

THE STAR

CALTEX'S MAGAZINE FOR EMPLOYEES, FRANCHISEES,
RESELLERS AND THE WIDER WORLD
ISSUE 47 / FEB 09 – MAR 09

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CALTEX
Caltex Australia



From the Managing Director

As we've stated for the public record, Caltex supports a carbon-trading system. We believe it is the best way for governments to address the problems associated with climate change provided international consensus on emissions targets can be reached.

However Caltex has serious concerns about the government's proposed Carbon Pollution Reduction Scheme which is due to become law in July next year. The most serious relates to the proposal that petroleum refiners, as part of an emissions-intensive, trade-exposed (EITE) industry, will get only 60 per cent of their carbon-trading permits free.

We estimate the additional resulting burden on our two refineries to be between \$25 million and \$40 million a year.

Not only will it affect our bottom line, it will provide a competitive advantage for refiners in other countries, like Singapore and India, which will bear no carbon costs and whose products compete directly with ours. Clearly refineries should be allocated 100 per cent of their permits free until such time as our competitors face similar costs.

Another area of concern for us relates to reducing the excise on fuel for three years to protect drivers from the higher fuel costs (up to 10 cents per litre on petrol) resulting from the scheme. This will do nothing to change motorists' driving behaviour or reduce fuel use. It will therefore have no environmental benefit.

To put things in context, transport produces about 14 per cent of Australia's greenhouse emissions. Emissions from customers' vehicles and equipment using Caltex's petroleum products are 20 times greater than from our refineries.

These and other pressing matters discussed in this issue of *The Star* must be urgently addressed by the Federal Government which, we believe, should be placing greater emphasis on new vehicle technologies.

Australia needs security of supply for its petroleum products. Refineries must maintain their ability to continue running safely and reliably. Our industry is a cornerstone of the nation's economy. We deserve nothing less.

Des

COVER: An illustrator's view of the key themes in this month's cover story.



LPS at work

While observing some Loss Prevention System (LPS) work during a visit to Kurnell refinery late last year, Caltex Board member Brant Fish noticed a catalyst loading operation which he felt presented possible safety issues. LPS methods are used by Caltex employees to prevent, or reduce, loss using behaviour-based tools and proven management techniques.

The catalyst loading was being carried out by crane coordinator Danny Bell whose cranes regularly perform heavy lifting around the refinery. One of the tasks of Danny's team involves lifting bags of catalyst onto hoppers and unloading them through a chute on the underside of the bag. Each bag weighs about two tonnes and must be lifted onto a hopper approximately two metres high.

Brant suggested that a Job Safety Analysis should be developed around the catalyst loading task. This is a review of the work process to identify potential losses and hazards so procedures about performing the task safely and correctly can be developed.

Danny's team made this task a target for Loss Prevention Observations (LPOs), a standardised method for observing a work process and determining if it's being performed according to Caltex's standards. LPS coordinator Alex Mann was brought in to help develop the JSA.

When simulating the task, one of the team found the bags were not being used in the correct way. After analysing the task further it was decided to build steel scaffolding on the top of each hopper to support the weight of the bags.

Several weeks and LPOs later, Brant Fish took time out to steward this LPO and he caught up with Danny and his team to talk about some of the improvements they made by using the LPS tools.

"When we had a closer look at how we did the job we found there were a few crush injury hazards that needed to be addressed," Danny explained to Brant. "The guys definitely feel safer now we have changed the way we do this job."

By using LPS tools the team are now performing this, and other lifts, in a much safer way.



Countless thousands of words have been written about the Federal Government's keenly anticipated Carbon Pollution Reduction Scheme (CPRS) White Paper, released in December 2008 (see box on page 4). It contained details of its carbon reduction targets and emissions trading scheme due to start in July 2010. Because Caltex must buy permits for its customers' emissions as well as its own emissions, the company will be the largest single buyer of carbon permits under the CPRS. In an interview with *The Star*, Managing Director and CEO Des King discusses the company's key concerns.

'If our competitors won't pay for permits, why should we?'

The carbon pollution reduction scheme Why there are challenges ahead – Caltex's view

The Star: The original government proposal was that oil refining should qualify for no free allocation of carbon permits under the CPRS. What's Caltex's response to the latest proposal that should give refiners at least 60 per cent of their permits free of charge?

Des King: The latest proposal is an important step in the right direction and we acknowledge the government has been listening to industry concerns. However, we believe international competitiveness should be fully maintained, which means 100 per cent free allocation of permits until overseas refineries such as those in Singapore which supply product to Australia bear equivalent carbon costs. If international competitors don't bear a carbon price, why should we have to? Failure to implement such a policy threatens to destroy Australian investment and jobs without reducing global emissions.

The Star: Is the business climate making it more difficult to introduce the CPRS?

DK: The business environment in which we find ourselves today is adding to our concerns. Australia imports 30 per cent of the petroleum products it needs and this figure will increase over time. Large, low-cost Asian refineries have competitive advantages over Australian refineries including being closer to growing markets. This means no new refineries will be built in Australia and imports will accordingly increase. In the near term, lower demand growth in Asia because of the global economic crisis combined with new refining capacity in countries like India will reduce refining profitability. Despite this, Australian refineries can be competitive but not if they are loaded with extra costs that tilt the playing field against them. We are not asking for special treatment against imports, just a level playing field. Once competitors have the same carbon costs, we are willing to bear the same costs and then emissions trading should work as intended to help reduce emissions.

