SHELL AUSTRALIA'S SUBMISSION TO:

THE SENATE RURAL AND REGIONAL AFFAIRS AND TRANSPORT REFERENCES COMMITTEE INQUIRY INTO FUTURE OIL SUPPLY AND ALTERNATIVE TRANSPORT FUELS.

March 2006

EXECUTIVE SUMMARY

Shell in Australia is pleased to contribute to the Senate Committee Inquiry and appreciative of the opportunity to do so. This paper covers a range of topics related to the Terms of Reference for the Inquiry, where Shell believes it has something to contribute to the discussion. Shell is also supportive of the submission from the Australian Institute of Petroleum (AIP), which covers these topics from a broader industry perspective.

The paper is structured to give a bullet point executive summary for quick understanding of Shell's position, with greater detail in the body of the document.

Shell's view of world oil demand, reserves and production capacity

- World demand continues to increase, particularly in developing and transition countries (e.g. China and India).
- Reserves are continually being found and technology improvements and sustained high oil prices continue to make previously unviable reserves viable. E.g. the IEA estimates up to 200 billion barrels of deep-water oil could be developed and technology to produce oil from very large Tar Sands reserves is continually evolving.
- Oil is likely to remain the dominant world energy source for the coming decades due to the costs of alternative fuels on the scale required and the cost of appropriate infrastructure and vehicles for the alternative fuels.
- We are seeing large investments in refinery capacity, much of this by National Oil Companies, particularly in the Middle East, India and China. There is also a lot of upgrading capacity coming on line to produce higher quality fuels (especially in the Middle East). These capacity changes are likely to place economic pressure on smaller Australian refineries.
- Pricing is hard to predict. The crude oil price is largely dependant on speculation (geo-political and security issues) and product price is influenced by crude oil price and production capacity. However, Shell does not see any infrastructure/capacity reasons why crude or product prices should continue to rise as they have in the last 12-18 months, particularly given the anticipated increases in refining capacity.

Shell's view of Australian/Asia-Pac demand and supply

- Shell in Australia does not currently produce crude oil or condensate directly (only through non-operated joint ventures), but is presently re-entering the exploration business in Australia.
- Australia is a net importer of crude oil and finished products.
- To meet the Australian finished product slate requirement, Shell refineries import either Australian or international oil or condensate. However, typically, international crudes provide a better cost alternative, given that much Australian oil/condensate is too light and has minimal freight cost advantages compared to international crude (compare NWS to Singapore distance to Melbourne and Sydney).
- Australian refinery capacity is lower than demand by around 20%, thus necessitating importation of significant quantities of finished product.
- Construction of new refining capacity is more likely in Asia, given the magnitude of demand and economies of refinery scale (ie large refineries in Asia produce the equivalent of 60-140% of Australia's total production capacity).
- New refineries (in Asia) and investments will ensure margins get squeezed further and it will become hard for Australian refineries to compete against the much larger, more efficient (lower manpower cost) refineries.
- Australian pricing is based on import parity, which means that the Australian Refining industry is slightly safer as it will have more robust margins. However, the cost of importing crude and refining it versus importing all products still puts Australian refineries under pressure.

- Shell expects continued demand growth in Australia and thus continued/increasing reliance on imports. Shell also sees the potential for a shifting demand from gasoline towards diesel.

Market structure and product prices in Australia

- Import parity price strongly reflects the crude oil price and the finished product margin across the refinery (as well as freight and handling costs to land the fuel in Australia).
- The single most influential factor in fluctuating fuel prices is the international price of crude oil. However, as Australian crude and condensate is sold on the world market, higher world prices also result in a higher income stream (taxes) for Australia.
- In Australia, Shell is predominantly a fuel wholesaler, setting a Terminal Gate Price, which is based on import parity pricing.
- Shell does however retain significant direct commercial relationships with customers in the Commercial Fuels, Bitumen, Marine and Aviation markets.
- Shell has a very limited presence in the retail sector, with the large majority of the approximately 1100 Shell branded outlets across Australia operated by either Coles Express or independent owner/dealers who set the retail prices.
- Australia's fuel market is highly competitive and has consistently had among the lowest fuel prices in the OECD in the last decade.

Biofuels and other transport fuel options

- Shell is supportive of the Government's biofuels target of the use of 350 ML of biofuels per annum by 2010.
- Internationally, Shell is recognised as one of the largest blenders of bio-components into road transport fuels presently and is investing in research into "2nd generation" biofuel technology, which will offer improved sustainability.
- For biofuels to continue to develop in Australia, Shell believes consumer confidence, component quality and competitive biocomponent costs are the key.
- Shell is taking steps to develop a biofuels portfolio in Australia. Shell has already played a large role in rescuing consumer confidence in ethanol by introducing Shell Optimax Extreme.
- As volumes will be small in the short to medium term, compared to Australia's net import requirements, biofuels pricing will be determined by the market for alternatives - ie imports - and thus by petrol/diesel import parity price calculations.
- At present oil prices, biofuels require subsidies and tax breaks to be economically viable. If oil prices reduce, there will be thresholds at which biofuels become uncompetitive. Consideration of "who takes the risk" in these scenarios must be made, particularly if Government subsidies are removed or reduced.
- Shell believes a clearer biodiesel blend standard is required. For example, allowing that biodiesel blends are acceptable under Australian standards, providing that both mineral diesel and biodiesel components meet the respective standards (ie mineral diesel and B100). Thus, for example, overall biodiesel blend density may be higher than mineral diesel density.
- In terms of environmental benefits of biofuels, Shell would point to the findings of the Prime Minister's Biofuels taskforce in November 2005.
- Shell is supportive of a number of transport fuel options including LPG, biofuels, synthetic fuels (e.g. Gas and coal to liquids) and Hydrogen and believes that each of these fuels has a role to play in the emerging transport fuel mix.
- Shell believes that all fuels should compete equally in the market, with minimal Government intervention and that this will lead to the most efficient and economically sustainable solutions.

