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Fuel of the Future

James Rockall, managing director of the World LP Gas Association with the report.

CLEANER LPG AUTOGAS COULD SAVE LIVES

A report presented to an international conference in Sydney warns of the enormous human and financial cost of tailpipe pollution from motor vehicles, especially those powered by diesel engines.

Commissioned by the World LP Gas Association, the report calculates the monetary cost of ill health caused by airborne particulate matter (PM) emitted by motor vehicles.

The report was prepared by Dr Bin Jalaludin from the University of New South Wales in consultation with Australian air quality expert Peter Anyon.

It calculates that the health cost to the community of one diesel-powered van travelling 30,000 kilometres a year is in the order of US\$600-1000.

The report also calculates that an LPG Autogas-powered van performing the same task would generate a health cost of less than

US\$30 per annum because of its much cleaner tailpipe emissions.

"The report confirms and quantifies what everybody thought was the case, but we've been surprised by the magnitude of the costs to the community calculated in the report," said the managing director of the World LP Gas Association, James Rockall.

In Europe there are growing concerns about the health effects of PM pollution on the community, especially in the light of the rapid growth in diesel vehicle sales in that region over the last decade.

In the wake of a sharp increase in petrol prices, Australian sales of diesel-powered passenger cars, SUVs and light commercials rose by 15 per cent in 2005 to 110,607 vehicles.

PM emissions have been implicated in a range of cancers and lung illnesses, including asthma.

"It's now clear that these health costs go way beyond the impact on a government's treasury of any

tax incentives given to encourage Autogas use in motor vehicles," said Mr Rockall.

The report shows that the PM emissions from an average Autogas-powered vehicle are just 3.4 per cent of those of a diesel-powered equivalent.

PM emissions from Autogas are also about half of those of an equivalent petrol-powered vehicle.

The report concludes that in many countries the economic burden of vehicle pollution is estimated to exceed 2.0 per cent of national gross domestic product (GDP).

It concludes that early adoption of rigorously implemented transport fuel and taxation policies, which lead to a strong uptake of cleaner gaseous fuels, can play a very significant role in reducing air pollution and its consequential harm to the community and national economy.

"LPG Autogas is a very important alternative fuel and governments who encourage its use can have a significant positive impact on our health," said Mr Rockall.

AUTOGAS WINS TEST AGAINST PETROL, DIESEL AND HYBRID

An LPG Autogas-powered Ford Territory has won a four-way comparison test between Autogas, petrol, diesel and hybrid-engined vehicles.

The comparison, conducted by leading motoring journalist Graham Smith and published in Melbourne's *Herald Sun* newspaper, showed that the Territory fitted with a new-generation vapour-injection LPG system cost less to run over a 400km test route than a petrol-electric hybrid-engined Toyota Prius.

The Territory used \$20.38 of fuel, while the Prius used \$20.57.

"I wasn't surprised by the result, given the price advantage of Autogas and that modern LPG injection systems are getting much closer to petrol engines in terms of fuel economy," says Smith.

The Autogas-powered Territory achieved an average fuel consumption of 13.36 litres/100 km compared to the petrol version's fuel consumption of 12.4 litres/100 km. [↪ continued page 4](#)



An LPG Autogas-powered Ford Territory was cheaper to run than petrol, diesel and hybrid-powered vehicles over a 400km route of city and country driving.

BOC FINDS LPG IS A GAS

BOC has committed to changing as much of its fleet as possible to LPG Autogas following a successful experience with an initial batch of Autogas-powered Ford Falcons. BOC now has fifty Falcon E-Gas sedans, wagons and utilities on its books as part of its Australia-wide 360-vehicle company fleet.

The vehicles, which are travelling an average of 40,000 kilometres a year, are saving the company about \$1500 per annum each in running costs, thanks to the lower cost per litre of Autogas compared to petrol.

"That means we are paying off the \$1500 higher purchase price of a Falcon E-Gas in the first year and saving significantly over the three-year lease life of the vehicle," said BOC Fleet Administrator Colleen Upsall.

Ms Upsall says the change to Autogas is compelling for reasons other than just the financial savings.

"The decision to go to an Autogas fleet is part of BOC's increasing corporate focus on environmental issues."

"The decision to go to an Autogas fleet is part of BOC's increasing corporate focus on environmental issues.

"At the end of the day we are a gas company and it is appropriate that we should run our motor vehicles on a gas that produces significantly lower pollution levels."

Vehicles powered by Autogas produce between 10 and 15 per



BOC's Colleen Upsall

cent lower greenhouse gas emissions, have around 20 per cent less ozone-forming potential (a measure of the tendency to generate photochemical smog) and only one fifth of air toxic emissions.

BOC began its transfer to Autogas at the beginning of 2005 – a move that necessitated a national road show to explain the change to staff in each State.

"Some staff were concerned about the change because of their experiences with old-style LPG

engines but we've largely overcome their worries," said Colleen Upsall.