The Star: Are you saying the 60 per cent free permit allocation will effectively put you out of business?

DK: Having to purchase 40 per cent of permits would cost our two refineries \$25 to \$40 million annually based on White Paper carbon prices.

This would seriously reduce the funds needed to keep them running reliably and efficiently. In the bottom half of a business cycle such as the period we're in now, carbon permit costs for refining could consume a significant percentage of our earnings as the costs are not recoverable from customers. Refineries already consume large amounts of energy so focus closely on energy efficiency. As a result, there is not much scope to reduce greenhouse gas emissions through better efficiency. This makes the CPRS just a tax on competitiveness instead of an incentive for emission reduction.

The Star: Is the future of refining in Australia at stake?

DK: The Australian Institute of Petroleum says the CPRS could indeed place significant pressure on the viability of a number of Australian refineries over the period to 2020 and may lead to closures. We agree with this assessment. Yet Australian refineries offer the critical supply diversity that underpins security of fuel supply to Australian industry, businesses and consumers. We believe it will be difficult and more costly to maintain our historical high level of fuel supply security if the vast majority of fuel supply is imported. You don't strengthen a supply chain by removing some of the links.

The Star: Under the CPRS, motorists will not face carbon costs for at least three years because there will be an offsetting reduction in excise tax. What's your reaction to this?

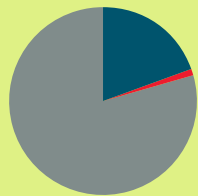
DK: It doesn't make sense to impose a carbon price on motorists and then immediately offset it with an excise reduction. In fact, the excise reduction proposal will actually reduce the price of petrol for several years so emissions from petrol under the CPRS will increase relative to emissions without the CPRS. That's not an environmentally sound policy. Under the CPRS, fuel suppliers will be required to buy permits for their customers' emissions. We calculate that by 2021 cumulative emissions from petrol will be the same as without the CPRS, yet the oil industry will have purchased \$15 billion in permits and charged them back to customers. That's financial churn with associated financial risk for no purpose.

Longer term, the CPRS will likely increase petrol and diesel prices in the order of 10 cents per litre or more but will reduce emissions by only a few per cent. It will not achieve the objective of greatly reducing emissions from vehicles and other mobile equipment by 2050. The way the CPRS has been formulated, one has to seriously question why motorists are included.

Another issue is the absence of price transparency. Fuel prices will go up because of daily carbon prices but the excise reduction will be based on prices up to a year before. Carbon markets could be very volatile and Caltex does not want to be blamed for any mismatch between carbon prices and the excise reduction. If the carbon price increase is more than the excise reduction, we'll be accused of ripping people off. To avoid this problem, the price of carbon permits for petroleum products should be exactly matched to the excise reduction. This could be achieved by issuing fuel suppliers with permits for customers' emissions at a fixed price equal to the pre-determined excise offset.

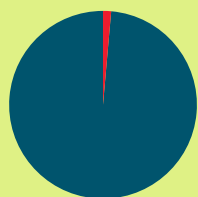
The Star: If motorists were left out of the CPRS, how could emissions be reduced?

DK: At this time, Caltex is not advocating leaving motorists out of the CPRS but the current proposal is badly flawed and needs to be reassessed. Price does little to change motorists' consumption behaviour so the necessary changes will inevitably come from new vehicle technologies. Once new car technology becomes economical, people will switch from fossil fuels to hybrids, fully electric vehicles and vehicles using other renewable non-fossil fuels including biofuels. The government has a significant role in supporting research, development and demonstration of alternative fuels. Some well-targeted incentives for the purchase and use of low-carbon vehicles could also help, as well as support for facilities to provide fuel for those vehicles. The focus has to be on reducing emissions from consumption, not production. Australia's greenhouse emissions from the use of liquid fuels were



Total Australian greenhouse gas emissions: 576 million tonnes

- Total annual Australian liquid fuel emissions: 115m tonnes
- Total annual Australian oil refinery emissions: 6m tonnes
- Other annual Australian greenhouse emissions: 465m tonnes



- Australia's share of global emissions: 1.5%

All data is for 2006

HOW DOES CARBON TRADING WORK?

At the heart of the Carbon Pollution Reduction Scheme is a "cap-and-trade" system under which emitters of greenhouse gases need to acquire a permit for every tonne they emit. Their emissions must be monitored, reported and audited and at the end of each year companies must surrender permits equal to the quantity of their emissions (one permit equals one tonne of emissions).

The number of permits issued by the Australian Government in each year will be limited and companies will compete to buy the permits they require. However, there will be no restriction on the purchase of overseas permits. Companies that want the permits most will pay more for them, either at auction or on a secondary trading market. The government expects that for some organisations it will be cheaper to reduce emissions than buy permits.

The government has set a price cap for five years of \$40 per tonne at the start of the scheme, rising by five per cent plus the rate of inflation (CPI) per year.

Penalties will be imposed on businesses that do not surrender sufficient permits.

Continued from page 3

115 million tonnes in 2006. In the same year, refineries only emitted six million tonnes.

The Star: What about the proposed timing of the CPRS?

