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26 September 2008

Senator Mathias Cormann
Chair
Senate Select Committee on Fuel and Energy
PO Box 6100
Parliament House
CANBERRA ACT 2601

Dear Senator Cormann,

Thank you for the opportunity to participate in the Senate Select Committee on Fuel and Energy Inquiry.

Shell has made a number of submissions recently to inquiries related to Fuel and Energy. I attach copies of the following :

- Shell's submission on the Government's Carbon Pollution reduction Scheme Green Paper.
- Shell's submission to the ACCC Petrol Pricing Inquiry July 2007
- Shell's submission to the Australian Senate Pricing Inquiry May 2006

These submissions address many areas that the Inquiry covers and can be made publicly available on the Committee's website.

Please direct any further questions to Mr Peter Scott, Shell's GM External Affairs, Downstream at peter.scott@shell.com or on (03) 8823 4148, who would be pleased to assist.

Yours sincerely

Russell R Caplan
Chairman

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10 September 2008

Green Paper Submissions
Department of Climate Change
GPO Box 854
CANBERR ACT 2601

Dear Sir/Madam

The Shell Companies in Australia : Submission on the proposed Carbon Pollution Reduction Scheme
(submission emailed to : emissionstrading@climatechange.gov.au)

Shell Australia Limited, Shell Energy Holdings Australia Limited and their related bodies corporate in Australia ("Shell") appreciate the opportunity to make this submission to the Federal Government on the proposed Carbon Pollution Reduction Scheme ("CPRS").

Shell supports the introduction of an emissions trading scheme (ETS) in Australia and is engaging in constructive dialogue with the Government to facilitate the ETS implementation.

Shell considers it is vital that Governments in both the developed and developing world urgently develop policies and supporting legislation that recognise the need to meet growing energy demand and address climate change issues.

Shell considers the following to be fundamental for the effective and efficient management of emissions:

- action in all sectors is required to meet global emissions reduction objectives in a given timeframe at lowest cost;
- a central objective of climate change policy should be the efficient direction of capital within the market towards low and zero carbon emission investment;
- policy measures should be consistent across as broad a region as possible (e.g. between states, federally and eventually internationally);
- policy should be built on a sound, established and practical measurement and reporting basis; and
- any ETS policy should be built from a long-term (20+ years) environmental objective, with clear intermediate target points (i.e. each 5 or 10 years) to provide investment certainty and greater confidence in delivery of the aspired outcome.

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Further, Shell considers that well targeted complementary measures operating alongside the ETS are required to address market failures and drive structural changes more effectively than relying on an ETS alone. Effective complementary measures will help lower the costs involved with meeting the ETS emission trajectories, and create smoother transitions across abatement options.

In particular, Shell considers that the following measures are necessary to supplement the proposed CPRS:

- complementary measures in the transport sector, such as low carbon fuel standards (i.e. standards that aim to reduce carbon emissions on a "well-to-wheel" basis), vehicle efficiency targets and driver education programs;
- additional action in the commercial and domestic sectors, such as a series of enforceable energy standards for buildings and appliances, and incentives for retrofitting of existing infrastructure; and
- support for the discovery, development, demonstration and deployment of impending emission reduction technologies, such as Carbon-dioxide Capture and Storage (CCS).
-

Shell considers that the Government needs to consolidate and rationalise State and Federal legislation and schemes that conflict or overlap with the proposed national CPRS.

With respect to the Government's proposed CPRS outlined in the Green Paper, Shell has specific comments on the following areas:

- trade-exposed industries;
- carbon dioxide capture and storage; and
- transport fuels.

Our comments on these specific areas are attached in the accompanying document.

Should you wish to discuss any of the considerations and proposals raised in our submission, please contact our GHG Manager, Tzila Katzel, on +61 3 8823 4201 or +61 424 073 716.

Yours sincerely

Russell R Caplan
Chairman

***Enc** : Shell Companies in Australia : Response to the Federal Government's Green Paper on the Carbon Pollution Reduction Scheme*

The Shell Companies in Australia:

Response to the Federal Government's Green Paper on the Carbon Pollution Reduction Scheme (CPRS)

September 2008

SUBMISSION TO CARBON POLLUTION REDUCTION SCHEME - GREEN PAPER

Name of organisation:

Shell Australia Limited

Shell Energy Holdings Australia Limited

(Collectively referred to as "Shell" herein)

Name/s of author/s:

Russell Caplan, Chairman, The Shell Companies in Australia

Date:

10 September 2008

Confidentiality statement:

I **do not** want this submission to be treated as **confidential** and/or **anonymous**

1 Executive Summary

Shell supports the introduction of an emissions trading scheme (ETS) in Australia and is engaging in constructive dialogue with the Government to help this happen.

There are three areas of the Green Paper on which Shell has specific comment:

- trade-exposed industries;
- carbon-dioxide capture and storage; and
- transport fuels.

1.1 Trade-exposed industries

Shell supports the Government's desire to assist industries that are emissions intensive and trade-exposed (EITE). However, Shell does not consider that the Government's proposed position is an efficient or effective way of providing assistance to EITE industries.

Shell recommends that the Government continues to pursue its sectoral analysis before finalising the design of the Carbon Pollution Reduction Scheme (CPRS) and that the Government does not use an emission per unit of revenue metric as proposed.

However, in light of the tight timeframes that the Government has set itself, Shell recognises that using the most economically efficient and effective methodology for allocating EITE assistance may not be possible. Therefore, Shell recommends that a "safety net" approach be adopted for the allocation of free permits to EITE industries, which would cap the cost of emission permits at a defined level of industry profit or value added.

1.2 Carbon-Dioxide Capture and Storage

Shell agrees with the Government that Carbon-Dioxide Capture and Storage (CCS) is a necessary technology to enable the world and Australia to meet their emission reduction aims. However, Shell does not consider that the market price of carbon will be sufficient to commercialise CCS in the timeframe that is required to reduce emission. Therefore, Shell recommends that the Government provides a greater level of funded support for CCS demonstration facilities in Australia.

1.3 Transport Fuels

Shell supports the Government's proposal that the Customs and Excise Duty point be used as the point of obligation for transport fuels. However, Shell does not consider that including transport fuels in an ETS, in isolation, will provide sufficient price incentives to reduce transport emissions, because of the low elasticity of demand. Shell considers that the Government needs to implement complementary transport emission reduction policies that help ensure that emissions from the transport sector reduce over time.

Shell is concerned about the Government's proposal to zero-rate all biofuels under the CPRS. Shell does not consider zero-rating all biofuels to be an effective way of reducing transport emissions.

2 Emission-Intensive Trade-Exposed industries

The Green Paper Summary states that, in the absence of a comprehensive global agreement on emissions reduction:

> *[Australian] trade-exposed industries may not be able to pass on the costs (of emissions imposed by the trading scheme) as they face prices set in international markets, and compete against firms that do not at this stage have comparable carbon constraints.*

Further, the Green Paper states in the Summary that:

> *In the absence of assistance, if constraints on emissions are placed on activities in Australia but not elsewhere, there is a possibility that some emissions-intensive trade-exposed activities (EITE) may choose to leave Australia (or new investment could be discouraged). If these EITE industries choose to relocate elsewhere, with no consequent global reduction in emissions, it results in what is called 'carbon leakage'.*

To ensure the effectiveness of the Carbon Pollution Reduction Scheme (CPRS), in the absence of a global climate change agreement, it is important that carbon leakage is minimised. An ineffective CPRS could result in Australian industries losing market share to international industries that do not face similar carbon costs, with negative consequences for Australia's economy.

Further, any reduction in Australian emissions will be nullified by an increase in emissions by the international industries that are displacing Australian production. An ineffective CPRS will mean that Australia exports its jobs and imports carbon emissions. Shell does not consider that this is the Government's intention.

Shell notes that the Summary of the Green Paper states:

> *The Government proposes to address [this problem] by providing a share of free permits to the most emissions-intensive trade-exposed activities.*

and

> *The Government proposes to assist those firms that have a sufficiently material impact on their cost structures as a result of the scheme.*

Shell supports the aims of maximising the economic efficiency of the CPRS and minimising the relocation of Australian industry where there is no consequent reduction in global emissions (carbon leakage).

Shell considers that targeted assistance to EITE industries by providing a proportion of free emission permits, would reduce the risk of inefficient carbon leakage and is an efficient way to minimise carbon leakage.

2.1 An economically efficient solution to address carbon leakage

Shell acknowledges that designing an ETS that minimises carbon leakage is difficult, but critical to achieving the most efficient outcome. The Green Paper advocates in section 9.1.3 that the CPRS design should support the:

> *"competitiveness of traded and non-traded industries, be economically efficient and be consistent with the environmental objectives of the scheme."*

Shell considers that the extent of trade exposure and potential carbon leakage will vary widely between different Australian industries and activities, and these differences will depend on:

- how much energy is consumed by the different industries in their production process (energy intensity); and
- the extent to which increased costs can be recovered from the market (trade exposure).

In practice the degree of trade exposure faced by different industries will vary widely. Industries that are more trade-exposed will be subject to higher potential carbon leakage and therefore require a greater level of assistance. To achieve maximum efficiency, Shell considers that the allocation of free permits to the trade-exposed activities must take the degree of trade exposure into account.

The Green Paper examines a range of measures of trade exposure including:

- examining trade shares;
- estimating the price elasticities of individual products; and
- examining correlations between relevant global and domestic prices.

The preferred position identified in the Green Paper is not to attempt to distinguish between degrees of trade exposure, but to include all industries where no physical barrier to trade exists as "trade-exposed". The explanation for this decision in Section 9.3.3 is:

> *Estimating specific price elasticities and examining movements between the prices of domestic and comparable international goods would be an alternative way of assessing the relative capacities of industries to pass through cost increases. These are complex exercises subject to numerous assumptions. The Government does not believe that a robust methodology could be developed to conduct such an exercise in a fair and comparable way across a wide range of industries and activities.*
>
> *On balance, the Government's assessment is that it is not possible to provide a practical, transparent and robust test of the relative capacities of different industries to pass through cost increases.*

Shell considers that for an optimal solution, the primary criterion for assistance to trade-exposed industries should be whether they are actually trade-exposed. The mechanism for allocation of assistance should be based on an assessment of an industry's inability to pass costs into the market on the basis of its trade-exposure.