"The technology has progressed and our drivers have been surprised by both the mileage and the power of our Falcon E-Gas vehicles."

Ms Upsall says there was also some initial concern amongst staff that the Falcons did not have dual-fuel (petrol/Autogas) systems but she believes the dedicated Autogas system is a distinct advantage.

"By removing the option of petrol, we keep much better control over our fleet running costs and, with more than 3000 service stations around Australia selling Autogas, our drivers haven't had any problem filling up when they need to," she said.

AUTOGAS ADVANTAGE AT RESALE TIME

One of Australia's leading motor vehicle auction houses is advising its clients to add LPG Autogas-powered vehicles to their fleets.

Auto Group Limited says Autogas vehicles are proving very popular at auctions, typically fetching a premium of \$1500-2000 over petrol-powered equivalents.

Auto Group says the residual values of Autogas vehicles have

"improved dramatically" since petrol prices began to rise steeply mid-year.

At the same time the auction house says residual values for petrol-powered large cars and light commercial vehicles have receded.

"The competitive bidding for gas cars is very strong with demand outstripping supply," said Auto

Group's Consignment Manager, Peter McGinnity.

"Autogas commercial vehicles such as utes and vans are exceptionally popular, but we're seeing strong auction results for the sedans and wagons as well." Mr McGinnity says traditional petrol-powered large sedans are, meanwhile, suffering at auction because the market is confronting

an over-supply of near new ex-lease vehicles compounded by rising fuel prices.

"In 2004 a three-year-old petrol utility would have fetched an average of \$18,500 at auction and the Autogas equivalent \$17,500 – but now petrol utes are averaging only \$16,500 at auction while Autogas versions are averaging \$19,500," said Mr McGinnity.

Auto Group says the case for LPG is more compelling when the whole-of-life costs of the vehicle are considered.

"Not only do you make further savings at disposal time because of the lower depreciation these vehicles are suffering, but the running costs are also lower because of the much lower price per litre of gas," said Mr McGinnity.

"We believe the local industry should support LPG.

"Disposal is now a major factor in fleet management and the smart managers will be looking to balance their fleets with the addition of Autogas vehicles as a hedge against future fuel price rises."



Autogas commercial vehicles such as utes and vans are exceptionally popular at auctions, according to Auto Group Ltd



Mitsubishi's new 380 large family car



Ford Falcon E-Gas engine

FORD EXPANDS LPG AUTOGAS RANGE

Ford Australia has responded to the recent sharp increase in demand for LPG-powered vehicles with a significant expansion of the Falcon E-Gas range.

At the recent Melbourne Motor Show, Ford announced it would expand its LPG offerings to include E-Gas variants of Fairmont, XR6 Ute and the new limited-edition Falcon SR*.

The new models will be added to the already existing Falcon XT and Futura models, which have enjoyed a sales boom over the last 12 months.

Ford E-gas sales grew to 5339 in 2005 – an increase of 1343 or 33.6 per cent over the previous year.

E-Gas models now represent 10.1 per cent of Falcon range sales – up from 6.1 per cent in 2004.

"Ford Australia was the first local manufacturer to develop a dedicated LPG engine and, in this age of fluctuating fuel prices, we are pleased to be able to expand the range of vehicles which offer the E-Gas alternative," said Ford Australia president Tom Gorman.

The cost of optioning the E-Gas engine will remain \$1400 over equivalent petrol versions.

"This cost can be recouped within approximately a year of motoring, or even sooner if petrol prices trend upwards," said Mr Gorman.

"Ford Australia has long recognised the viability of utilising alternative fuel sources, and we hope that the expansion of our E-Gas range will result in more people considering this option."

The new range of E-Gas vehicles will be available for sale in April.

"E-Gas is only available with automatic transmission."

LPG SALES SOAR IN 2005

Latest sales statistics from Original Equipment and aftermarket manufacturers have confirmed anecdotal evidence pointing to a boom in LPG motoring in 2005.

The latest figures from automotive industry statistician VFACTS show that the number of factory-fitted Autogas vehicles sold in Australia grew to 8281 – an increase of 40 per cent over the previous year.

Holden, which launched a dual-fuel (petrol/Autogas) version of its VZ-model Commodore in the last quarter of 2005, says it is having trouble keeping up with customer demand.

"Our orders have well exceeded our capacity at this stage and we've more than met our sales target," said Holden spokesperson Shayna Welsh.

"The majority of orders have come from business and government fleets; however, demand from private buyers is showing some signs of growth."

Mitsubishi dealers will be hoping to cash in on the boom from this month after an LPG Autogas kit for its new 380 sedan becomes

The latest figures from automotive industry statistician VFACTS show that the number of factory-fitted Autogas vehicles sold in Australia grew to 8281 – an increase of 40 per cent over the previous year.

available. The company says its dealers already hold more than 200 orders for LPG conversions. Ford LPG sales grew by more than one-third last year, prompting the company to expand its range of LPG models (see story on right).