DK: Some commentators say it should be put on the back burner. Caltex does not take that view but is not fixed on a particular implementation date. Sufficient time must be taken to ensure the scheme is properly designed and reviewed, and it should be implemented fully only when economic times return to normal. This does not mean sitting on our hands but we have time to get it right, which includes ensuring the legislation and regulations are considered by the Parliament as a package. Given that Australia is very likely to meet its Kyoto Protocol target for 2008-2012, it may be desirable to trial the CPRS through 2012 to iron out the problems.

We believe it's likely there will be a global agreement by 2010 on reducing growth in

emissions but it will be imperfect and differentiated between countries, particularly in light of global recession. Deep emission cuts or high carbon prices are unlikely initially, but the evolving nature of the climate change threat seems likely to drive all governments to more stringent action over the next decade. Under these circumstances, it's critical that the international competitiveness of emissions-intensive, trade-exposed industries is maintained until all major emitters are fully engaged and have equivalent carbon prices for these industries.

The Star: How prepared is Caltex for the coming changes?

DK: We're working hard on making sure we're prepared. We have a comprehensive in-house team dedicated to examining all the implications and effecting strategies to deal with the new business and operating environment the scheme represents. We are also talking to many stakeholders about changes we believe are necessary to the CPRS as currently proposed. ●

What is the White Paper?

It's a statement of the government's policy position which will be converted to law through an Act of Parliament.

It follows the "Green Paper" in mid 2008 which set out options on emissions trading. Key points of the White Paper include:

It sets a target range for greenhouse gas emission reduction in Australia of five to 15 per cent below the 2000 level, with the fuel targets being subject to targets agreed at the Copenhagen climate change conference to be held in December 2009.

The five per cent reduction is a firm commitment that will guide Australia's policy in the absence of international agreement.

The scheme will put a cost on "carbon" (greenhouse gas) emissions with big emitters having to buy permits for the carbon they emit. This encourages reduction in emissions if the cost of emission reduction is less than the cost of permits.

The scheme will only apply to facilities which emit more than 25,000 tonnes of carbon dioxide equivalent a year, affecting about 1,000 companies and covering about 75 per cent of Australia's greenhouse emissions.

An expected carbon price of \$25 per tonne of carbon dioxide when the scheme is introduced will result in a cost of living increase of 1.1 per cent, according to the government. Electricity

prices are expected to increase by about 18 per cent and gas prices by 12 per cent. To help consumers with the cost of living increases that will result, the government will provide household assistance to targeted families and individuals.

Motorists will be protected from higher fuel costs resulting from the scheme by a reduction in fuel excise tax for the first three years.

When the scheme starts, many big carbon emitters that are emissions-intensive and trade-exposed (EITE) will get free permits to cover at least 60 per cent of average emissions in their industry to help maintain international competitiveness and stop production relocating to countries without carbon costs. The most emissions-intensive activities like aluminium smelting and iron and steel production will receive free permits at a rate of 90 per cent. Fuel refiners like Caltex are likely to receive assistance at the 60 per cent rate.

The government will establish a \$2.15 billion Climate Change Action Fund over five years to ease the transition for businesses and community sector organisations to a carbon-costed environment.

Refinery energy study evaluates potential savings

A Caltex refinery never sleeps. It works day and night to produce the transport fuels on which Australia depends to keep its economy moving.

This process devours huge amounts of energy in the form of electricity, natural gas and other hydrocarbons to produce the heat and steam needed to turn crude oil into petroleum products. Caltex's annual energy bill runs into hundreds of millions of dollars. And that means even incremental savings can make a worthwhile difference to the bottom line.

With potential savings in mind and as part of the federal government's Energy Efficiency Opportunities (EEO) program, during much of 2008 Caltex's refineries ran exhaustive studies to seek and identify energy saving opportunities and assess which ones could be implemented.

The work involved people across both refineries, many meetings and much expert help from an international consultancy, KBC Advanced Technologies, says Caltex's Energy Specialist Refining Joe Rollo, who coordinated the studies, reviewed data and evaluated benefits.

Joe was well supported by energy engineers David Miller (Lytton) and Louise Sinclair (Kurnell) and the Chevron Business Improvement Network team.

The outcome was a recent report to the Department of Resources, Energy and Tourism from Caltex Managing Director and CEO Des King detailing the opportunities to save. These included capital projects as well as non-capital schemes that may be implemented with little or no capital expenditure.

\$7 million identified

"We're now doing much more rigorous examination of our energy use and greenhouse emissions," explains Joe.

The total potential savings identified at the two refineries are worth more than \$7 million and represent over 1.1 million gigajoules of energy per year. While these figures seem impressive, the savings are only two to three per cent of Caltex's total fuel costs and energy consumption.



Kurnell's Louise Sinclair with a crude exchanger train, a potential target for energy saving

A wide range of opportunities were identified, from operational changes like reducing the amount of air vented at a catalytic cracking unit to investment in revamping heat exchange trains on large crude units, which would enable significant reduction in "furnace duty" (furnace fuel use) on the units.

While the non-investment initiatives will be pursued vigorously in the near term, the large capital modification prospects are generally not economically viable at present, says Joe. ●

THE BROADER PICTURE

In broader terms, the study confirms that while there are some cost savings to be made by introducing efficiency measures overall there is minimal scope to reduce greenhouse gas emissions through improved efficiency. This is why the CPRS will have little impact as an incentive to reduce emissions.