Shell acknowledges the difficulties associated with accurately quantifying the relative ability of individual industries to pass through cost increases, particularly in the timeframe proposed for implementation of the CPRS. However, Shell considers that there is merit in the Government continuing to pursue its sectoral analysis to assess trade exposure before it finalises the design of the CPRS.

Adopting a more comprehensive and robust definition of trade exposure would allow the Government to target industry assistance more efficiently, and lower the total cost of reducing carbon leakage. Implementation of rigorous trade exposure criteria would provide the most economically efficient use of consumers' and industries' money to fund emission reduction in the transition to a comprehensive global scheme.

Shell recommends that the Government continues to pursue its sectoral analysis to assess trade exposure properly, to allow efficient targeting of those industries that are trade-exposed before it finalises the design of the CPRS.

2.2 Emission per unit revenue is inefficient and inequitable

The Green Paper proposes that assistance be provided to EITE industries on the basis of a measure of emissions per unit of revenue. Shell considers that the proposed revenue measure fails to achieve the Government's stated objective as outlined in section 9.4.1 that:

> *"EITE industry assistance should be targeted to activities for which the carbon cost impost is most significant and material."*

The proposed revenue measure takes no account of the capacity of an EITE industry to recover increased costs from the market or the materiality of the cost increases relative to the industry's profits or value add. Therefore, Shell considers that the proposed measurement of emission per unit of revenue as a basis for allocating assistance to trade-exposed industry is inefficient and inequitable. It is not an effective means of reducing risks associated with carbon leakage and is likely to lead to unintended consequences.

Using the proposed revenue metric will result in big losers and big winners. The big losers will be those industries that do not qualify for assistance but are heavily trade-exposed and would not recover costs in the market. The big winners will be those industries that do receive assistance and are not heavily trade-exposed, and could pass on the cost of the scheme to their customers.

Shell strongly recommends that the proposed emission per unit of revenue measure not be used by the Government to assess EITE assistance for carbon leakage.

2.3 Providing a "safety net" for existing trade-exposed industries

Shell proposes that a "safety net" approach be used for existing trade-exposed industry.

Under the "safety-net" proposal, the cost of permits would be capped at an agreed safety net threshold, set at a defined share of industry profit or value added. Permit costs above the safety net threshold would be offset by the allocation of free permits.

The "safety-net" approach would help minimise carbon leakage by targeting assistance to those industries that face the highest relative cost burden and are therefore more likely to be competitively disadvantaged by the introduction of an ETS. By setting the "safety net" at a modest level, the approach does not need to increase the amount of industry assistance; rather it is designed to allocate this assistance more efficiently and more equitably.

Allocation of these free permits should be defined at the commencement of the CPRS, based on estimates from a set of baseline years (e.g. average profit/value-add over the previous 5 years). Such a "safety net" would help minimise carbon leakage from firms already operating in Australia.

Shell recommends that assistance to EITE industries by provision of free permits not be artificially capped at 20 per cent of total permits. However, if the Government chooses to maintain this element of the scheme design, this could be accommodated within a "safety net" proposal by adjusting the "safety net" threshold.

Shell suggests that a "safety net" approach be adopted for the allocation of free permits to EITE industries that would cap the cost of emission permits at a defined level of industry profit or value added.

2.4 Benchmarking for new trade-exposed activities

The potential for carbon leakage is greater for new activities where capital costs have not been sunk. Investment decisions by firms will be made on a range of criteria. Under the CPRS, the incentive to invest in Australia is reduced, as new investment in Australia incurs a carbon cost that is not borne in competing countries.

The shifting of new EITE activity offshore is an extreme form of carbon leakage. In theory, to avoid this problem, free emission permits should be provided to the extent that potential projects that would have proceeded are not discouraged from doing so because of the need to purchase permits. In practice this is very hard to quantify.

Shell considers that a potential way to deal with this issue would be to provide significant new EITE activities with an allocation of free permits within the cap, up to the level of emissions equivalent to the "world's best practice" emissions benchmark for the facility.

Under the proposal, firms would purchase emission permits for all emissions above this best practice benchmark. As the proposal is designed to reduce the risk of large-scale carbon leakage, the assistance would only apply to significant new activities that pass a materiality threshold based on the level of emissions.

Benchmarking would help minimise the risk of carbon leakage from new facilities locating offshore and provide the incentives required for new facilities to adopt best practice technology to reduce emissions.

Whilst benchmarking can be a complex exercise, it is relatively simple to create best practice energy efficiency benchmarks, such as emissions produced per unit of production. Shell is confident that both Liquefied Natural Gas (LNG) facilities and petroleum refineries could be suitably measured under this approach, along with other facilities such as aluminium smelters.

Shell suggests that assistance for significant new EITE investments be in the form of free permits equivalent to the "world's best practice" emissions benchmark for the facility.

2.5 Refineries are trade-exposed

Australian petroleum fuels are priced on an import-parity (Singapore price plus freight) basis. Imports by major oil companies, independent distributor-marketers and independently operated terminals provide the price-setting mechanism for refined products. Therefore, Australia's refineries are "price-takers" in the Australasian market with no capacity to recover carbon costs.

Australia's refineries are already under significant competitive pressure from refineries in Asia.[1] Further cost pressures arise from the obligation to produce Australian specification clean fuels. There is very limited capacity to pass on any increased domestic refinery costs to Australian consumers, as the competitive context in which Australian refiners operate is the Asian market. Because of the competitive context, there is very limited, if

[1] For example, Reliance's Jamnagar refinery in India will start production this year from an expansion that is almost equivalent in size to all of Australia's refining capacity combined. It will have much greater crude choice flexibility and hence lower input costs.

any, capacity for Australian refineries to pass on the costs of carbon resultant from the CPRS.

Under the emission per unit of revenue metric proposed by the Government, refineries do not meet the proposed threshold for assistance and therefore will not qualify for any free permit allocations. Consequentially, the costs of permit acquittal for refineries (with no assistance as a trade-exposed industry) are likely to consume a large portion of the total profit or result in loss making from this activity. This poses a real and significant threat to the viability of the Australian refining sector.

Shell strongly considers that retaining Australian refining capacity is important for security and diversity of transport fuels supply in Australia. Australian refineries provide thousands of jobs directly and indirectly, as refineries have very high multiplier effect, and provide significant tax revenue for the economy. In addition, domestic refining increases the capacity of Government to define petroleum fuels standards that best fit the environmental needs of Australian cities.

Shell considers that the refining industry is trade-exposed and under significant threat from international competitors that do not have stringent environmental protection laws or an ETS.

Shell strongly recommends that the Government considers the viability of the domestic refining industry under the proposed CPRS and allocates permits to refineries accordingly.

2.6 LNG projects and trade exposure

The world will continue to depend to a great extent on fossil fuels in the coming 50 years. Natural gas has the lowest carbon emissions of all fossil fuels. The Australian LNG industry has significant potential for growth over the next two decades, taking advantage of the strong demand for gas in Asia Pacific markets.

The development of LNG projects in Australia provides large economic benefits and tax revenues. These projects can also make a very large contribution to reducing global CO2-e emissions by displacing higher emission fossil fuels, such as coal, in the countries to which Australia exports.

As Australian LNG is a "price taker" in world markets, there is no capacity to recover higher carbon costs from the market until the majority of Australia's international trading partners and competitors implement a scheme that puts a similar price on carbon emissions.

Shell considers that any additional cost imposed on a project in Australia, but not elsewhere, will reduce the attractiveness of LNG investment in Australia.

Under the proposed CPRS, Australian LNG projects are not eligible for EITE assistance. This will place potential new Australian LNG projects at a competitive disadvantage to competing projects in other countries, increasing the risk that investment in new Australian LNG projects will be deferred or abandoned as a consequence of the CPRS. Such an outcome would have negative consequences for the Australian economy and for the global environment.

Shell recommends that the Government considers the significant contribution that new and existing LNG projects make to the Australian economy, and allocates permits to new and existing LNG projects accordingly.

3 Carbon-dioxide Capture and Storage (CCS)

3.1 More Government support is required

The Green Paper Summary states that:

> *CCS will necessarily be a critical part of any global solution" [to address climate change].*

and in section 2.4.6 that:

> *carbon that is transferred to CCS facilities would be netted out of the originating entity's gross emissions.*

Shell agrees with the Government that CCS is a necessary technology to enable the world and Australia to meet their emission reduction aims.

Shell considers that CCS technology is one of the few technologies that are entirely driven by climate change policy. It is, however, becoming increasingly clear that deployment of CCS technology will not happen without policy intervention. Shell considers that a carbon price alone will not provide sufficient incentive for the commercialisation of CCS in the timeframe required. Therefore, Shell strongly recommends that Government provides sufficient additional financial support for the rapid development of CCS technology.

Given that CCS is an emerging technology, there are several important phases to its commercialisation. Shell considers that CCS technology has been discovered and developed, but assistance is necessary for the demonstration phase of CCS. Internationally, there is large-scale example of end-to-end CCS in conjunction with clean coal technology.

The "demonstration" phase for CCS needs financial support as the technology is still in the upper part of the carbon abatement cost curve. The incentive provided by a carbon market alone, will not typically be sufficient to enable demonstration facilities to be built (i.e. the first few installations of the technology) as the infrastructure costs are significant. Once the required CCS infrastructure is set up, the costs involved in CCS decreases due to economies of scale. Consequentially, Shell considers that direct additional Government assistance is required for CCS technology to be demonstrated.

Once the technology has been demonstrated and begins to enter the deployment phase, Shell considers the financial incentive from the carbon market is likely to be sufficient to ensure further facilities are developed.