Aftermarket Autogas installations are also booming.

Latest figures collated by LPG Australia show that in 2005 the number of Autogas installations

in Victoria grew to 13,640 – a rise of 103 per cent over the previous year.

Installations in South Australia grew by 33 per cent over the same period to 6144, while Tasmanian installations almost doubled.

"What's striking about the figures when you break them down is that, by far, the greater part of the increases occurred in the second half of the year as petrol price increases began to hurt consumers," said LPG Australia's Industry Development Manager, Phil Westlake.

"Autogas cylinder sales grew by 32.7 per cent to 42,101 last year and most of that also occurred in the second half of the year."

Mr Westlake said the only thing holding back the growth of Autogas vehicle sales was a temporary shortage of some parts for the kits.

"No-one foresaw the growth in demand we've had over the last year and, in some cases, suppliers have been caught a little short, but it's a nice problem for the industry to have!" he said.

DRIVING FOR PERFORMANCE AND FUEL COST SAVING

Newcastle, NSW, motorist

Brendon Black says there's no going back to petrol after purchasing an Autogas-powered motor vehicle.

Mr Black purchased a factory LPG Autogas Ford Falcon last July from an auction house.

Having previously driven Autogas-powered company cars, he was already familiar with many of the benefits of using the alternative fuel.

"Cost savings, doing my part to help reduce pollution, reduced engine wear, less exposure to rapid petrol spikes, car resale value and safety – all contributed to why I chose Autogas and why I strongly recommend it", Mr Black said.

As he travelled extensively between Newcastle on the NSW Central Coast and Canberra, Autogas provided Mr Black with similar performance and reduced fuel costs compared to a petrol-powered vehicle.

"Filling up with low-priced LPG Autogas against an expensive petrol fuel which costs typically double or more has saved me on

average 45 per cent. I'm reaping exceptional savings on fuel costs", he said.

"Having driven over 20,000 kilometres between July

approximately 15 litres per 100 kilometres, averaged over both highway and city driving.

However, on purely highway driving, the Falcon has averaged consumption figures as low as 11.5 litres per 100 kilometres.

LPG Autogas dramatically reduces the build-up of carbon on internal engine

**LPG Autogas advocate
Brendon Black and his
factory Autogas Ford
Falcon which has helped
him reduce fuel costs.**

and December, I have saved over \$1000.

"It's also a huge advantage for motorists like me who want to have greater control and visibility on fuel spending given the rapid changes in petrol prices".

The Falcon's fuel economy with Autogas has returned consumption figures of

components, hence reducing engine wear and enhancing the motor vehicle's reliability.

Additionally, it does not wash the protective lubricant from cylinder walls.

"Filling up with low-priced LPG Autogas has saved me on average 45 per cent. I'm reaping exceptional savings on fuel costs."

"I've noticed that, since I have switched to Autogas, the oil and oil filter are much cleaner at service time", said Mr Black.

"The oil is the same colour as it was when it went in, not a dirty black colour which is often the case with petrol vehicles.

"As for its performance, you can put your foot into it and it just goes. I'm extremely happy and, in practical terms, it's just as good as any equivalent petrol-run vehicle.

"I was also surprised with its availability as people had told me I would have trouble finding outlets offering Autogas.

"I have never had such a problem as there is always a bowser ready and waiting."

AUTOGAS WINS TEST AGAINST PETROL, DIESEL AND HYBRID

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However, the much higher cost of petrol versus Autogas meant the petrol Territory consumed a whopping \$61.85 of fuel.

The Autogas-powered Territory was also cheaper over the distance than a petrol-powered Holden Astra – which used \$34.91 of fuel – and a diesel-engined Volkswagen Golf (\$40.56).

Smith conducted the comparison test in response to public interest in alternatives to petrol-powered

vehicles, following the recent spike in fuel prices.

"With absolutely no sign that petrol prices will come down any time soon, it could be the right time to consider your driving future," says Smith.

Smith says he was not previously a fan of Autogas but has been converted by the new generation of sequential vapour-injection LPG systems.

"The way the dual-fuel Tartarini system fitted to the Territory functions is largely beyond criticism – you can't tell the difference between the vehicle running on petrol and running on Autogas. I would happily drive one for sure."

The Tartarini sequential gas injection system is imported from Italy and distributed in Australia by Victorian Autogas Supplies.

The company's chief executive,

George Peake, says the Tartarini system was tested extensively by his company before going on Australian sale last year.

"We tested four other similar systems before settling on the Tartarini because of its performance, driveability and durability," said Mr Peake.

"Engines fitted with the system produce about the same amount of power as on petrol. In fact an SS Commodore we had fitted with the system actually produces three kilowatts more.

"The reliability has been terrific. We fitted the Tartarini system to a BA Falcon ute and it did 100,000km in six months without missing a beat before it came in for its first service."