Remembering Alex Strang

When Alex Strang died in December after a short illness colleagues and friends at Caltex, Chevron and many other organisations were deeply saddened. It's not surprising, because Alex was an influential and integral part of Caltex for over 36 years. He touched many in that time.

Alex, 58, brought a wealth of experience and integrity to his work, having excelled in a variety of management, technical and production positions within Caltex and during several secondments to the US. Among his roles were Manager of Strategic Planning, Corporate Treasurer, General Manager Manufacturing & Supply, General Manager Supply and Corporate Services and, finally, General Manager Supply & Distribution, the position he filled at the time of his death.

"Alex's career was a shining example of the diverse and impactful career a chemical engineer can enjoy," says Managing Director Des King. "He had exceptional management and leadership talent which contributed to our corporate success over a significant period. His loss is deeply felt by his colleagues at Caltex who extend their heartfelt condolences to his wife Young, and children Jessica and William."

Alex began work at Kurnell refinery as a chemical engineer in 1972, having graduated from the University of Sydney. He helped steer the company through some challenging times. Among his more significant achievements were guiding the merger with Ampol in the 1990s and setting up the Woolworths partnership in 2003.

Last September, Alex was recognised outside of Caltex when he was awarded the Fluor award for "leadership in chemical engineering". It was typical of Alex's nature that he immediately donated his \$5,000 prize to Sydney University.

When, shortly before his death, Alex spoke about winning the Fluor award for an article in *The Star* he said how much he enjoyed his time at Caltex. "The award demonstrates the positive image the company has and the achievements I've been fortunate enough to be a part of," he said.

Alex was also a keen sportsman who played A-grade cricket and squash. He was active in the communities in which he lived – initially in the Sutherland Shire and more recently in the northern Sydney suburb of Killara. ●



Reseller revamp gives country customers what they want, when they want it

A major restructuring of the Caltex Petroleum Services business is allowing us to deliver better, faster service to regional and rural clients.

It's a sunny autumn morning in Dubbo. Caltex depot manager Carol Lane, reading emails in her office, hears a knock at her door and looks up. It's one of her regular customers, a wheat farmer.

"Hi Bill," says Carol. "You've had some rain out at your property I hear. Are the kids well?"

Carol, who has worked at the Caltex depot in the central New South Wales town for 14 years and been manager there for the past 12 months, continues the conversation as they stroll to the lubes store, known as the "oil shed". Bill orders a 205-litre drum of Delo 400 diesel engine oil for his utes and tractors.

They chat about the weather, the wheat harvest and their families until Bill finally heads home.

"Our customers are mostly farmers," says Carol, who knows every one's requirements, their regular purchase patterns, where they live and even what sport their children play. "But we also service business people in town. Caltex fuel and

lubes play a vital role in all their lives. We know each other well – I've seen their kids grow up."

The transaction that's just taken place is a typical one enacted hundreds of times a day in the Caltex network across Australia. It's just one step in a process that helps keep rural and regional customers in business.

Now, to ensure such small to medium enterprise (SME) clients get even better service and attention, the Caltex reseller network has undergone a major restructuring.

It involves consolidating the reseller businesses owned by Caltex from 10 separate businesses to four regional hubs: Caltex Energy NSW, Caltex Energy WA, Caltex South East (Vic/SA) and Caltex Energy QLD. The businesses have been created and management teams are already in place.



LEFT: Ian Ross with Caltex's new split-shifter truck
 ABOVE TOP: Caltex's Wade Death (right) with Dubbo driver Shane Lodding (left) and local farmer John Knaggs
 ABOVE: Serving customers better through greater efficiency: from left, Caltex Energy QLD Business Managers Glen Hill and Helga Bennet with Queensland Regional Manager Scott Nicholls

"When a customer wants to talk to Caltex locally it's usually to satisfy a need, order fuel, seek advice or get information," explains Regional Manager Wade Death. "That's what they care about. What they don't care about is what the return address on the envelope of their statement might be, or where the statement comes from."

Even more importantly, better distribution and delivery networks are being set up. For example, at the peak harvest time in the northwest of the state it's usually a scramble to get enough trucks and drivers to deliver fuel to agricultural clients. Thanks to more resources and better planning, Caltex Energy NSW can now have resources available for such peak periods – including the holiday season at year-end in the north and the main fishing season at Eden on the south coast.

The number of vehicles available has been increased, says Wade. And two new "split shifter" trucks can tow a pair of tanker barrels from Newcastle terminal to regional depots like Dubbo. The trailers can be pulled apart and other prime movers can take them on to other areas, allowing for a more effective distribution and fuel-storage cost savings before the truck heads back to Newcastle at night.

"From a change management perspective, the restructure will touch every one of the 1,200 people in Caltex Petroleum Services," says Ian. "It's the biggest change management program since the merger of Caltex and Ampol in the mid 'nineties."

CPS people have been positive about the changes, adds Scott Nicholls. "They recognise that if we do this right our people will see many more opportunities to grow with the business over the next few years." ●

Less complexity, sharper focus

Why's it happening? It's simply about being more efficient, explains National Manager Reseller Ian Ross. The consolidation will allow for a more integrated approach to managing customer relationships and a more efficient structure. It will also reduce the complexity of the business model.

That's partly because in the past there's been some confusion about what the reseller group actually does, particularly as it ended up owning and running about 200 service stations. The result was many reseller people spent more time on the retail side of the business than on servicing small to medium enterprises (SMEs), which is obviously what their prime focus should be, says Ian.