Flow on economic and social impacts of high oil prices

- The most significant contributor to transport fuel price increases is increasing crude oil prices. Australia collects greater tax revenues when the price of oil is higher, which can be used for positive economic and social impacts.
- High oil prices also foster the discovery of more crude oil and the viability of producing it as well as improvements in efficiency of oil products and the viability of biofuels and other transport fuel options.

Options for reducing transport fuel demands

- In recognition of consumer concerns, Shell has launched a programme called "Fuel Stretch" aimed at educating consumers on ways to reduce their fuel consumption.
- The investment by Shell of over 340 million dollars (and the industry of around 2 billion dollars) in producing cleaner fuels also paves the way for improved vehicle technology, which is both more efficient and more environmentally friendly.
- It would be possible to increase indigenous production of petrol by relaxing the olefins specification back up to 20% maximum.

CONTENTS

EXECUTIVE SUMMARY 1

SHELL GLOBAL SCENARIOS 5

WORLD OIL DEMAND AND RESERVES 6

WORLD PRODUCTION CAPACITY 6

MARKET STRUCTURE AND PRODUCT PRICES IN AUSTRALIA 7

BIOFUELS AND OTHER TRANSPORT FUEL OPTIONS 13

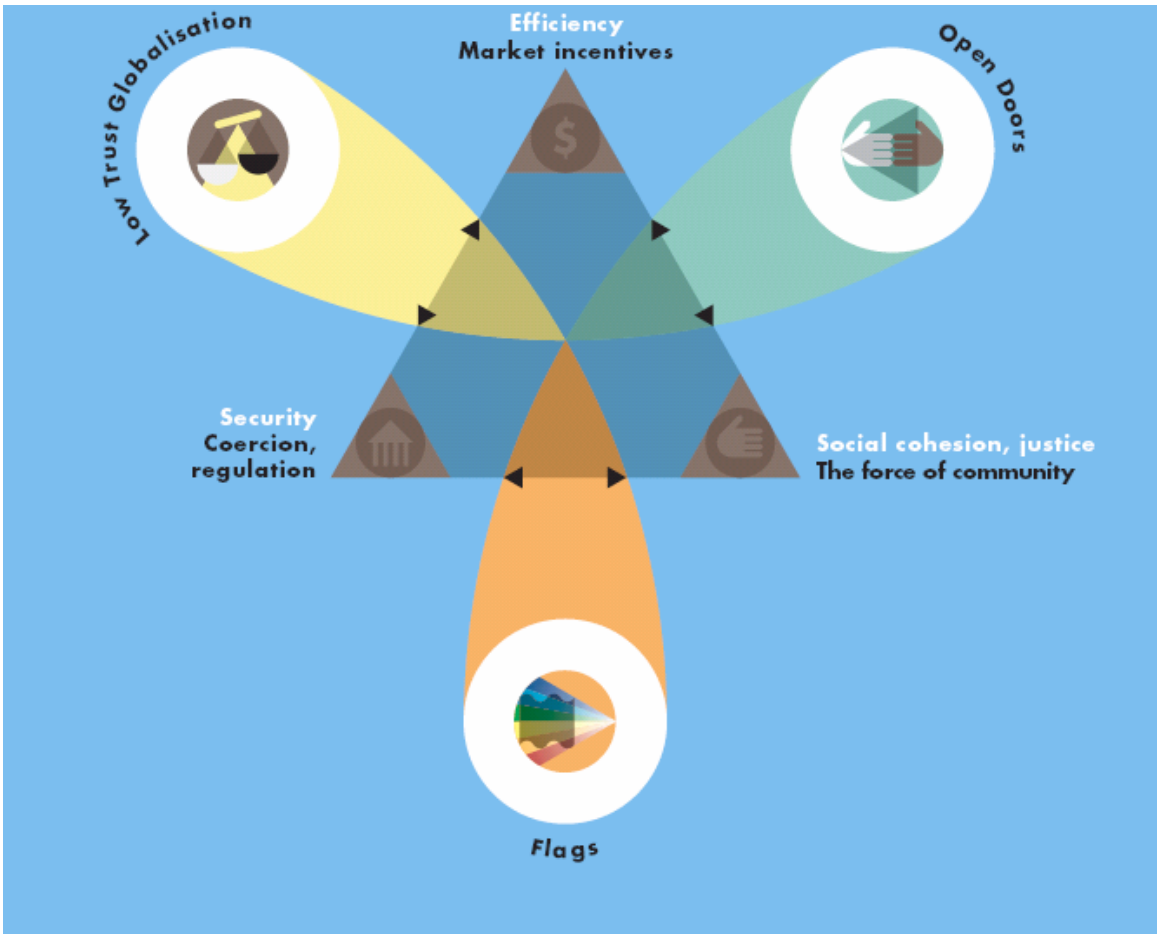
FLOW ON ECONOMIC AND SOCIAL IMPACTS OF HIGH OIL PRICES 15

OPTIONS FOR REDUCING TRANSPORT FUEL DEMANDS 16

SHELL GLOBAL SCENARIOS

Over the last three decades, Shell has developed *Global Scenarios* to cast light on the context in which the Group operates, to identify emerging challenges and to foster adaptability to change. These scenarios are used to help review and assess Shell's global strategy and are thus included in this submission to provide context for Shell's view of the future. The most recent scenarios published by Shell were released in 2005 and present a view of the world to 2025.

The *Global Scenarios to 2025* explore the three forces of market incentives, communities, and coercion or regulation by the state. The three forces drive towards different objectives: efficiency, social cohesion and justice, and security. While societies often aspire to all three objectives, the forces display elements of mutual exclusiveness—one cannot be at the same time freer, more conformant to one's group or faith, and more coerced.



Shell's scenarios are developed, not at the apexes but in the areas of the *Trilemma Triangle* that capture the most plausible trade-offs between these diverse, complex objectives, namely the "two wins—one loss" areas in which forces combine to achieve more of two objectives. Each of these areas embodies trade-offs acceptable to broader coalitions of actors than in the utopian worlds at the apexes.

Key to these *Global Scenarios* are the legal environment, the market culture, the global forces of integration and fragmentation and—more generally—the complex interplay between the three forces. These factors shape how different societies, and the global community, strive towards all three objectives of efficiency, social justice and security.