Shell strongly recommends that the Government provides a greater level of funded support for CCS demonstration facilities in Australia.

3.2 Mechanisms to support CCS

Shell recognises the National Clean Coal initiative as an important support mechanism for CCS, but does not consider the funding to be sufficient to ensure that CCS (for clean coal projects) is commercialised in Australia.

Shell proposes that Australia contributes to launching 20 CCS demonstration projects by 2010, called for jointly by the International Energy Agency and the G8. Shell considers that the principle of funding CCS project commercialisation is that of providing for the

public good (just as the Government provides roads, schools, hospitals, and other infrastructure).

Mechanisms for subsidies that the Government should consider include:

- direct payments (partnership between Government and the private sector);
- hypothecation of funds from allowance auctioning; and
- differentiated allowance allocation that favours early CCS demonstration projects.

Subsidies should be employed until learning-by-doing incentivises cost reduction, making CCS competitive within the ETS.

3.3 Recognition of CCS in the trading scheme

Shell supports the Green Paper proposal that "*Carbon that is transferred to CCS facilities would be netted out of the originating entity's gross emissions*" (pg 108), based on the accounting methodologies and requirements of the 2006 IPCC GHG Inventory Guidelines and the general advice on site selection in the IPCC Special Report on CCS.

Further to what is covered in the Green Paper, Shell strongly supports the inclusion of CCS in the Clean Development Mechanism (CDM) of the Kyoto Protocol, supported by appropriate and robust verification processes, as the main means of making CCS commercially feasible in countries where emissions will rise most rapidly in the near future.

Certified Emission Reduction (CERs) units generated under the CDM from CCS projects internationally should be given preferential treatment within the Australian trading scheme, such that no limits to the use of CCS-generated CERs apply. Shell considers that any arguments for limits (based on the desire to spur domestic action) are outweighed by the benefits of early CCS projects being delivered in developing countries.

Working with IPCC and the European Commission, Shell has acquired considerable expertise on matters related to CCS policy and technology. Shell looks forward to engaging and working with the Australian Government on further details regarding CCS technology, the inclusion of CCS in the CPRS, and in the CDM.

4 Transport fuels

Shell is one of the main suppliers of transport fuels in the Australian market, providing more than 9 billion litres of fuels to Australian motorists and businesses each year.

4.1 A systematic policy approach is needed

The Green Paper states in section 2.4 that the preferred position on coverage is to include transport fuels in the trading scheme.

Shell does not consider the inclusion of transport fuels in an ETS, in isolation, to be an efficient or effective way to reduce transport emission. Inclusion of transport fuels as the only signal to promote behaviour change in the transport sector is likely to result in minimal abatement in the short to medium term, because of the relatively low elasticity of demand.

Long term, inclusion of transport fuels in the CPRS may lead to additional changes being imposed on the sector in a rapid and inefficient manner, due to the lack of early abatement achieved in the transport sector. Therefore, Shell supports the implementation of a small number of mechanisms across the transport sector, designed to promote a smoother transition for the transport sector to a lower emissions outcome. These include, but are not limited to, complementary policies on vehicle efficiency standards.

Shell recommends that the Government implements complementary transport emission reduction policies:

- **vehicle efficiency standards;**
- **incentives for low carbon fuels such as advanced/next generation biofuels; and**
- **measures to influence driver behaviour and mobility choices, including increased investment in public transport.**

Shell recognises that the Government has proposed to include transport fuels in the trading scheme, and assuming this position does not change, Shell looks forward to engaging with the government to ensure that the details of inclusion of transport fuels are implemented in the most efficient and effective manner, with least administrative cost burdens.

4.2 Using the Customs and Excise Duty as the point of obligation

In section 2.10, the Government proposes that the:

> *...obligations for emissions from fuel combustion would be applied at all fuel excise and customs duty remission points for all liquid fuels currently subject to Fuel Excise and Excise-equivalent Customs duty, with thresholds to exclude smaller customs duty remitters to be determined.*

Shell agrees that having the point of obligation with individual motorists is not realistic until such time as appropriate Information Technology systems exist. Therefore, Shell agrees that the optimal point of obligation for transport fuels is at the Customs and Excise Duty point. However, Shell is concerned that the Green Paper proposes to exclude smaller customs duty remitters. Shell considers that providing exemptions to exclude small customs duty remitters will not result in equitable treatment of providers in the liquid fuels market.

Shell strongly recommends that no exemptions for small customs duty remitters be allowed unless they are exempt from being subject to fuel excise and excise-equivalent customs duty.

4.3 The "opt-in" provisions need some restrictions

The Government is proposing that an "opt-in" provision for large fuel users be explored after 12 months of the scheme operating. This would allow large fuel users to decide whether they manage their own emissions and compliance or not (pages 100 and 118).

Shell considers that any "opt-in" provision must incorporate strict restrictions on the notice period before opting in, to ensure that companies are not choosing to "opt-in" on an opportunistic, short-term assessment of risk and reward. The notice restriction is required to ensure that fuel suppliers can change their emission requirements for compliance depending on whether a large user customer is "opted-in" or not.

Shell recommends that suitable restrictions on the notice periods are required for large users to opt-in to self-acquittal under the scheme.

4.4 Zero-rating all biofuels is too simplistic

The Green Paper states in section 2.17 that all biofuels are zero-rated for emissions and would be exempt from the CPRS emissions obligation.

Shell considers that zero-rating all biofuels is too simplistic to realistically address the biofuels sector, as the production emission intensity and sustainability of different biofuel feedstock varies greatly.

Shell is concerned that by zero-rating all biofuels, an inequitable situation will be created if some biofuel feedstock is domestically produced and some is imported. Imported biofuels will not have growing, harvesting, production or transport costs of carbon included in the price of the feedstock/product until biofuel exporting nations implement similar GHG lifecycle or Well to Wheels (WtW) performance assessments and policies.

The application of zero-rating of all biofuels will create an incentive for biofuels with poor WtW GHG performance to be used within Australia. By adopting a WtW GHG performance assessment and standards for biofuels to be used in the road transport sector, along with social/environmental sustainability standards, the Government can ensure that there is a level playing field within the biofuels sector in Australia. Further, this approach is aligned with approaches being adopted in other jurisdictions, notably Europe and North America, and most importantly that the use of biofuels plays an effective role in contributing to sustainable mobility in Australia.

Shell recommends that the appropriate Government agency undertake a WtW GHG performance assessment of various biofuel feedstock/production methods and provide an emissions rating for each feedstock/production method. Shell considers this is a more appropriate method for assessing the emission profile of biofuels. The methodology needs to apply both to imported and indigenous biofuels supplies for blending into gasoline and diesel.

Shell recommends that all biofuels sold in the transport sector be subject to Well to Wheel GHG performance assessment in order to determine the degree to which the biofuel is subject to emissions obligations.

Shell recommends that the Government should ensure that safeguards are adopted to ensure the social/environmental sustainability of biofuels use in the transport sector in Australia.

4.5 Liquefied Petroleum Gas (LPG) used for transport purposes

The Government proposes in section 2.12 that LPG be included in the CPRS and that the point of obligation is applied to producers, marketers, distributors, and importers of LPG.

Shell considers that the point of obligation for automotive LPG should be applied to the marketer of automotive LPG. Any obligation points further upstream make it much more difficult to identify whether LPG is being used in the transport sector, in stationary energy applications, or in industrial processes. Being able to identify the use of the LPG is important in determining emissions obligations under the CPRS.

Shell does not consider a "cent-for-cent" offset for LPG to be important as there are already considerable environmental benefits that are recognised and incentivised by the Government.

Shell recommends that the point of obligation for LPG be applied to the marketer of automotive LPG.

SHELL AUSTRALIA'S SUBMISSION

TO

THE AUSTRALIAN COMPETITION AND CONSUMER (ACCC) INQUIRY INTO THE PRICE OF UNLEADED PETROL

CONTENTS

Introduction

This submission addresses issues relevant to Shell under the broad subjects, "Refining and importing", "Wholesale and distribution" and "Retail", which are set out in the Issues Paper published by the ACCC in June 2007. However, as Shell is essentially no longer a retailer, the submission makes limited comment on the retail market.

As an overarching comment, Shell believes that the Australian market for unleaded petrol is highly competitive as evidenced by:

- the fact that Australian fuel, both pre and post tax, is amongst the cheapest in the OECD countries;
- Shell's profits before interest and tax in 2006 equate to 2.3 cents per litre of fuel and over the last five years have averaged around 1.8 cpl or 1.5% on a litre of petrol); and
- Shell's investment of over $1 billion in the Downstream business (refining, distribution and marketing) in Australia over the last 5 years is equivalent to what it has earned as profit before interest and tax in that period.

Refining and importing

Capacity

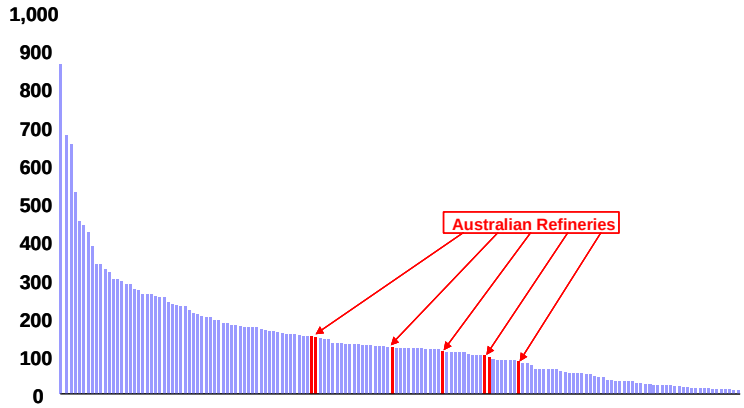
There are four integrated refiners/marketers operating refineries in Australia. These are: BP, Caltex, ExxonMobil and Shell. BP (QLD and WA), Caltex (NSW and QLD) and Shell (NSW and Vic) operate two refineries each and ExxonMobil (Vic) operates one. The total capacity of the seven refineries is 42 970 million litres per annum and they produce petrol, diesel, jet fuel, fuel oil, liquefied petroleum gas, lube oils, bitumen and other products.