"We're moving the retail sites out of reseller back to retail so we can concentrate on the SME business core offer – giving our customers a great product, delivering to them when they want it and with a competitive price and credit terms."

Caltex clients will see no downside; in fact, they'll experience an approach that's more focused on their needs, says Ian. To that end the sales teams will get fresh training this year as Caltex Petroleum Services "moves towards the culture of the hunter," actively chasing business.

For Caltex Energy QLD, an important focus is to execute better than the competition by having talented local people and a reliable supply and distribution network. This is a challenge, concedes Queensland Regional Manager Scott Nicholls, as is maintaining the foundation that's been built for safe and compliant operations while Caltex seeks to aggressively grow the business.

Does it mean safety is no longer a priority? Absolutely not, says Scott. Growth will never be at the expense of safe operations. By making the regional distribution network more efficient and reliable, customers will experience improvements in relationship management. "There are many synergies and marketing advantages we can offer our customers by Caltex Energy QLD having a larger and geographically diverse business," says Scott.

Streamlining accounts

In New South Wales, the operations of newly formed Caltex Energy NSW cover a vast chunk of the state, from north to south and as far west as 300 kilometres beyond Cobar and Bourke. Synergies here include streamlining non-customer facing transactions like billing and general accounts enquiries while continuing to have dedicated sales and operating people on the ground.

MORE INNOVATIONS FOR BETTER SERVICE

Fresh ideas are helping grow the Caltex reseller business in New South Wales, says Regional Manager Wade Death. For example, a display trailer acts as a mobile point of sale demonstration unit with sales and collateral material and information about Caltex products. It travels to trade shows like Agquip in Gunnedah and others, and a mobile eftpos unit allows people to sign up for accounts and reseller people to do deals on the move.

And Caltex Energy NSW has bought a number of mobile fuel tankers which it's leasing to customers in country areas including Dubbo, Coonamble, Coffs Harbour and Bourke. Customers can fill them up and take them back to their properties themselves, saving considerable sums in delivery costs.

Alternative transport fuels – where to from here?

What does the future hold for alternative transport fuels in Australia? In this edited extract from a recent speech to the Academy of Technological Sciences and Engineering (ATSE) in Melbourne, Caltex CEO Des King identifies challenges and outlines his vision.

Transport fuels policy must have solid economic and scientific foundations, but it will always reflect the art of the politically possible. Alternative fuels policy formulated without considering the broader environmental and energy context and policy initiatives may not achieve its goals or be economically efficient.

Obviously any alternative transport fuels policy must align with major existing initiatives. Those at federal level include the Carbon Pollution Reduction Scheme and Renewable Energy Target, Energy White Paper, Henry tax review, car industry plan and green car scheme, Auslink and Infrastructure Australia Fund. (See Chart 1).

We should aim for a framework that is integrated with major policy initiatives but seeks to ensure alternative transport fuels are properly considered through some kind of separate action plan. It is not realistic to formulate an alternative transport fuels policy independent of major policy initiatives.

A heroic challenge

Optimising energy and environmental policy is a truly heroic policy challenge. The defining energy objectives of the next half century will address climate change, which means reducing greenhouse emissions massively below business-as-usual trends. They will also need to address the situation where supply of conventional crude oil will fall short of world demand.

Alternative fuels will play a key role in meeting these challenges.

Governments will not solve climate change and energy problems for us but markets will, based on scientific and technological innovation. The role of government policy should be to let markets operate and only intervene where there are market failures and governments can improve outcomes.

The oil market, for example, faces difficulties like geopolitical tensions, financing of massive new investment in oil and gas and lack of skilled people. However the market is competitive. The recent drop in oil prices is unlikely to persist once world economic

growth picks up again, and an upward trend in prices will help solve these problems through increased supply and decreased demand.

The major “externalities” from using oil relate to its combustion: air pollution and greenhouse emissions. Alternative fuels have similar externalities though they may be smaller.

In Australia we have to meet the climate change challenge in a way that’s economically efficient and avoids imposing unnecessary costs. This applies to policy on alternative transport fuels as much as any other. (See Chart 2).

Future sources of transport energy

While conventional petroleum products and the refineries that make them will be required for many years, Australia will need alternative fuels to help reduce imports of petroleum products and greenhouse emissions. Sustainable “second generation” biofuels like ethanol and biodiesel made with renewable feedstocks like non-food crops or even algae will provide pure and blended lower carbon content fuels for internal combustion engines in cars and trucks and possibly for some aircraft engines.

Longer term, synthetic diesel and possibly jet fuel made from gas, coal and biomass will provide fuels for heavy commercial transport and other mobile uses where electric motors are impractical. Hydrogen-powered vehicles may eventually appear. The hydrogen will have to be produced from renewable sources.

Market versus regulation

With so many technological options, what kind of policies should we pursue?

Placing a price on carbon through an emission trading scheme is the most economically efficient way to reduce greenhouse emissions. The carbon price should be the central instrument of climate change policy.

But a carbon market inevitably has distributional consequences which politicians must address. It also disadvantages certain interest groups.

We therefore face an intense policy debate. On one side are the interventionists who believe the climate change crisis is too dire to be left to the market or the market is too slow to respond. On the other side are free marketers who believe price signals in reasonably competitive markets will result in more cost-effective changes in fuel supply and demand and a lower cost to the economy. And there are plenty of pragmatists in the middle.

