbestos were reported it was concluded that such exposure was likely to have occurred in refineries before 1970 while in other cases the condition resulted from exposure before entering the industry.
- The latest study does not show any increase in cases of bladder cancer (in contrast to previous work).
- Tanker drivers reported higher rates of kidney cancer than would be expected, but there have been too few cases to date to draw any statistically valid conclusions.

AIP training and accreditation programs

AIP provides a number of training and accreditation programs designed to enhance the safety of personnel engaged in the industry, contractors working on oil facilities, and the broader community.

These programs cover: AIP Driver Accreditation Training for tanker drivers; AIP Safe Load Pass Accreditation Scheme; AIP Workplace Clearance Training and Accreditation Scheme for contractors at service stations; AIP Fire Safety Training; and AIP Ship-Shore Officer Training and Accreditation.



**Australian
Institute of
Petroleum**

Level 2, 24 Marcus Clarke Street
Canberra, ACT 2600
GPO Box 279, Canberra ACT 2601

T + 61 2 6247 3044
F +61 2 6247 3844
W www.aip.com.au