Shell's Geelong refinery in Victoria has a capacity of approx 110,000 bbl/d and Clyde Refinery in Parramatta, NSW has a capacity of approx 90,000 bbl/d. Between them, these refineries provide around 27% of Australia's petroleum products.

Shell has no plans to increase this capacity, other than marginally through equipment upgrading.

The combined capacity of the seven refineries in Australia is less than the capacity of some individual refineries in the Asia–Pacific region. For example, the SK Corporation refinery in South Korea has an annual capacity of 47 415 million litres per annum. The graph below illustrates this point.

Asian Refineries (capacity in thousands of barrels per day)



Imports

In the first half of 2007, Shell's imports accounted for 12% of its total unleaded petrol volumes compared to 11% in 2006.

There are many terminals into which fuel can be imported into Australia. Shell imports fuel into a number of different locations, including independently owned terminals in Darwin and Sydney.

Storage

Shell's supply logistics are optimised around storage infrastructure. The location and scale of this infrastructure is ultimately determined by the market. Shell does not see any particular barriers to putting additional storage facilities in place other than market driven economics.

In recent years Australian fuel standards have been tightened to be largely in line with "Euro 3" specifications with one major exception. Under Euro 3 the amount of MTBE in petrol can be up to 15 per cent, whereas the Australian fuel standards allowed for 1 per cent. The hybrid nature of the Australian fuel standards makes it more difficult to obtain supply, as it is not readily available from many refineries in the region.

Despite this, there are several options in the international market for acquiring Australian specification fuel. In Shell's case, it sources its imports either from the Shell refinery in Singapore (Bukom) or trading with third parties. In 2006, for example, 44% of Shell's imported unleaded petrol came from trading with third parties.

"Buy/sells"

In states where Shell operates a refinery, Shell sells fuel at a wholesale level to other refiner/marketers. In states where Shell does not have a refinery Shell either buys fuel at a wholesale level from other companies that do have refineries there, and/or transports fuel from Shell's Australian refineries or imports from the international market. In Queensland for instance, Shell typically imports directly into its North Queensland terminals (mainly from its Singapore refinery) but buys fuel for the Brisbane market from a refiner in that state.

In instances where Shell is buying or selling fuel, Shell negotiates a contract with the buyer or seller, based on an import parity price, using a suitable regional benchmark, plus Australian quality premia, freight and wharfage. In most cases, fuel is supplied into the buyer's terminal, and the buyer is responsible for the costs and operation of terminalling and consequently for setting their own terminal gate price.

Whilst from Shell's perspective, buy/sell negotiations are aimed at securing the lowest cost of supply, it is ultimately the market, not the buy/sell price, which determines the wholesale or terminal gate price. Australian refined petroleum product prices follow international prices because the Australian petrol market is an integral part of the highly efficient global petrol market.

There is an enormous challenge for Australian refinery operations to remain cost competitive, for otherwise they will not survive against the alternative of imports. These same market forces ensure that there are adequate fuel supplies in Australia by minimising any product export incentives that would arise if prices in Australia were set below international prices.

Prices in the Australian petroleum product market, like prices for many other products sold in the Australian market, are therefore based on the price of imported alternative supply (Import Parity Pricing), rather than on cost plus or bottom-up pricing of manufacture in Australia. One of the main benefits from the competitive pressures created by an open market like this, is that over time it tends to provide lower prices to consumers compared to prices established,

for example, by a cost plus formula (with an appropriate allowance for a reasonable return on capital).

Wholesale and distribution

Terminal Gate Price

Shell structures its wholesale fuel sales across Australia around a terminal gate price (TGP). Terminal gate pricing is presently a legislated requirement in Victoria and Western Australia and is a requirement under the Oilcode, which is part of the Federal Government's petroleum market reform package. The TGP is based on import parity pricing and includes a Singapore fuel price benchmark, ocean freight, wharfage charges, insurance, a premium for Australian quality product, a terminal margin to cover costs of infrastructure, excise tax (38.14 cpl) and GST (10%).

Singapore benchmark

Australia uses a Singapore benchmark for unleaded petrol because Singapore is the leading refining, exporting and trading hub in the Asia Pacific region. The Platts organisation collects extensive data on trading through the Singapore hub and publishes daily prices (a high and low) for various grades of commonly traded fuel.

"MOPS95" (the mean of Platts Singapore price quote for spot sales of Premium Unleaded Petrol – 95 Octane) is the common benchmark for commercially traded Australian-grade unleaded petrol. The quality of this benchmark fuel most closely reflects Australian fuel standards, although the quality of Australian fuel standards currently exceeds this benchmark. Any movement to another marker would require an adjustment for Australian quality premia and would likely have a minimal impact on overall pricing and volatility.

Because of the higher Australian fuel quality standards, the actual purchase prices, which Shell and other companies will pay for imports of unleaded petrol into Australia will exceed the marker prices quoted by Platts.

Ocean freight

The benchmark freight cost used is the Worldscale quote for the journey from Singapore to the relevant discharge port, eg: Singapore to Sydney. Worldscale is an internationally recognised non-profit organisation whose members include leading international tanker broker firms (for more information see www.worldscale.co.uk). Worldscale quotes are recognised and used internationally as a basis for negotiating oil industry freight costs.

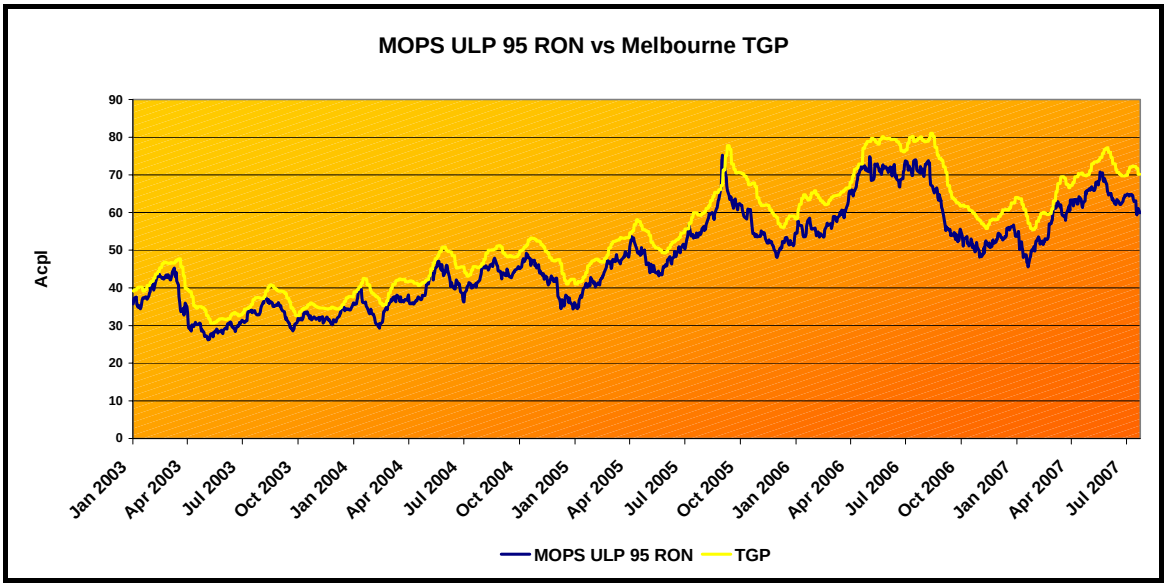
Until recently, the specific index used was based on the quoted Singapore to Japan voyage for a 30,000 tonne vessel. Although a number of Singapore to Australia quotes were available, the market was too thin to provide a reliable and stable price, hence the use of a Singapore to Japan reference as it represented a comparable voyage and a more robust market.

Since the beginning of 2007, Shell believes that the market for freight from Singapore to Australia had increased sufficiently to warrant using a Singapore – Australia quote as the basis for its ocean freight calculations.

Quality premium for Australian petrol

The quality premium for Australian petrol is a result of Australia's legislated fuel quality specifications. A good example is the limit of under 1% benzene in petrol, which is more stringent than in the majority of countries in the Asian region, and requires expensive refinery investment to produce. Australian quality price premia reflect real price differentials, payable for imports of Australian quality fuels, over standard benchmark prices.

The graph below shows MOPS ULP 95 RON (Unleaded Petrol with a Research Octane Number 95) compared to the TGP in Melbourne (before excise and GST). The TGP here incorporates a rolling 7-day average price on the MOPS benchmark and exchange rates.



The graph shows that:

- the TGP follows the benchmark very closely and has risen significantly in the last two to three years;
- Margins are compressed when prices are rising and expanded when prices are falling. This is due to the 1-2 week lag on rolling averages prices.
- The gap between TGP and MOPS 95 has increased in recent years due to increases in freight charges and quality premia differential.

TGP tracks the international benchmark closely but not exactly, because Shell uses a rolling 7 day average of the daily average regional product indicator (MOPS) as the basis for TGP, which is set only twice a week. Thus, changes in international prices can take 3-4 days to begin to have an impact on the TGP, with the "full" impact taking 1-2 weeks.

The anomaly in TGP tracking import parity and international benchmarks is when there is a public holiday, either in Singapore or in Australia. When there is a public holiday in Singapore, there is no published MOPS benchmark price for the day. On a given 7-day rolling average, this has the effect of making Shell's TGP lower than it might have been if the market is rising and higher than it might have been if the market is falling.

When there is a public holiday in a particular state in Australia on a Monday, the TGP is published on the Wednesday instead of the Tuesday. The TGP calculation is based on the same formula – that is, it uses the previous 7 days rolling average.

Wholesale market

At the wholesale level, Shell sells fuel to commercial customers, Shell branded and non-branded retailers and other non-Shell branded wholesalers. The arrangements with these

customers are based on TGP and may incorporate additional charges for delivery, brand and credit. Due to strong competition and low/no barriers to changing suppliers, some customers are offered discounts to attract or maintain their business. The discount level will be largely driven by the volume that the customer is contracting to purchase.