The three global scenarios to 2025 are summarised briefly below. For more information on the scenarios, please see www.shell.com and view the "Our strategy" section.

Low Trust Globalisation (LTG) – a legalistic "prove it to me" world.

The absence of market solutions to the crisis of security and trust, rapid regulatory change, overlapping jurisdictions and conflicting laws lead to intrusive checks and controls, encouraging short-term portfolio optimisation and vertical integration. Institutional discontinuities limit cross-border economic integration. Complying with fast-evolving rules and managing complex risks are key challenges.

Open Doors – a pragmatic "know me" world.
"Built-in" security and compliance certification, regulatory harmonisation, mutual recognition, independent media, voluntary best-practice codes, and close links between investors and civil society encourage cross-border integration and virtual value chains. Networking skills and superior reputation management are essential.

Flags – a dogmatic "follow me" world.
Zero-sum games, dogmatic approaches, regulatory fragmentation, and national preferences, conflicts over values and religion give insiders an advantage and put a brake on globalisation. Gated communities, patronage and national standards exacerbate fragmentation, and call for careful country-risk management.

WORLD OIL DEMAND AND RESERVES

Shell's view of global growth is dependant on each scenario. Within these scenarios, there is a clear trend of greater growth in China and India than any other part of the world.
Global estimates of current production versus oil reserves ratios indicate there is at least 40 years worth of supply available at present consumption rates. This statistic has remained relatively static for 20 years! However, such calculations do not take into account future growth in oil demand, which will decrease such projected time span. Shell's long-term energy scenarios have consistently explored the requirement to reduce oil demand around 2020, as the present reserve projections will be insufficient to sustain historical ranges in oil demand growth by that time. In the short term, accessibility and investment challenges will be more important than the size of the potential reserves base.

Nonetheless, more reserves are continually being found, although recent statistics and stochastical simulations for future finds in "conventional" oil plays indicate that in general smaller and more remote accumulations can be expected to be discovered. Improving technology continues to allow production of previously unreachable reserves. E.g. the IEA estimates up to 200 billion barrels of deep water oil could be developed. However, the "unconventional" oil resource base (e.g. Tar Sands) offer huge potential - in principle - but the technological and sustainable development challenges in bringing them to production are much higher, resulting in higher investment requirements.

WORLD PRODUCTION CAPACITY

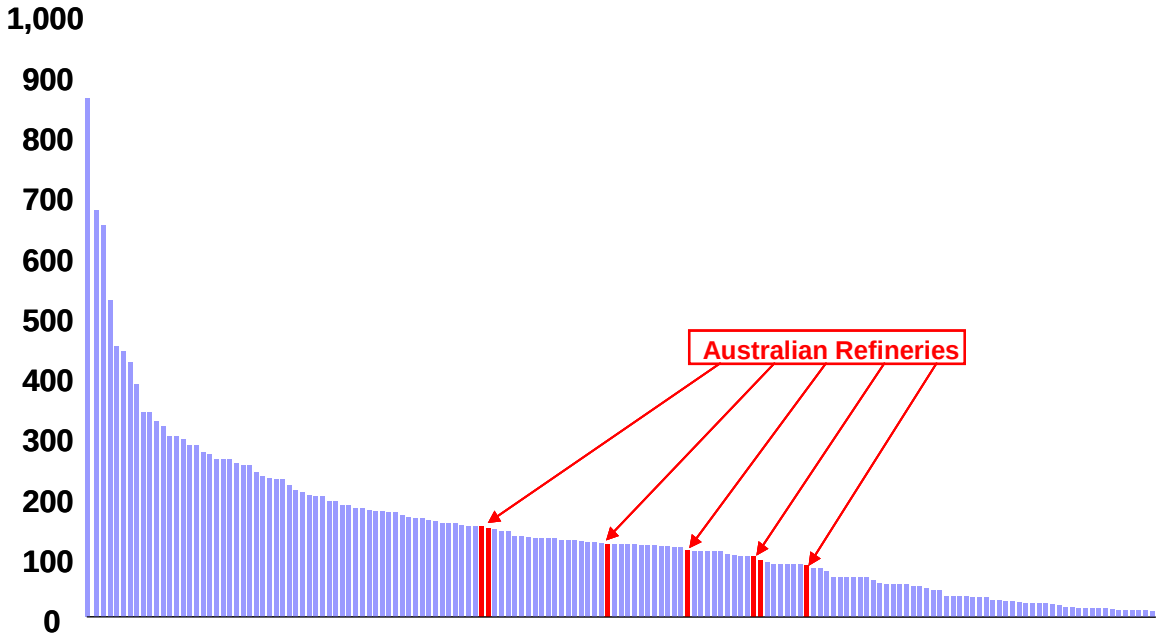
Production capacity growth is cyclical, in line with the profit cycles of the global oil industry. Recent strong margins fit the cyclic pattern of profitability and reflect the impact of strong demand growth, diminished OPEC spare crude supply capacity, and near-maximum global refining utilisation. In this environment, the industry is now responding with a larger refining expansion programme than witnessed since the early 1970's. Shell sees a strong risk of over-building in the refining industry in the short term, leading to a global decline in refining margins, which may be prolonged through the medium term. This scenario will place significant pressure on smaller refineries.

There is also a growing disparity in the supply and demand of certain products. Most specifically, the demand for lighter products (eg petrol/gasoline) has been and is likely to continue to grow more strongly than heavier products (e.g. fuel oil). This will drive higher differentials between light and heavy products and may in turn drive increased planning for conversion capacity.

However, the global refining industry is responding strongly, with recent margin strength enabling major investments amidst a mood of greater short-medium term optimism. For example, crude distillation capacity increases totalling up to 11 million barrels per day have been announced, to come on stream in the 2005-2010 period. The Geographic spread of these additions is: 36% Middle East, 19% India, 18% China, 21% Americas (primarily US) and 6% Europe/Africa (None expected in Australia).

An indication of the magnitude of Australia's refineries is given in the graph below, which shows that the larger Asian refineries can produce almost as much as all of Australia's refineries put together! New refineries are likely to continue the trend of economies of scale.