Policy objectives

Before we can solve policy problems, we have to know the objectives. Unless we know what we are trying to achieve, it’s hard to know if we have succeeded. Environmental objectives for alternative transport fuels, for instance, would include reduction of air pollution and greenhouse gas emissions. The reductions vary widely according to fuel type and process of manufacture.

Policy options

A range of policy options can achieve desired objectives. While carbon pricing will play a major role in addressing climate change, carbon prices will have little impact on oil demand or the demand for alternative fuels. That’s because demand is fairly inelastic with respect to price and oil prices and taxes are already high.

For example, an increase in oil prices of US\$50 per barrel is equivalent to a carbon price increase of A\$210 per tonne of carbon dioxide (assuming an exchange rate of 0.65). That’s the kind of oil price increase we experienced in 2008. However, it’s four to eight times the carbon price likely under an emissions trading scheme.

The existing 38 cents per litre excise on petrol and diesel is equal to a carbon price of about A\$160 per tonne of carbon dioxide. This is for revenue-raising but could be seen as an existing carbon price.

Most emission reduction will come from changes to vehicle technology and fuel supply and from non-price measures such as improved public transport, transport

infrastructure and urban design. The Carbon Pollution Reduction Scheme will not have much impact on transport fuel emissions.

Prices and charges

What about other price measures or charges? These could include charges for vehicles according to environmental criteria when new vehicles are purchased or registrations are renewed. Other measures include congestion pricing for roads, and charges for CBD access and parking to discourage private transport.

Taxes and subsidies

Taxes and subsidies can have a major effect on the relative demands for alternative fuels. Overall however, subsidy development appears to have been ad hoc without any integrated assessment of the relative merits of the various subsidies in the light of energy, environmental or other objectives. As a result, subsidies tend to be technology specific. Alternative transport fuels must be sustainable longer term and taxes and subsidies should not create significant longer term economic distortions.

Emission and fuel targets

Australia has a draft National Average Carbon Efficiency target (NACE) but any attempt to mandate this target would face two major problems: a high percentage of Australia's vehicles are imported so it is difficult to influence technological development, and Australian vehicle manufacturing is currently geared towards large cars. It would probably be more appropriate to set voluntary NACE targets for monitoring Australia's progress and encourage the production and import of more carbon efficient vehicles. Technology-specific approaches such as electric car quotas should be avoided.

Regulation of alternative fuel use is also problematic. Mandates are effective in driving alternative fuels investment but risk economic distortions by channelling investment into fuels that would not be viable otherwise.

Government measures include the purchase of lower carbon vehicles for government fleets, including those using alternative fuels, and the facilitation of trials of alternative fuel vehicles. This can be very important for encouraging the introduction of new technologies and increasing consumer awareness and acceptance.

Research and development is also fundamental to ensuring Australia develops and uses the alternative fuels that are most relevant to its needs.

This includes research into the most appropriate biofuels feedstocks for various locations, relevant conversion processes and testing of their real world application in vehicles. R&D should include utilisation of gas and coal resources for production of synthetic fuels and accompanying carbon capture and storage.

In conclusion

Alternative fuels policy must be set within the broader context of transport policy and within climate change and energy policy more generally. We should aim for a framework that's integrated with major policy initiatives but seeks to ensure alternative fuels are properly considered.

A free market should always be the most preferred option and policy actions should be tested against it. Markets are not perfect but neither is regulation, so regulatory risk needs to be considered. There are many ways for market intervention to go wrong.

Other preferred policies are taxes and R&D. Some well-designed subsidies and charges could also be preferred, together with government purchasing references and education and information measures.

The biggest policy development opportunities in 2009 may be the Energy White Paper process and the Henry tax review.

Focusing ATSE's expertise on these policy processes could be very constructive. Longer term, supporting technology and innovation will be critical to sustain our quality of life faced with some tremendous challenges. ●