Legislation on terminal gate pricing introduced in Victoria and Western Australia has improved the transparency of the price for buyers but, in Shell's view, has not impacted on competition.

Shell does not believe there are any particular barriers to wholesaling or distributing fuel in Australia, other than having the capital to purchase the necessary distribution equipment, such as trucks.

Retail

In the late 1990's and early part of this decade, the petroleum retail business in Australia was becoming increasingly competitive. Shell's strategy in general was to move towards fewer, bigger retail sites to spread the fixed costs of each site over more fuel sales – this was prior to the large scale entry of supermarkets into petrol retailing.

In 2003, Shell began its alliance with the Coles Group (then Coles Myer) and as a consequence, Shell is essentially no longer a petroleum fuel retailer.

Today, Shell branded sites fall into two categories:

- Dealer owned sites; and
- Coles Express sites.

In addition Shell operates a very small number of sites as part of its commercial vehicle refueling network, which sell primarily diesel fuel and are located mainly in regional areas to service large fleets traveling throughout Australia.

The following gives more detail about each arrangement.

<u>Alliance with Coles Express.</u>
Shell supplies fuel on a delivered basis and grants branding rights to around 600 Coles Express and Shell branded sites, predominantly in metropolitan and large regional centers. Coles Express operates the service stations, including the convenience stores and car washes. Coles Express independently sets the retail price for all fuels at these sites.

Shell sells to Coles Express on a pricing mechanism that incorporates TGP, plus other charges, for example branding and delivery.

Shell's Coles Express alliance sites constitute around 9% of the total service stations in Australia. Shell's fuel sales to Coles Express represent around 24% of total Australian retail fuel sales for on-road use, including LPG.

<u>Dealer owned sites</u>:
There are around 350 dealer owned and operated, Shell branded sites across Australia. Shell supplies fuel and grants branding rights and provides the option to have the fuel delivered to the site. Pricing to these customers is on a TGP basis plus a fee for branding rights and credit charges and where applicable delivery charges. Shell also makes the Shell Card facility for purchasing fuel on credit available to the site.

The dealer owner operates the service station and any associated facilities. The dealer owner sets the retail price for all fuels at these sites.

Commercial Vehicle Refueling Outlets.
The CVRO network is a small national network dedicated to the Commercial Road Transport sector. The sites are primarily designed and positioned to cater to the refueling needs of heavy goods vehicles, with the majority in regional areas. There are approx 41 CVRO's, in Shell's national network. They sell a total of 80 million litres per annum, 85% of which is diesel. These sites are predominantly Shell owned and 24 are attached to facilities that either were, or still are, functioning as Shell depots. Shell sets the pump prices at these sites.

Other retailers and wholesalers
Shell also sells fuel to other retailers and wholesalers, who are not Shell branded. These customers buy fuel based on Terminal Gate Price, plus costs for any other services such as delivery.

There is significant competition in the petrol retail market relating to factors other than the pump price, including discount vouchers, service station location, trading hours and convenience shops.

Oilcode
In March 2007 the Federal Government introduced a mandatory Oilcode, following the repeal of the Sites and Franchise Acts. Shell welcomed this development as it resulted in a small reduction in the amount of administration required under the old Acts, removed barriers to more effective competition and increased pricing transparency. However, the change has had little effect on Shell's business, as the old Acts had limited impact on Shell's primary business models (outlined above).

Shell observations on price cycles
Shell's observations internationally indicate that there are very few other markets where retail prices cycle in a way similar to that which exists in Australia. The following are the few examples:

- Germany - 2 cycles per week. Amplitude of 4 Euro cents or 3%. The market tends to move down 0.5 Euro cents, twice a day and then restore to previous levels
- Austria - Weekly cycle. Amplitude of 4 Euro cents or 3%.
- Canada - Multi day part cycle. 8-10 price changes per day. 5-8 cents per day. High at night (post commute) down during the following 24 hours.

In Shell's view, the retail price cycles in Australia are driven by the relatively high proportions of fixed costs throughout the supply chain leading to a requirement to maintain volume throughputs at high levels. When that circumstance is blended with the absolute transparency of retail price boards and the customer sensitivity to very small pricing differentials, price cycles occur which create an intensely competitive market, to the ultimate benefit of consumers.

SHELL AUSTRALIA'S SUBMISSION

TO

THE SENATE ECONOMICS LEGISLATION COMMITTEE INQUIRY INTO THE PRICE OF PETROL IN AUSTRALIA

CONTENTS

EXECUTIVE SUMMARY

Shell believes that the Australian fuel (petrol and diesel) market is highly competitive as evidenced by the fact that Australian fuel, both pre and post tax, is amongst the cheapest in the OECD countries.

Australian wholesale petrol and diesel prices closely track movements in international petrol and diesel prices, as Australian refineries compete with international refineries and as Australia is a net importer of petroleum products, which include petrol, diesel and lubricants.

The increases in Australian wholesale fuel prices over the last three years have been due primarily to increasing world prices. World prices of crude oil and refined products have been driven up by demand increasing ahead of world refining capacity, particularly in China, supply disruptions such as those caused by Hurricanes Katrina and Rita and uncertainty in world markets about international events and their effects on oil producing countries.

Since July 2003, increases in import parity prices and the resulting tax increases, have been around 55 cents per litre (cpl). A small part of this increase has been due to the tightening of Australian Fuel Quality Standards. Shell has invested more than $340 million dollars on its refineries to enable them to produce fuels meeting the tightened Australian fuel quality specifications.

As Shell in Australia is almost entirely a refiner and wholesaler and not a retailer of fuels, this submission makes limited comment on the retail market. Shell fully supports the Australian Institute of Petroleum's submission and the comments and observations made in it regarding the retail market. In particular, Shell's observation is that the retail market continues to be highly competitive, as indicated by the price discounting cycles in the major metropolitan markets, about which the ACCC states "it is likely that consumers in aggregate benefit overall from [these] price cycles" ("Reducing fuel price variability " 2001).

Shell's Downstream business must be viewed in the context of long term costs, investments and profitability, as demonstrated by the following observations:

- Shell's Downstream profit before interest and tax per litre of petroleum product sold for the last 5 years has been approximately: 1.6, 2.0, 1.8, 0 and 3.0 cents per litre, or an average of 1.5 cents per litre (a profit margin of around 1% on a litre of petrol);
- Shell has invested nearly $1 billion dollars in the Downstream business (refining, distribution and marketing) in Australia over the last 5 years, which is more than it has earned as profit before interest and tax; and
- Shell's Downstream return on average capital employed since 2000 has averaged 5.5% (Current Cost of Supply basis) – lower than the average 10 year bond rate.

Shell believes there is a place in the Australian fuel mix for alternative fuels, such as ethanol-blended petrol and biodiesel. Commercial decisions on development of these blends must take into account fluctuating world prices for ethanol and hydrocarbon components, investments in blending, distribution and retailing facilities and consumer preference.

RELATIONSHIP BETWEEN LANDED PRICE OF CRUDE OIL, REFINING COSTS AND THE WHOLESALE PRICE

Shell's pricing of petrol and diesel (fuel) into the Australian wholesale market is based on import parity and uses a Terminal Gate Price structure. Wholesale market pricing is not directly related to the costs of crude oil and refining.

Within Shell's Terminal Gate Price, Shell has two primary areas where a margin is made – the refiner's margin and the terminal margin.

The refiner's margin is essentially the difference between the cost of crude oil and the wholesale market value of the products produced. This margin must cover a range of costs including refinery costs and investments and the costs of ensuring continuity of supply, such as storage capacity in addition to refinery storage. Refiner's margins are not controlled by the refinery, but by international price movements. They fluctuate over a number of years and must be viewed on the time scale of the refinery investment, i.e. decades, and in terms of return on investment in the refinery.

The second area of margin for Shell is in the terminal margin. This must cover the cost of infrastructure and operation of the Shell terminal. It is typically around 1% of the Terminal Gate Price

This section of the submission describes the import partity pricing and Terminal Gate Pricing mechanisms, which Shell uses to price its fuel into the wholesale market and concludes with a brief discussion of crude oil, refining costs and refiner's margins.

Import Parity Pricing

Import Parity Price (IPP) is the price at which a fuel can be purchased on the international market, freighted to a specific port in Australia and landed in a terminal. Typically, IPP uses a Singapore fuel price benchmark, e.g. Mean of Platts Singapore (MOPS) and includes ocean freight, wharfage charges, insurance and a **premium for Australian quality product**.

The three major influences on Australian Import Parity Pricing and changes in this pricing in the last few years have been the:

- international market for refined products;
- impact of tightening Australian fuel quality specifications; and
- increases in freight costs.

The international market price for petrol (and diesel) is heavily influenced by international crude oil prices and also by the specific product market. International crude oil price increases have been related primarily to a tightness in the global crude supply and demand balance as well as market reactions to political tensions (this is covered in more detail below). The specific product markets are driven by supply and demand for each individual product. For petrol in recent years, demand has generally been increasing ahead of world refining capacity, particularly demand from China in our region and supply disruptions such as those caused by damage to refineries in the US have meant that international petrol prices have increased relative to crude oil (see discussion on refiner's margin below).

The quality premium for Australian petrol is a result of Australia's specific fuel quality specifications. A good example is the limit of under 1% benzene in petrol, which is more stringent than in the majority of countries in the Asian region, and requires expensive refinery investment to produce. This particular fuel quality specification, introduced in Australia on 1

January 2006, means that the import parity price of unleaded fuel is more expensive in 2006 than it was in 2005.