Asian Refineries
(capacity in thousands of barrels per day)



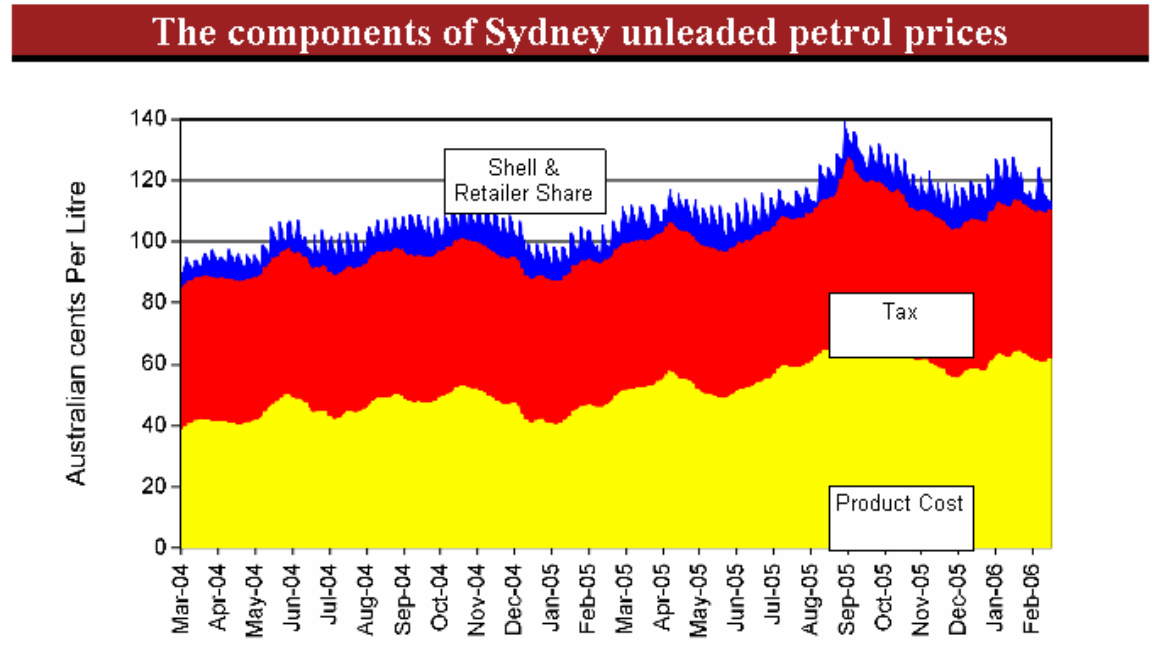
The consequence is that Australia will continue to be dependant on imports and on import parity pricing, with local refineries under increasing pressure to try to compete with the larger refineries in the region.

MARKET STRUCTURE AND PRODUCT PRICES IN AUSTRALIA

Petrol prices are made up of three components:

- Import parity costs (or product cost) (including ocean freight and wharfage);
- Tax (excise & GST); and
- Gross Shell & retailer share (includes all costs/overheads including freight and small amount of profit)

As the graph below shows, together, government taxes and the import parity cost of petrol make up around 90% of pump prices.



Shell is a fuel wholesaler

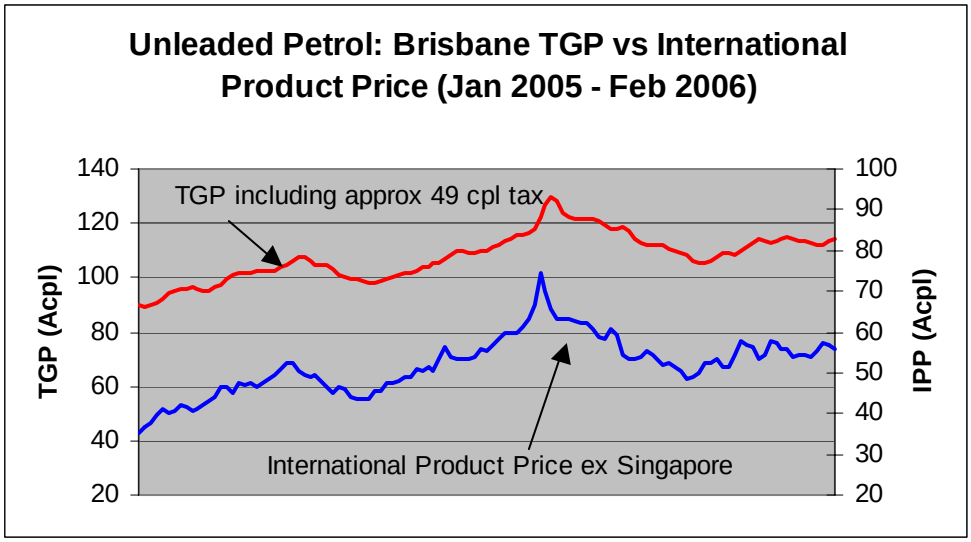
Shell supplies petrol and diesel to a wide range of commercial customers, including large commercial end users, owner dealers and independent retailers. Shell supplied service stations, include independently owned Shell branded locations, Coles Express sites and independently owned, non-Shell branded locations. A small number of motorists in remote locations may also buy fuel from Shell operated commercial refueling outlets.

Shell also retains significant direct commercial relationships with customers in the Commercial Fuels, Bitumen, Marine and Aviation markets.

Setting wholesale prices

Shell's wholesale pricing model is based on a Terminal Gate Price (TGP). This model is presently legislated in Victoria and Western Australia. As Australian refineries compete with international refineries to sell product, the TGP is based on the international product price for fuel (ex Singapore) and includes a quality premium for Australian grade fuel, ocean freight, landing costs, terminal and overhead costs, excise tax (38.14 cpl) and GST (10%).

The graph below compares Shell's Brisbane TGP to the international product price (IPP) for unleaded petrol during 2005. A similar trend, that is that TGP closely tracks the international product price, is observed for other capital cities.



Shell uses TGP based pricing around Australia. The TGP is influenced most significantly, of course, by the IPP and tax but is also affected by ocean freight and wharfage charges, the costs of terminal operation and overheads.