Chart 1: Policy context

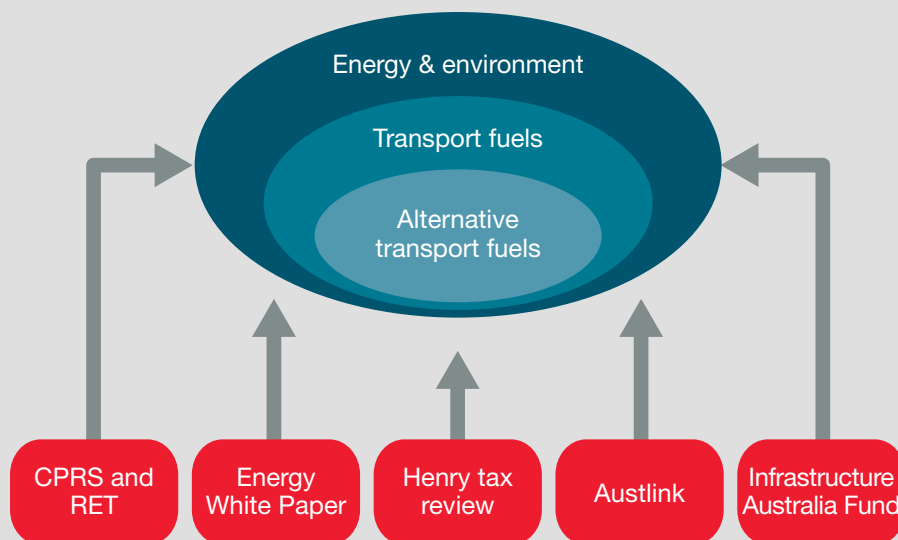
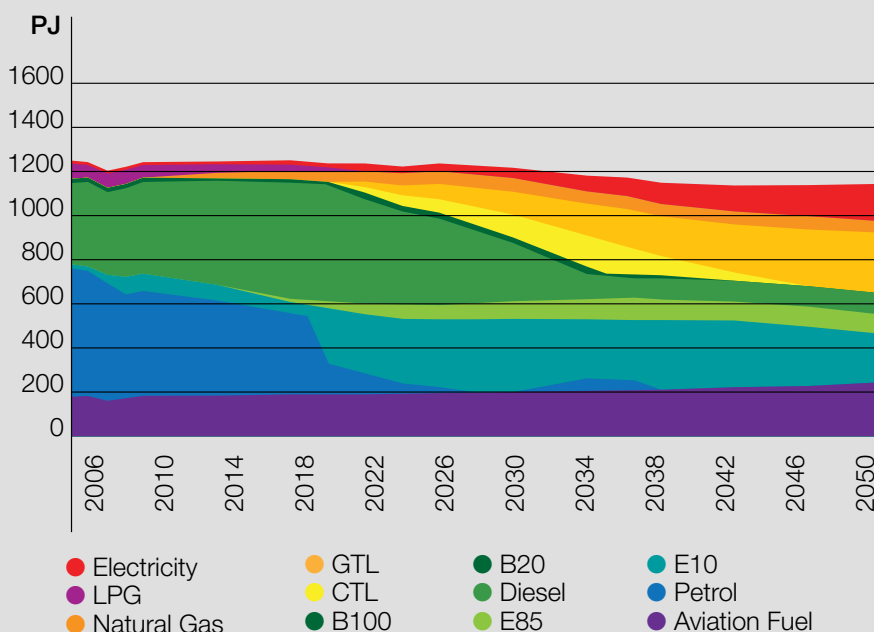


Chart 2: Australian transport fuel consumption



Ref: CSIRO (2008) Modelling of the future of transport fuels in Australia, Figure 17. EIA high oil price projection and 60% by 2050 of emission reduction target.



This takes the cake. From left at Lytton: Mark Hodgkinson (OE&R Manager), Mike Gray (Major Projects Manager), Des King (Caltex CEO), Sue Jiear (Safety & Security Superintendent) and Liam Tobin (Refinery Manager)

THE RIGHT LUBES ADVICE MEANS BETTER BUSINESS

Greater knowledge of Caltex products can translate into better service and more sales. That's the idea behind a newly released training pack for customer service attendants (CSAs) at Caltex service stations. It will allow them to give drivers shopping for lubes better advice on which ones to use in their vehicles.

The training pack, to be updated every six months, will give CSAs enough information about products like Havoline, Delo and additives like Techron 5000 so that if customers come in with questions they can gain an understanding of exactly what they need, says Melinda Bossina, Lubricants Marketing Manager – Retail Channel.

Under the "Let's talk engine oils" section, for example, the pack outlines the basics of engine oils including the differences, uses and benefits and how to recommend a product.

The "Planning your store" section contains schematics on how the lubricant packs should be laid out on shelves. The schematics and planograms are current as of October 2008.

"The idea is to give our attendants the knowledge to answer questions *and* effectively display the products in store," explains Melinda.

Every Caltex site will get a pack including an A4 hard copy and a CD. They're due to be sent out by the end of February.

TWO MILLION INJURY-FREE HOURS? NOW THAT'S A RECORD

"How does everyone feel? We are unbelievably proud!" says Sue Jiear, Lytton Safety and Security Superintendent.

Sue is responding to a question she's been asked often recently – how everyone who works at Lytton refinery feels about achieving two million man hours without a lost-time injury. The workforce is justifiably delighted, she says, considering the challenges they've faced in the past few months.

Not only has the record exceeded the 1.8 million hours set several years ago, it happened during a time when a large construction workforce representing multiple disciplines was on site for construction work on the DHTU2. The period also spanned an engineering shutdown and turnaround of the crude distillation unit, an unplanned power outage and a site emergency shutdown that required evacuation of personnel.

"To be able to do all that as well as our normal business without injury is so impressive," says Sue. "I've been working here sixteen and a half years and we've never seen anything like it."

To what does she attribute the great result? It's a combination of many factors. Among the most important are a strong focus on personal and process safety, fostering of an Incident and Injury Free (IIF) culture of care and concern for your own personal safety and that of your fellow workmates, and a commitment by every individual to going home safely every day, no matter what task they're performing.

"We can also thank the culture of positive reinforcement of safer behaviours we've developed, application of the Stop Work Authority card – giving everyone authority to stop any unsafe work practice they may see – and the fact that people now feel comfortable to speak up to stop unsafe behaviours when they see them happening."

The refinery people celebrated the record with a barbecue lunch followed by celebratory cake and cupcakes – in Caltex red, green and white, naturally.



How to display lubes. A schematic from the new training pack

DRIVERS EMBRACE E10 AT FREEWAY SITES

Ninety per cent of Caltex customers surveyed during a Bio E10 Unleaded trial at Wyong on the New South Wales Central Coast recently already knew about the biofuel blend and its environmental benefits.