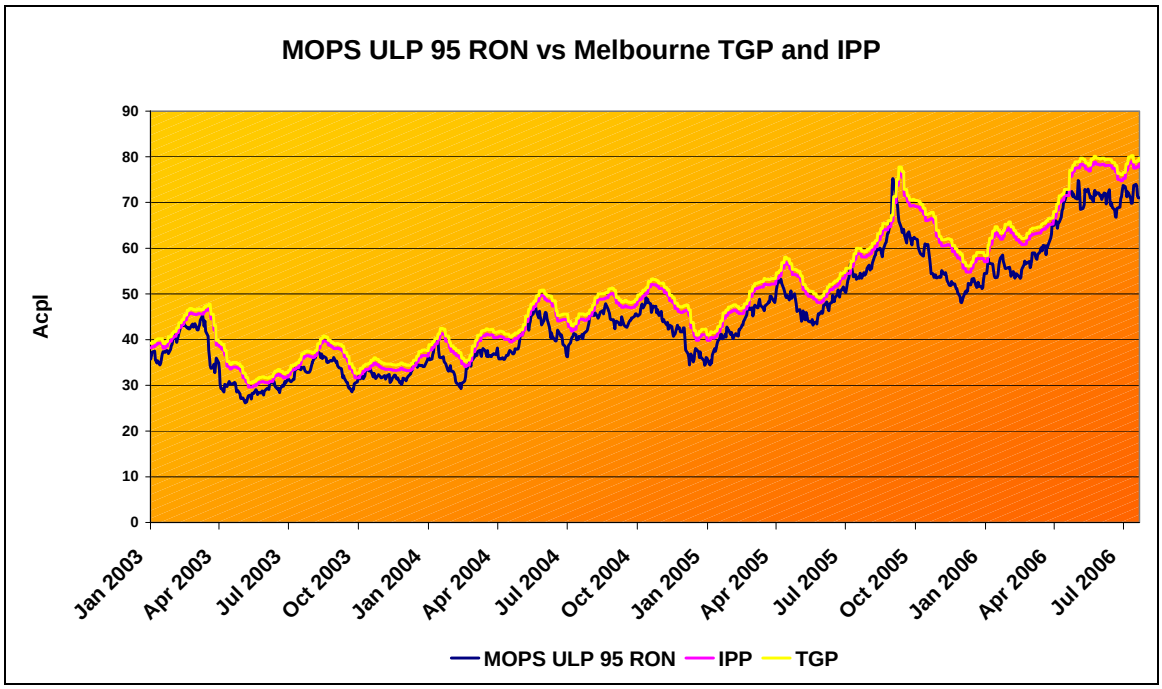
Freight costs have risen significantly over the last 5 years and are set to increase further as Australian legislation changes to require double-hull vessels. The Australian flagged vessels used by Shell for coastal movements are significantly more expensive than internationally flagged vessels.

Import parity pricing is the most suitable model for Australia because Australia's refineries have the option of selling their products internationally and because Australia is a net importer of finished petroleum products, importing around 20% of the products used in the country.

IPP does not cover the costs of additional storage that may be required to service the market and ensure continuity of supply under changing domestic supply and demand. This storage can take the form of additional facilities, such as Shell uses in Sydney through Vopak, or demurrage of vessels, which can cost millions of dollars.

Shell structures its wholesale fuel sales across Australia around a Terminal Gate Price (TGP). Terminal Gate Pricing is presently a legislated requirement in Victoria and Western Australia and is proposed as a national requirement under the Oilcode, which is part of the Federal Government's proposed petroleum market reform package. The TGP is made up of the import parity price for fuel (ex Singapore) as outlined above and includes a terminal margin to cover costs of infrastructure and operation of the terminal, excise (38.14 cpl) and GST (10%).

The graph below shows MOPS ULP 95 RON (Unleaded Petrol with a Research Octane Number 95) compared with the IPP to Melbourne and the TGP in Melbourne (before excise and GST). MOPS ULP 95 RON is an appropriate regional unleaded benchmark for Australian quality fuel as the overall properties closely reflect regular unleaded fuel under the Australian fuel quality standards – of which octane number is only one of many specifications. Both IPP and TGP here incorporate a rolling 7-day average price on the MOPS benchmark and exchange rates.



The graph shows that:

- the TGP follows the IPP very closely and has risen significantly in the last two to three years;
- import parity price makes up the vast majority of TGP (around 99%); and
- the gap between IPP and Singapore benchmark ULP 95 RON has increased significantly in the last three-four years, due to increases in the cost of freight, wharfage and Australian fuel premia.

TGP tracks IPP closely but not exactly, because Shell uses a rolling 7 day average of the daily average regional product indicator (MOPS) as the basis for TGP, which is set only twice a week. Thus, changes in international prices can take 3-4 days to begin to have an impact on the TGP, with the "full" impact taking 7-11 days.

The graph above also shows that, from July 2003, the TGP has risen by around 50 cpl before tax, or 55 cpl inclusive of tax.

The sections below discuss the costs of crude oil and refinery costs and the refiner's margin, which is encompassed in the Terminal Gate Price.

Crude Oil

Shell has two refineries in Australia. Geelong Refinery in Victoria has a capacity of approx 110,000 bbl/d and Clyde Refinery in Parramatta, NSW has a capacity of approx 90,000 bbl/d. Between them, these refineries provide around 27% of Australia's petroleum products.

The input to these refineries is primarily crude oil. Shell purchases the majority of its crude oil on the international market from non-Shell sources. The crude purchased comes mainly from South East Asia, specifically from Vietnam, Malaysia, Indonesia and Brunei as well as from Australia and New Zealand.

The cost of these crudes varies, depending on factors such as freight distance and crude quality. However, virtually all crudes in the region are priced off the Tapis or Minas crude markers, thus these crude markers make good reference indicators for crude price trends.

The refinery crude diet (that is the combination of crudes purchased and processed) is important to ensure that the right mix of products are produced, based on the demand across the whole barrel and based on the refinery configuration. Procuring the right crudes is done on the basis of a complex calculation of price and yield. The more expensive, lighter, sweeter crudes tend to produce more valuable products, while the less expensive, heavier, sour crudes tend to produce less valuable products once refined. In order to tailor the intake of crude to the slate of products that its refineries are required to make for the Australian market, Shell uses only a minority of indigenous crude oil.

Costs for crude in Australia are also linked to the Australian/US dollar exchange rate as crude oil is bought and sold internationally in US dollars. Thus, there are times when the international price of crude can be falling, but petrol prices are not, because of a weakening exchange rate.

Over the last two to three years, crude oil prices have risen significantly. In large part these increases have been due to production disruption, especially in the Gulf of Mexico as caused by Hurricanes Katrina and Rita, and uncertainty in the market due to rising tensions in the Middle East.

Refinery costs

Refinery costs include operational costs and capital costs. Examples of operational costs include:

1. Fuel costs for running the refinery – electricity and gas.
2. Equipment maintenance costs –Shell's refineries were built in 1926 (Clyde) and 1953 (Geelong) and require continued spending to ensure they continue to perform effectively and are safe for operation.
3. Staff costs - more than 850 people work at the two refineries.
4. Meeting ever tightening legislation and regulation. E.g. environmental regulation related to tank seals and vapour recovery to minimize the release of volatile organic compounds and safety measures as a result of international events such as Texas refinery and Buncefield (UK) explosions.

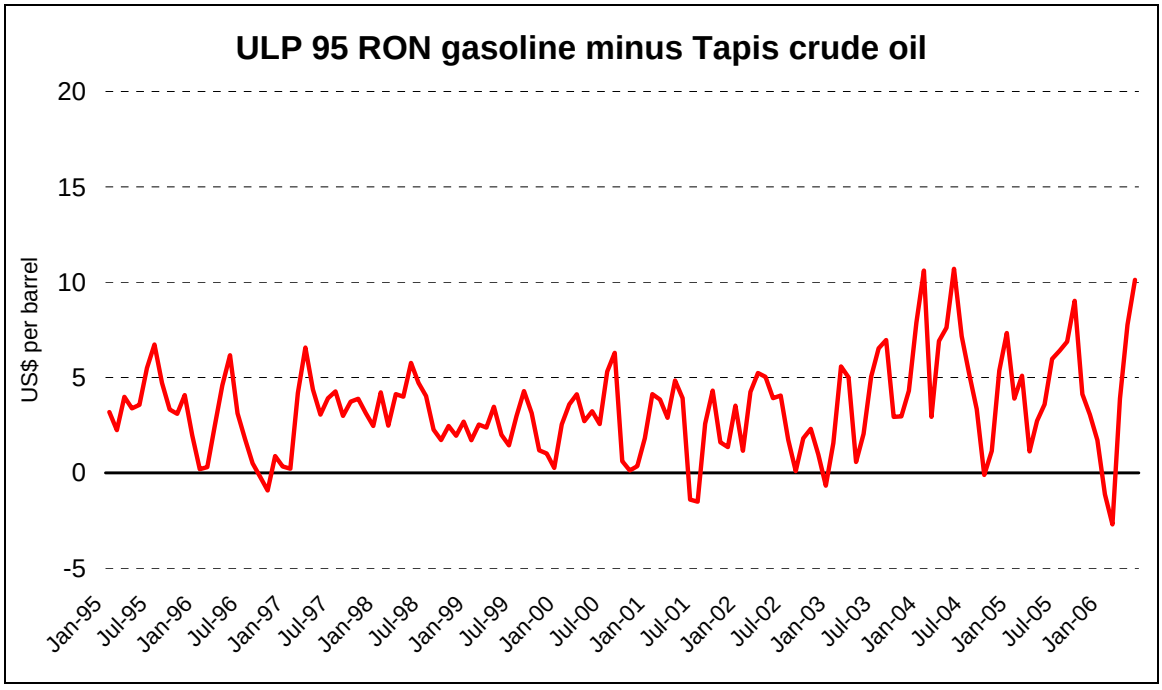
Examples of capital costs are:

1. Shell spent $340 million to enable its refineries to meet the Federal Government's clean fuels specifications by 1 January 2006.
2. Shell is spending $87 million in Geelong over 3 years to meet the requirements of its regulatory licence and the expectations of local stakeholders on environmental performance.