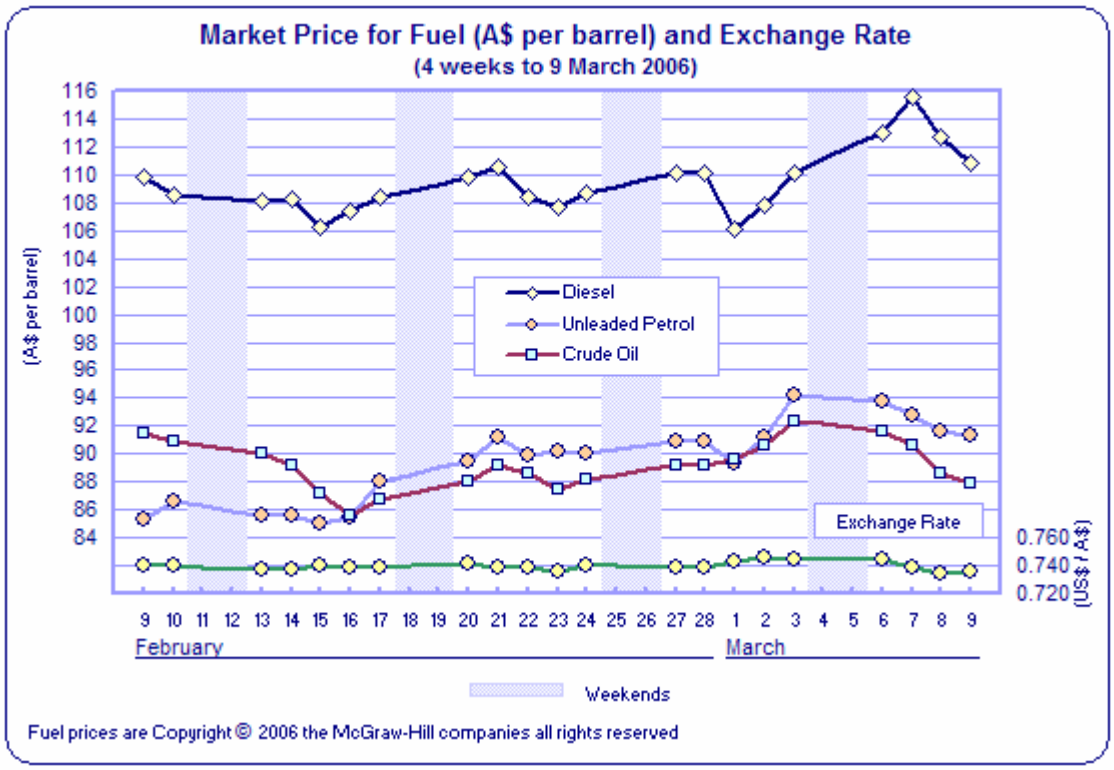
Contribution of crude oil prices

The graph above clearly shows that the price increases in September 2005 were largely attributable to the import parity price (shown as product cost) of the fuel. However, as Australian crude oil and condensate is sold on the world market, higher world crude prices also result in a higher income stream (taxes) for Australia.

The International Product Price can be considered in simple terms to be composed of the crude oil price plus a "product crack", which is the difference between the crude (or input) cost to the refinery and the specific product (or output) price. "Product cracks" are product specific, so will be different for 500 ppmS diesel or 50 ppmS diesel or unleaded 95 octane petrol, and are set by supply and demand in the market. The commonly referred to "refiner margin" is an aggregation of the product cracks across a set of products.

Product cracks and refiner margins are set by the international market and tend to cycle on very long periods (ten to twenty years) as discussed above. Whilst we have recently experienced anomalies in these margins – primarily due to incidents such as Hurricane Katrina, which temporarily reduced some global supply capacity, and the boom in China driving very high demand – the consistent trend is that crude oil price changes have a much more significant effect on the overall price fluctuations of products and thus on the price motorists pay at the bowser than any other factor. Consequently, when prices are rising, Australia stands to benefit significantly from increased resource rent tax on the crude oil and condensate being produced and from any increased profits made by companies producing these products.

The graph below, from the AIP website, shows the trend over the last two months of crude oil price compared to the international product prices for petrol and diesel.



Source: AIP website

Big distances, low volumes and local competitive forces drive regional costs

Shell customers have the option of purchasing their fuel direct from any Shell terminal, providing the load is purchased in an accredited fuel tanker (to meet industry safety regulations). As a result, Shell's delivery system must be very competitive.

Where customers prefer to have their fuel delivered, Shell offers this service and will negotiate a price dependant on volume delivered and location. Depending on where a customer is located, the supply chain, ex terminal gate, may incorporate a combination of fuel depot, hired carrier and Shell carrier. Shell sells direct to customers and contracts the delivery of fuel to distributors.

Delivery in the more remote parts of Australia is expensive due to the big distances and relatively low volumes of fuel. For example, depots which are used as interim points for storing and then redistributing fuel to customers in the immediate vicinity of the depot have certain fixed costs associated with site rent and operation. As an indication of the costs of a depot, in 1994, an Industry Commission conducted a detailed inquiry into the petroleum industry and estimated that the cost of depots, including delivery in the depot area (within 10 kilometers), could range between 3.0 and 5.5 cpl.

The retailer sets pump prices at service stations

The retailer or service station owner sets the pump prices that are seen by motorists. Retail prices in metropolitan and regional areas depend on local competition and local market factors.

Service stations in regional areas will often sell lower volumes of petrol/fuel per site than metropolitan service stations. When this occurs, a higher margin is required on each litre of fuel sold to cover the overhead costs of the service station, often contributing to the higher prices in regional areas. Overheads can include for instance, site rent/cost, wages, electricity and branding.

Most Shell branded petrol stations are operated by either Coles Express, our alliance partner in over 600 sites across the country or by independent operators, who pay a fee for use of the Shell brand. Shell does own and operate a small number of "Commercial Vehicle Refuelling" stations, which are typically located in regional areas of Australia and predominantly sell diesel.