This was one of the interesting findings to emerge when the Caltex F3 sites on either side of the Sydney-to-Newcastle freeway stopped selling unleaded petrol and replaced it with Caltex's blend of ten per cent ethanol and regular petrol.

The switch was accompanied by local radio spots and "E10 Ambassador" promotions on the forecourts – in which ambassadors in Caltex livery handed out brochures and answered customers' questions about E10 and the company's commitment to biofuels.

"We wanted to test awareness while giving people the opportunity to buy environmentally friendly fuels at some of the largest service station sites in the country," explains Michael McGavin, Retail Business Manager.

While many drivers weren't especially interested in E10, they used it anyway, mostly attracted by the three cents per litre discount. Many who hadn't noticed the change of petrol thanked staff for the added information.

"Others thought it was a similar product just re-packed – different look, same product," says Biofuels Marketing Manager Mabelle Reyes.

While a few consumers didn't understand the need for E10 and its benefits, once they learned more about it they were happy to try it. "I'm really happy Caltex had finally made the change," one woman motorist said. "People should be more environmentally aware."



Bio E10 Ambassadors Madonna El-Nachar and Skye Heness on forecourt duty

The most common questions included: does this work in my car, why is it cheaper, why isn't regular ULP not available also and why can certain cars not use E10?

PRAISE FOR CALTEX'S AIR-SEA RESCUE SUPPORT

The cooperation and professionalism of Caltex people was much appreciated during an air-sea rescue operation off Merimbula, New South Wales, in January. Staff at Caltex Energy NSW swung into action to refuel the Royal Volunteer Coastal Patrol boat *Sapphire Rescue* after three Victorian men had gone missing when their boat capsized.

On the evening of Monday 12 January, local scheduler Kim Cody received a call from the patrol's Merimbula division. They'd been searching for several hours since losing contact with the men, daylight was fading and the rescue craft was low on diesel. To resume searching at first light, they needed to refuel urgently.

Kim contacted Cocks Petroleum driver John Bailey and asked him to be at the boat at dawn to fill it. Thankfully, as night fell the patrol contacted Kim with news the occupants of the boat had been found and were being lifted from the sea by the Snowy Hydro SouthCare helicopter.

The boatmaster stood the Caltex tanker down until 5.30 the following morning when John refuelled *Sapphire Rescue*.

"Our thanks go to our partners such as Caltex Petroleum Services who in times of need and out of normal hours make themselves available to assist us," an appreciative Coastal Patrol Commander Barry Harrison told *The Star*.

In a letter to Caltex Energy NSW Barry added: "It is only with the support and cooperation of organisations like yours that we at Royal Volunteer

Coastal Patrol can satisfactorily provide a lifeline to those who use the seas around us."

Steve Ferguson, Caltex Petroleum Services NSW Mergers and Integration Manager, added his praise in a note to Kim, observing that the effort was particularly noteworthy for happening outside of normal business hours.

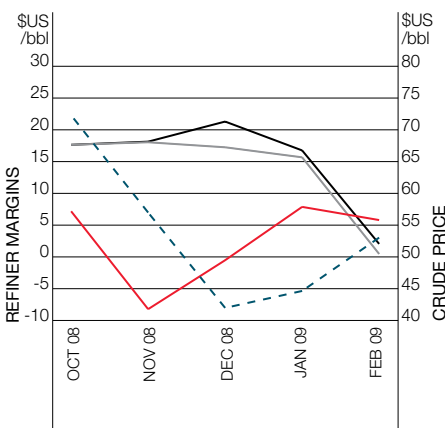


Two of the three survivors with the upturned boat shortly before their rescue. The other man was located 100 metres away. Picture courtesy of the Australian Maritime Safety Authority

SHARE PRICE



CRUDE OIL PRICE & SINGAPORE REFINER MARGINS



The Star is a bimonthly magazine written and produced by Businesswriters & Design for Caltex employees, franchisees and resellers. Story ideas, letters, photographs and other contributions are welcome. For more information or for extra copies of the magazine, please email editors@businesswriters.com.au or contact *The Star*, c/o Caltex Policy, Brand & Communications, Level 24, 2 Market Street, Sydney 2000. Tel: (02) 9250 5000 Fax: (02) 9250 5664. Published by Caltex Australia Petroleum Pty Ltd ABN 17 000 032 128.

MARGINS
 — Petrol (95 ULP) (left axis)
 — Jet (left axis)
 — Diesel (0.005%) (left axis)
 - - Tapis – crude oil price (right axis)

Tapis is the crude oil produced in Malaysia. The Tapis price is the benchmark for crudes in the region. The refiner margins for petrol, diesel and jet fuel are the differences between the Tapis crude oil price and the ex-refinery price in Singapore for the products.

CALTEX BIO E10. A FUEL YOU CAN FEEL GOOD ABOUT.

Caltex Bio E10 Unleaded contains 10% ethanol – a renewable non-fossil fuel that helps reduce greenhouse gas emissions. It meets Caltex's strict quality standards, and is made with homegrown crops to support our local industry. So you can feel good about making a choice that makes a difference.

For further information on Caltex Bio E10 Unleaded visit www.caltex.com.au/biofuels or call 1300 784 009.

Bio E10 Unleaded



CALTEX