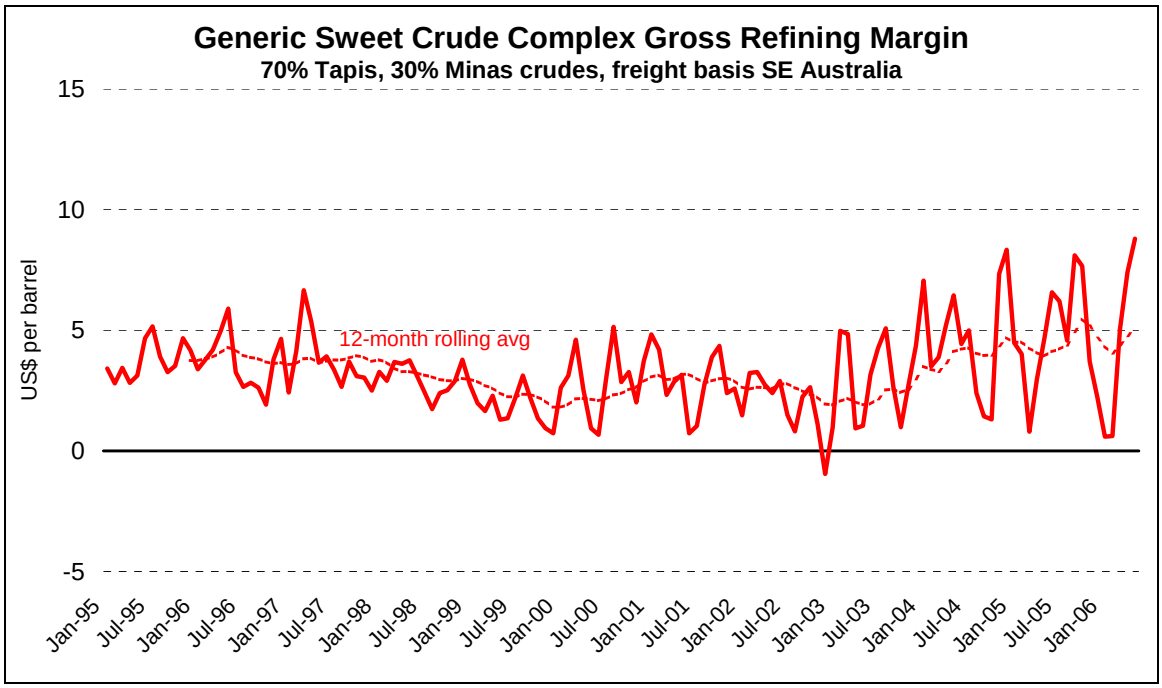
These costs must be covered by any "refiners margin".

Refiner's Margin

The term "refiner's margin" is typically used to refer to the sum of the differences in price between the crude oil basket and the refined products. These differences or "cracks" vary depending on the market for both crude oil and the particular refined product. Cracks for different products vary independently, depending on market factors for each product. For example, diesel prices can be increasing relative to crude, whilst petrol prices are decreasing. The graph below shows the "crack" for MOPS ULP 95 RON gasoline for the last ten years.



The overall refiner's margin, however, is the aggregate of the differences (cracks) across all products, because in refining crude oil, a refinery must make all products. Thus the graph below shows the complex refiner's margin from a generic sweet crude mix of Tapis and Minas, that Shell's Australian refineries tend to use.



The graph shows that the refiner's margin has varied over time and for much of the last ten years has run around 2-3 US$/bbl, or 2-3 cpl. Once refining costs, depreciation and tax are taken into account, the net margin is much lower and has often been negative over the last ten years.

It also shows that prior to the anomalous events of the last few years, the long-term trend is one of reducing refiner's margins. This overall trend is likely to continue due to ever increasing competition from Asian mega-refineries, which have advantages of economy of scale and often cheaper labor (see below).

It is important to note that the refiner's margin is not set by the refinery, but by external market factors that influence the prices of the refinery inputs and outputs. It must also cover additional storage costs (e.g. Shell's facility leased from Vopak in Sydney) and potential demurrage costs, as Shell tries to ensure continuity of supply through all domestic supply and demand fluctuations. Shell's Australian supply envelope incorporates 19 coastal terminals, 33 inland depots and delivery of some 14.7 billion litres of fuel to more than 187,000 locations.

Recently, the world has experienced increases in refinery margins, driven mainly by demand growth for refined products, particularly in China, outstripping refinery capacity. The margin spike has been exacerbated by anomalous incidents such as Hurricane Katrina, which temporarily reduced global supply capacity, and by uncertainty related to conflict in the Middle East and elsewhere.

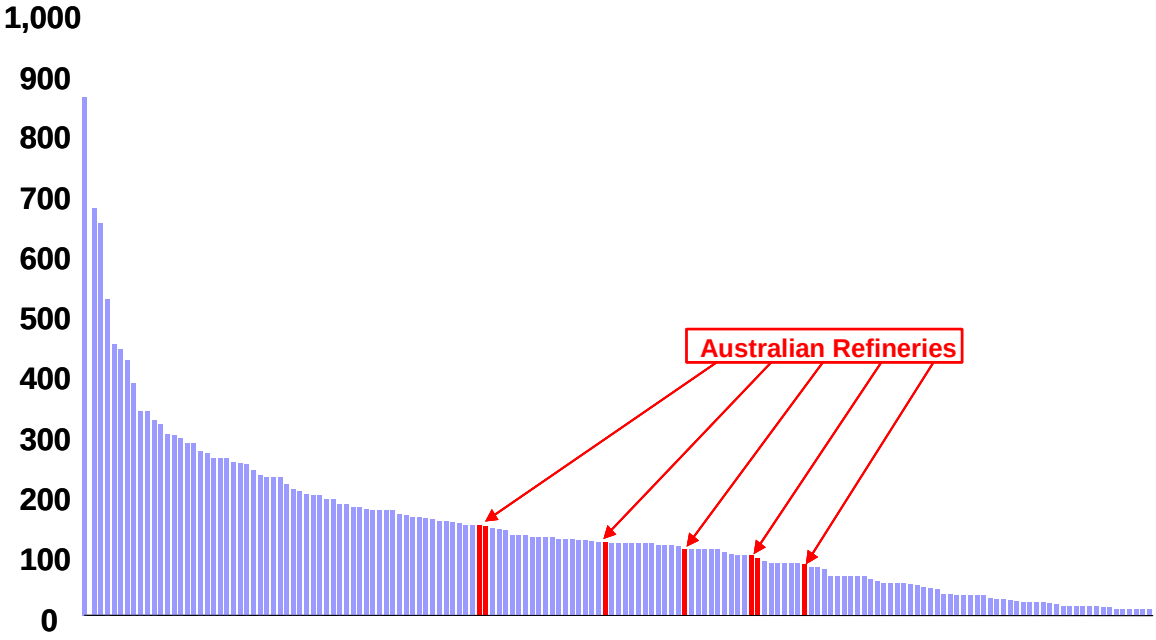
The long-term cyclical nature of margins must be taken into account in considering the risk and return on the very large and long-term investment in a refinery. Refining industry dynamics have tended to be characterized by a cycle of poor margins -> stagnant capacity ->

increased demand -> good margins -> investment/ increased capacity -> over capacity -> poor margins.

Shell believes that current high margins are temporary. We believe it is a question of when, not if, margins will decline. Crude distillation capacity increases totalling 11 million barrels per day have already been announced to come on stream in the 2005-2010 period. This compares to Australia's total capacity of 0.7 million barrels per day. The Geographic spread of these increases is: 36% Middle East, 19% India, 18% China, 21% Americas (primarily US) and 6% Europe/Africa (None expected in Australia).

An indication of the ranking of Australia's refineries is given in the graph below, which shows that any of the larger individual 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. Thus pressure on Australian refineries will be ever increasing as they try to compete with Asian mega-refineries, which have advantages of economy of scale and often cheaper labor.

Asian Refineries
(capacity in thousands of barrels per day)



Fuel grades

Shell sells a number of grades of petrol. The large majority of sales are of regular unleaded petrol (ULP). Shell also sells Premium Unleaded Petrol (PULP), Unleaded 95, Shell Optimax and Shell Optimax Extreme.

Unleaded 95, Shell Optimax and Shell Optimax Extreme are only sold through Shell's alliance partner Coles Express. They are fuels aimed at niche markets, are more expensive to make and include various additives to improve performance.

RELATIONSHIP BETWEEN THE WHOLESALE PRICE AND THE RETAIL PRICE OF PETROL.

In the early part of this decade, a period of low refining margins and relatively low prices for fuel in Australia put continuing financial pressure on the industry, resulting in investment returns being generally lower than the long term bond rate between 1993 and 2003. As a result the number of service stations in Australia has reduced from more than 8000 in the late 1990s to about 6,500 today (well down from an estimated 20,000 stations in 1970).

Shell's response to the financial pressures was to restructure its business in the Downstream sector in Australia and form an alliance with Coles Myer Limited, in which Shell became a wholesale supplier of fuel and Coles Express a retailer of Shell's fuel across Australia. The alliance brought together Coles Express's retailing expertise and Shell's expertise in fuel and resulted in the innovation of the shopper docket discount scheme that has proven very popular with customers across the country. There are now more than 30 similar schemes across Australia. In 2004, ACCC Chairman, Mr Graeme Samuel, said that he had found "that the introduction of the shopper docket schemes has encouraged competition and lower prices in the fuel market".

Shell's business model

Today, the large majority of Shell fuel is retailed by other parties, who set the retail price and operate any convenience stores associated with the service station. In many cases, these service stations display the Shell brand. Shell's fuel is sold by Coles Express at around 600 sites across the country, by independent owners and operators at around 350 Shell branded sites around the country and through Shell's Commercial Vehicle Refueling Outlet (CVRO) network. Shell also sells fuel to resellers of petrol, diesel and LPG who do not display the Shell brand and to a wide range of commercial customers.

The arrangements with all of these customers are based on Terminal Gate Price and may incorporate additional charges for delivery, brand and credit. Some customers also negotiate discounts as a result of the large volumes they purchase from Shell.