Weekly price cycles

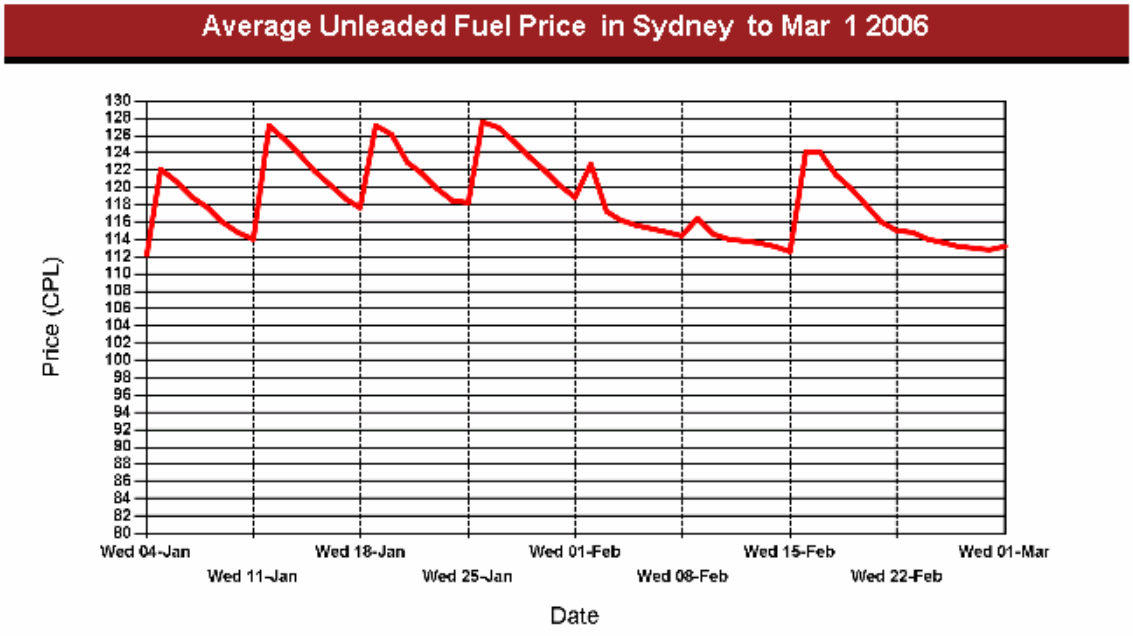
In Australian capital cities, petrol prices have historically moved up and down regularly. This is due to intense competition. Service station operators set their own prices and discount prices to attract more customers.

Historically, the price cycle has worked like this: One service station reduced its price, lowering its profits but hoping to increase sales not only of petrol but other retail goods. The service station's competitors closely monitored each others prices and usually responded by also reducing their prices or discounting even further to attract more customers.

The downward price spiral continued until the prices reached an unsustainably low level where margins were squeezed to unprofitable levels. Once these low levels were reached, one or more service station operators put up their prices again, returning to earlier levels and the pricing cycle began again.

Price fluctuation provides motorists an opportunity to save. Companies selling fuel at a very low margin are the reason Australia has among the cheapest petrol in the OECD world, both before and after tax. Most metropolitan markets have a weekly price cycle. To assist motorists in working out the best days to buy petrol in their capital city, Shell has a graph on its website (example shown below) of the average daily price of unleaded petrol in the last two months, at Shell supplied service stations.

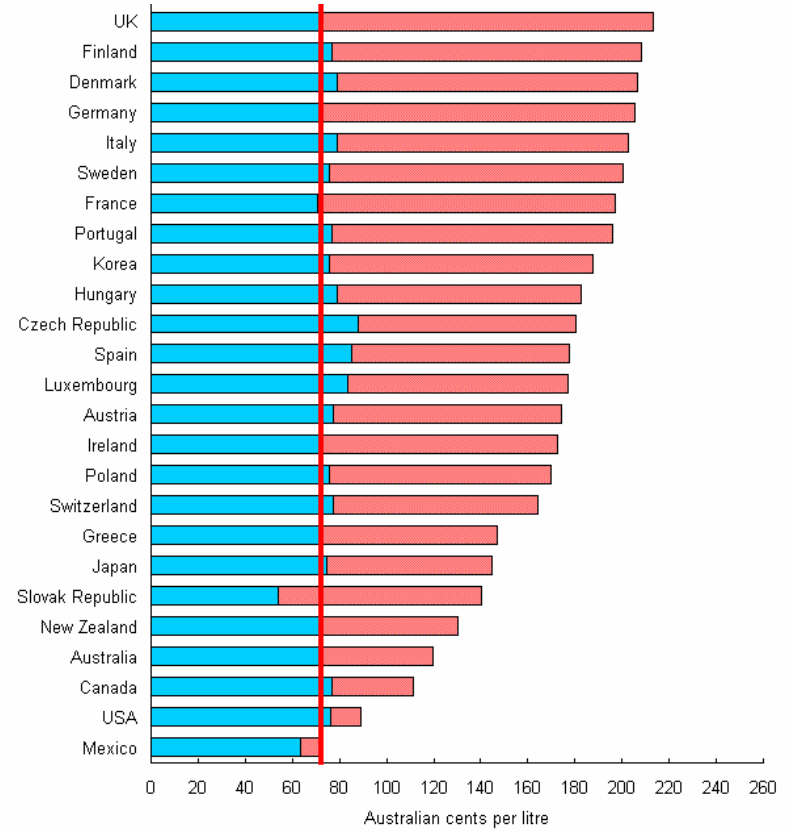
Shell suggests people take advantage of when prices are low and buy petrol at those times during the week when price discounting is taking place. Shell suggests that when people see a low price they should fill up, regardless of whether or not they have a near empty tank.



Australian prices in context

Australian consumers benefit from having amongst the cheapest petrol prices in the world both before and after tax. Before tax prices are low because margins are small and because of

the efficiency of Australian petroleum distribution and marketing operations. The table below gives a comparison between Australian and other country's pre and post tax petrol prices.



Source: AIP website – September Quarter 2005.

Competition

As mentioned above, Australia is a highly competitive market for petrol and diesel prices. Evidence to support this includes:

- Australians enjoying among the cheapest pre and post tax petrol and diesel in the OECD (as above);
- Petrol and diesel (excluding tax) have reduced in price in real terms over the last twenty five years;
- Returns to Australian refiner-marketers have largely been below the long term bond rate for the last twenty years and well below international benchmarks for the industry – Shell made a profit of $4 million in 2004 in its Downstream business in Australia!;
- The explosion of retail discount schemes since Shell and Coles Express introduced the 4cpl discount scheme in 2003.
- The ACCC has examined the shopper docket arrangements (2003) and concluded that: 'shopper docket petrol discount arrangements were likely to result in lower petrol prices for consumers, generation of a culture of discounting, and increased non-price competition. In August 2005, in their brochure "Understanding petrol pricing in Australia", the ACCC concluded that 'developments in the petrol retailing market over the last two years indicate that these results have in fact occurred'.

BIOFUELS AND OTHER TRANSPORT FUEL OPTIONS

Use of Bio-components in road transportation fuels: Internationally, Shell is recognised as one of the largest blenders of bio-components into road transport fuels, selling nearly three billion litres in 2005, mostly in the US and Brazil where legislators favour ethanol.

Shell is investing in development of bio-components that could provide significant reductions in greenhouse gas emissions on a "well to wheel" basis, using sources that meet acceptable standards of sustainable development and societal performance. For example, Shell has technology development programmes with its Canadian partner, Iogen in advanced (so called 2nd generation) bio-components, such as cellulose ethanol from agricultural residue, that offer the lowest overall greenhouse gas emissions (often discussed in terms of CO2 equivalents), without taking resource from the food chain for feedstocks. Shell is also engaged in research and development to develop Biomass-to-Liquid processes, in which a woody feedstock is converted into high-quality diesel fuel components. In this respect Shell has recently announced a partnership with CHOREN Industries. In Australia, Shell is drawing on its international experience to address some of the challenges that exist in the Australian market.

Shell supports the Australian Government's 350 ML target and has recently launched its first biofuels product in this market – Shell Optimax Extreme. The launch of the product in Melbourne, Sydney, Brisbane and Canberra has been highly successful, with ringing endorsements from the Acting Prime Minister the Hon. Mark Vaile, the Federal Minister for Industry Tourism and Resources the Hon. Ian Macfarlane, racing legend Dick Johnson and many others from ethanol producers to renewable fuels advocates.

The fuel is a clear demonstration that Shell continues to lead the way in fuels in Australia (Shell Optimax Extreme is Australia's first and only "super-premium" fuel), but also a significant step forward for alternative fuels as Shell puts its brand quality guarantee behind ethanol as a reputable component in fuels.

Looking ahead, Shell believes the key elements in considering biofuels in Australia are outlined below.

The market as the driver of which fuels to produce: Consumer demand for product is the best avenue to a sustainable market for any fuel. Consequently, consumer confidence in biofuels is a critical issue for development of the biofuels industry in Australia. Shell Optimax Extreme is a significant attempt by Shell to demonstrate to consumers that their confidence is warranted.

Which biofuels? Not all biofuels are the same. Shell recognises current liquid biofuels have performance and CO2 compromises. Further, many current biofuels are based on food crops. Shell recognises that biofuels commercially produced from food crops will lead to pressure on food stocks and prices. Shell internationally is developing advanced biofuels for future, commercial use with better environmental and vehicular performance.

Through focused R&D, Shell continues to seek viable alternative fuels, which are better for the environment, based on non-food crops. Our partnerships (e.g. Iogen and Choren) involve research into these "2nd generation" biofuels using the feedstocks from wood, straw and paper by-products.

Biocomponent cost/price: Fundamental to the uptake of biofuels is the relative cost of biocomponent to fossil oil based petroleum fuel. Tax legislation and the competitiveness of imports will also play a significant role in this equation over the coming ten years. This issue was clearly identified in the Prime Minister's Biofuels taskforce report, which states that "…barring unexpected scenarios such as ongoing oil prices over US$47 a barrel at a 65c exchange rate, ABARE analysis suggests that Australian biofuels will generally remain uncompetitive with conventional fuels without continuing assistance in the longer term".

Pricing of ethanol-blended fuels must take account of the additional costs to be borne by fuel suppliers, distributors and retailers. These additional costs will depend on the overall strategy

of blending and distribution, but will include distribution and storage costs, blending facilities, biotreaters (water separation from hygroscopic ethanol blended fuels and wastes), retail site upgrades (additional channels and improved storage) and marketing.

In light of this, the Federal Government's present tax strategy (production subsidy for ethanol) is a positive vehicle for promoting market entry. Shell believes that initiatives like the Queensland Ethanol Conversion Initiative grant scheme, which provides grants for supply infrastructure are also an important part of establishing the biofuels industry, providing some incentive for potential biofuels sellers to enter the biofuels market.

However, it is important to emphasise that whilst these initiatives can help promote market entry, they should not necessarily be used to promote an expectation of price discounting with ethanol blends.

Pricing of blends depends on:

- The relative price of ethanol and fossil oil fuel;
- Additional transport costs (to and from terminals)
- The additional costs of supply infrastructure (e.g. terminal and retail site investment);
- The percentage of ethanol in the blend (ie at 10% ethanol, any cost saving on ethanol component has to be divided by 10 before arriving at a maximum possible saving across the price of the whole litre of fuel);
- RVP (Reid Vapour Pressure) penalties (ie the cost of adjusting base fuel) if there is no appropriate variation or waiver; and
- The tax regime (imports receive same treatment as domestic production and tax increases from 2011 through to 2015).

Of these, the price fluctuations of the commodities ethanol and petrol are the most difficult to manage. Future scenarios where companies are committed to ethanol blends and the ethanol price becomes more expensive than petrol represent a significant risk.

Establishing a consistent and enforced regime for fuel volatility is also an important step yet to be taken in Australia. At present there are differing regimes across different states, making it difficult for companies to roll out ethanol products nationally.