Shell sells its fuel directly to the customer and not through "distributors". Customers may choose to buy their fuel from Shell on a delivered basis, in which case Shell will negotiate a fee for the delivery by Shell, or by a Shell contractor.

Shell has the following arrangements with regard to retailing at service stations.

<u>Alliance with Coles Express.</u>

Shell supplies fuel, branding rights and delivers the fuel to around 600 Coles Express and Shell branded sites, predominantly in metropolitan and large regional centers. Coles Express operates the service stations, including the convenience stores and car washes. Coles Express independently sets the retail price for all fuels at these sites.

Shell sells to Coles Express on a pricing mechanism that incorporates Terminal Gate Price, plus charges for branding, delivery and credit.

Shell's Coles Express alliance sites constitute around 9% of the total service stations in Australia. Shell's fuel sales to Coles Express represent around 24% of total Australian retail fuel sales for on-road use, including LPG. This is different to previous estimates that fuel sales through Coles Express represented around 28% of the Australian market, because the

old estimate did not take account of the whole retail market (e.g. it related only to "metropolitan" areas) and it did not include LPG.

Independently owned and operated sites:

There are around 350 independently owned and operated, Shell branded sites across Australia. Shell supplies fuel and branding rights and provides the option to have the fuel delivered to the site. It also makes the Shell Card facility for purchasing fuel on credit available to the site. Pricing to these customers is on a TGP basis plus a fee for branding rights and where applicable delivery and credit charges.

The independent owner operates the service station and any associated facilities. The independent owner sets the retail price for all fuels at these sites.

Commercial Vehicle Refueling Outlets.

The CVRO network is a small national network dedicated to the Commercial Road Transport sector. The sites are primarily designed and positioned to cater to the refueling needs of heavy goods vehicles, with the majority in regional areas. There are approx 60 CVRO's, in Shell's national network. They sell a total of 100 million litres per annum with a diesel share of 80%. These sites are predominantly Shell owned and 44 are attached to facilities, which either were, or still are, functioning as Shell depots. Shell sets the pump prices at these sites.

It is important to note that the retail price displayed at the CVRO for petrol or diesel, does not represent the "wholesale" price at which petrol or diesel is available from the attached depot.

Other resellers

Shell also sells fuel to independent resellers, who are not Shell branded. These customers buy fuel based on Terminal Gate Price, plus costs for any other services such as delivery of fuel.

Retail prices

Shell supports the AIP submission, which makes general comments on the retail market in Australia and for completeness briefly summarises retail pricing below.

Generally the retail price is made up of:

- Terminal Gate Price, i.e.;
    - Import parity price;
    - Excise tax;
    - Terminal margin; and
    - Some GST.
- Retailing costs, i.e:
    - Costs involved in delivering fuel to the service station;
    - Administration and marketing costs;
    - Costs involved in running the service station such as wages, rent and electricity;
    - A small profit margin for the retailer; and
    - Some GST.

The TGP (ex tax) constitutes 50-60% of the price of fuel at the bowser, tax (excise and GST) around 30-35% and the retail gross margin 5-10%.

Despite being almost entirely a refiner and wholesaler and not a retailer of fuels in Australia, Shell's observation is that the retail market continues to be highly competitive, as indicated

by price discounting cycles in the major metropolitan markets. The positive impact of price discounting cycles is referred to by the ACCC in their 2001 report titled "Reducing Fuel Pricing Variability" where they quote "it is likely that consumers in aggregate benefit overall from price cycles".

REGIONAL DIFFERENCES IN THE PRICE OF PETROL

Shell customers have the option of purchasing fuel direct from any Shell terminal, providing the fuel is picked up in an accredited fuel tanker (to meet industry safety regulations). Where customers prefer to have their fuel delivered, Shell offers this service and will negotiate a price for delivery, which is dependant on volume delivered and location. Depending on where a customer is located, delivery of the fuel will be via a Shell tanker or hired carrier and may involve storage at a local fuel depot prior to final delivery.

Delivery in the more remote parts of Australia is expensive due to the large distances, relatively low volumes of fuel and additional infrastructure required to distribute fuel in these areas. For example, inland depots which are used as interim points for storing and then redistributing fuel to customers in the vicinity of the depot constitute a an additional fixed cost to the supply chain. Clearly in parts of Australia, the distances between terminals and depots and the final delivery can be large and they will thus add a further significant amount to the delivered cost.

Many regional sites carry only a limited convenience store offer. Consequently, the majority of the overheads (wages, rent, electricity) must be met by fuel sales. However, most service stations in regional areas will sell lower volumes of fuel than metropolitan service stations. Thus a much higher margin is required on each litre of petrol sold to cover the overhead costs of the service station.

BIOFUELS

Shell is presently designing and developing its next biofuel product, to follow the well-received introduction of Shell Optimax Extreme last year. Shell supports the Australian Government's target for the use of 350 ML of biofuels in transport fuel in Australia by 2010.

<u>The economics of biofuels are highly dependant on relevant commodity prices</u>

Shell advocates that commercial decisions around supplying and retailing biofuel blends must balance whether and how to take the risk of the medium to long-term investment in infrastructure with uncertain reward based on the short-term fluctuations in commodity prices and consumer behavior.

Economics and pricing of biofuels must take account of the following factors:

- The relative price of ethanol and hydrocarbon fuel;
- Costs associated with the blending, distribution and sale of biofuels – particularly ethanol, for instance terminal infrastructure and retail site tank preparation;
- The cost of adjusting the refined hydrocarbon fuel to allow the blended biofuel to meet environmental specifications such as the Reid Vapor Pressure (RVP), volatility specification, if there is no appropriate variation or waiver in place; and
- The fact that ethanol blends are less energy efficient – i.e. they don't take motorists as far per litre sold. Shell estimates that E10 blends contain around 3% less energy and an E85 blend contains around 40% less energy.

Shell Optimax Extreme

Shell Optimax Extreme, containing 5% ethanol, was designed to help address the issue of consumer confidence in ethanol. It is a niche fuel aimed at a small portion of the market and is Australia's first 100 Octane "super-premium" product. Shell Optimax Extreme is not Shell Optimax + ethanol, but has been carefully formulated from a range of refinery components and ethanol. For example, the base (non-ethanol) fuel is designed to have a higher energy density to mitigate the reduction in energy density of adding the 5% ethanol.

Shell Optimax Extreme is thus priced at a premium to Shell Optimax, which in turn is priced at a premium to regular unleaded grades of petrol.

Second generation technology offers significant greenhouse advantage

Ethanol from food crops and bio-diesel from plant oils are considered first generation bio-fuels because they have limited potential for further cost reduction and their source material i.e. sugar or wheat can also be used for food crops and so compete for land use. New fuels based on biomass conversion that convert the cellulose contained in plant residues, such as straw and stems, into sugars (2^{nd} generation bio-fuels) have the potential to overcome these limitations while delivering much bigger reductions in CO2.

Internationally, Shell is conducting research into these new technologies that convert agricultural waste to fuel, with its Canadian partner, Iogen. The technology, known also as cellulose ethanol production is used in a demonstration scale prototype plant in Canada. 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.

Given that these technologies are emerging, Shell believes that any policy or support should clearly link to the proven performance of individual bio-fuels in the delivery of well-to-wheel carbon dioxide emission reduction. Bio-fuels that are most effective in delivering well-to-wheel carbon dioxide emission benefits should receive the most support, whilst those least able to deliver such benefits should receive substantially less support.

Appropriate regulation, enforced compliance and infrastructure support programmes can help move ethanol blends forward now

- Shell advocates the need for consistent RVP regulation across the country, taking account of the inherent higher volatility of ethanol blends. Shell recognizes that the Federal Department of Environment and Heritage is progressing this issue.
- Enforcement of compliance with regulations (such as RVP and maximum ethanol content) and implementation of appropriate safety measures (such as appropriate underground tank preparation and safety facilities for blending) is important to prevent the recurrence of negative public perception and thus for the continued development of the industry.
- Infrastructure support programmes, that recognize the significant infrastructure costs in the blending and retail end of the biofuel chain will help facilitate implementation of ethanol blends at the consumer level. The Queensland Government's Queensland Ethanol Conversion Initiative is a good example.

OTHER FACTORS

Competition in the Australian market

Australia is a highly competitive market for petrol. Evidence to support this includes:

- Australians enjoy among the cheapest pre and post tax petrol in the OECD;
- 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 – e.g. Shell announced a profit of $4 million in 2004 in its Downstream business in Australia; and
- The proliferation of retail discount schemes since Shell and Coles Express introduced their 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'.

Shell financial facts

- Shell has invested more in the industry in Australia (capital expenditure) than it has received as profits before interest and tax over the last 5 years. (e.g. $340 million spent on clean fuels upgrades at Shell's refineries).
- Shell's Downstream profit expressed as Profit (before interest and tax) per litre of petroleum product sold for the last 5 years has been approximately: 1.6, 2.0, 1.8, 0 and 3.0 cents per litre, or an average of 1.5 cents per litre BEFORE any reinvestment of capital. This incorporates refiner's margin, notional terminal margin, sales and operations margins and all other margins. These figures should be contrasted to the 55 cpl increase in retail prices based on world market factors over about the same time period.

These figures give a clear indication that not only is the market in Australia highly competitive, but it is a difficult market in which to make a reasonable profit.

Downstream (Refining & Marketing)

	2001	2002	2003	2004#	2004##	2005
Revenue $Amillion	9340	8953	11003	12940	13095	15722
Profit before interest & tax* $Amillion	155	203	183	4	43.5	300**
Capital expenditure $Amillion	106	224	178	144	144	267
Production crude processed m bbls	73	71	67	62	62	63

*Current cost of sales basis. This excludes the effect of changes in oil prices and gives a clear picture of the underlying performance of the business.
** PBIT excludes $A215 million in income for the sale of trademarks to Shell Brands International (SBI)
# 2004 results reported in 2004 media briefing
2004 results have been recast due to new International accounting standards.