Infrastructure costs: There are significant costs associated with the blending, distribution and sale of biofuels – particularly ethanol.

Terminal costs depend on the size of installation and cover storage tanks, modified firefighting equipment, linework, pumps and ganrtry loading arms.

Retail site costs incorporate additional tank testing (due to ethanol's propensity for water), filters and branding and signage.

Biocomponent quality: Shell has a world wide reputation built on quality fuels and will not compromise its fuels to its customers. Any biofuel components must be of suitable quality and the development of and assurance of compliance with appropriate Australian quality standards is vital for development of the industry. For example, at present, there are few suppliers meeting the Australian Biodiesel (B100) specification.

Australia currently has a mineral diesel standard (i.e. with 0 biocomponent) and a standard for B100 (i.e. 100% biocomponent), but no clear standard for biodiesel blends, E.g. B5. Development of standards for fuels containing bio-components should take due account of the performance of the finished fuel in vehicles, and should not place un-necessary constraint on the quality of the crude oil derived portion of the fuel blend.

Biodiesel blends should be acceptable under Australian standards, providing that both mineral diesel and biodiesel components meet the respective standards (ie mineral diesel and B100). Thus, for example, overall biodiesel blend density may be higher than mineral diesel density.

Supply outlook: Australia is a net sugar and grain exporter, but a net transport fuel importer. Shell appreciates that these facts do lend themselves to some sentiment around supply

security. However, Shell supports the view put forward in the Government's Energy White Paper, which found that there was no case for intervening in energy markets to address any perceived energy security problem.

In terms of volumes of biocomponent available, at least in the short to medium term, there will be challenges in securing volumes of supply as the balance between demand and construction of appropriate biocomponent producing plants is struck.

Other factors: The environmental benefits of biofuels are well covered in the Prime Minister's Biofuels Taskforce report. The report clearly states that there are benefits and dis-benefits of using biofuels. E.g "Emissions of CO are reduced under E10 compared with neat petrol; there is little change in VOC emissions, and NO_x emissions are increased".

Also of importance and relevance is comparison to the effect of the Government's clean fuels programme. The continued tightening of Australian fuel standards has made a significant contribution to vehicle emission reduction and will continue to do so through to the last round of the present programme in 2008/9 (see Fig 5, page 101 of the task force report).

The Biofuels task force report has examined these matters extensively, and thus it is not intended to go into these issues here, suffice it to comment that the environmental benefits of biofuels are mixed and that the existing clean fuels programme is already making a significant contribution to reduced vehicle emissions. Shell would, however, advocate that policy makers need to consider CO2 performance when creating new regulations relating to biofuels.

In some sectors, biofuels do not represent a viable option in the short term. For instance, the long life cycle of commercial aircraft will dictate that a Jet A-1 type hydrocarbon will remain the dominant Aviation fuel source for at least the next two decades.

Other fuels: Internationally, Shell is also supportive of a number of other transport fuels including LPG, synthetic fuels (e.g. Gas and coal to Liquids) and Hydrogen.

LPG is widely available in Australia, whilst the other fuels are emerging internationally as fuels that will play an important role in the future transportation fuel mix. Shell in Australia is continually looking for suitable opportunities to introduce these fuels to the Australian market.

Conclusion: Shell in Australia has consistently stated that for biofuels to become a sustainable and significant part of the Australian fuel mix, there must be consumer confidence in biofuels and a reliable supply of suitable quality biofuels at a competitive price. The long term prospects of biofuels will depend on the relative prices of the base commodities and who is prepared to take the downside risk. Shell believes that the long-term cheapest sustainable price for consumers will occur when all fuels compete equally in the market, with minimal Government intervention.

FLOW ON ECONOMIC AND SOCIAL IMPACTS OF HIGH OIL PRICES

As pointed out above, typically the most significant contributor to transport fuel price increases is increasing crude oil prices. Australia collects significant tax revenues when the price of crude oil is higher, from both the PRRT (Petroleum Resource Rent Tax of 33%) and from any profits that companies who produce the crude oil or condensate make. For example, according to ABARE, in 2004/5 Australia produced an average of 437 thousand barrels of crude oil and condensate per day. At a typical exchange rate of 75c, for every increase of US$1/barrel of crude oil price (or approximately 1 cpl in petrol prices), the PRRT component alone contributed over AUS$70 million to Australian Tax Office revenue. Thus, typically, increases in the overall prices of petrol and diesel at the bowser are accompanied by increased taxes, which contribute positively to the Australian economy.

High crude oil prices will facilitate the discovery and production viability of more crude oil and condensate, improve the viability of alternative fuels and accelerate the drive to introduce

new, more fuel efficient technology. For example, in the Aviation business, airlines are refleeting to significantly reduce fuel burn per seat.

OPTIONS FOR REDUCING TRANSPORT FUEL DEMANDS

Transport fuel demand will continue to grow. This will be driven by the continual demand for "economic growth" which translates to more resource production in Australia, a growing population and phenomena such as "low cost airlines" which drive down the cost of travel and thus encourage more people to take it up.

One option for mitigating this overall pattern is to improve efficiency of fuel use. In recognition of consumer concerns, Shell has launched a programme called "Fuel Stretch" aimed at educating consumers on ways to reduce their fuel consumption. This initiative provides suggestions on driver behaviour, choice of vehicle and choice of fuel. Shell is also a sponsor of the Guinness Round the World fuel economy record attempt by Australian couple John and Helen Taylor – a further demonstration that Shell is trying to raise the profile of fuel efficient driving.

Shell is also contributing to more efficient fuel use is by the investment of over $340 million (and the industry of around 2 billion dollars) to produce cleaner fuels, which have enhanced environmental benefits and pave the way for more efficient vehicle technology.

It would be possible to increase indigenous production of petrol by relaxing the olefins specification back up to 20% maximum as is currently being discussed between industry and the Department of Environment and Heritage. Through the process of fuel blending, this may in addition lead to slightly higher density fuel with potentially higher fuel efficiency. This increase in fuel efficiency of petrol blends could also be seen as an offsetting measure for ethanol blends – ie compensating for some of the loss of fuel efficiency from blending in ethanol.