

EXPANSION



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News and innovation from LPG Australia

Fuel of the Future



JILL CLOCKS UP HALF A MILLION KMS

Jill Schneider has driven 600,000 kms in her little Mitsubishi Lancer, powered by LPG.

That's more than 20 times around the world and it's never missed a beat. At today's Autogas prices she saved about \$30,000 over 13 years. It's more than enough to pay for her new car – a Mazda 2 which she now wants to convert to LPG.

The Lancer will go to her boyfriend 'to replace his big petrol guzzling sedan so he can now save some money,' she says.

Jill ran up the kilometres of a taxi driving daily from her home in Macedon, 60 km from Melbourne, to Tullamarine where she works for a global logistics

company. The 100km round trip piled on the kms ever since she bought the car new in 1995 and had it converted to run on LPG.

"The Lancer is still running perfectly – I expect it'll go on to reach a million kilometres," she says.

"My dad taught me how to service the car myself change the oil and generally look after it. Once a year I take it to the mechanic but there's been hardly been anything to do apart from brakes and the usual wear and tear."

"I would like a wider range of modern cars to be available, already converted, off the shelf," said Jill.

LPG ACCELERATES IN AUSTRALIA

The number of Australian motorists driving on LPG Autogas has tripled since 2005.

Last year another 125,000 local drivers embraced LPG as a solution to record fuel prices, new figures collected by the industry body LPG Australia show.

When fuel prices peaked last July with petrol averaging \$1.60 per litre, and LPG was about half the price at 68c, drivers sought relief by rushing to convert vehicles to LPG.

The Federal Government gave another boost to the sector in November, doubling the grant for buying a new vehicle factory fitted for LPG to \$2000, the same for private buyers who do aftermarket conversions to LPG.

"We couldn't keep up with demand," said Wagga City Auto Centre manager Howard Holgate.

"We have cleared the backlog and demand's flattened out now that fuel prices have dropped. But the dollar and greenhouse gas savings are still there," he said

Victoria confirmed its position as the nation's LPG capital where an extra 50,000 motorists had moved over to Autogas by the end of January.

There was a 20 per cent increase in Western Australian vehicles changing to LPG, on top of a big 50 per cent jump the previous year. The WA Government has topped up the grant by \$1000 as part of moves to meet greenhouse gas reduction targets.



LPG has among the lowest GHG emissions of all auto fuels. Releasing the conversion figures, LPG Australia industry chief executive, Steve Woodward,

said the residual cost of the conversion could be recouped in months, depending on how far a motorist travels, making LPG a value proposition.

LPG for WESTERN POWER

Western Power, the high profile WA electricity supplier, has chosen 5 LPG powered four cylinder sedans as the best way to cut back on greenhouse gas emissions.

It considered hybrids and small diesel vehicles as well as LPG powered Mitsubishi Lancers after tests in its fleet for an economical car that met the challenge of climate change.

Fleet Controller Keith Lovatt said the company wanted to be green while being conscious of safety and saving money.

The survey also considered other alternative fuels, such as biodiesel as part of the drive for a smaller carbon footprint.

"We looked at small diesels but often you pay a premium price for them and for diesel fuel."

The LPG Lancer uses 8 litres per 100km but has similar CO₂ emissions as the hybrid which consumes 6 litres per 100 km. The cost of the LPG conversion is

equal to the extra Fringe Benefits Tax incurred by the hybrid.

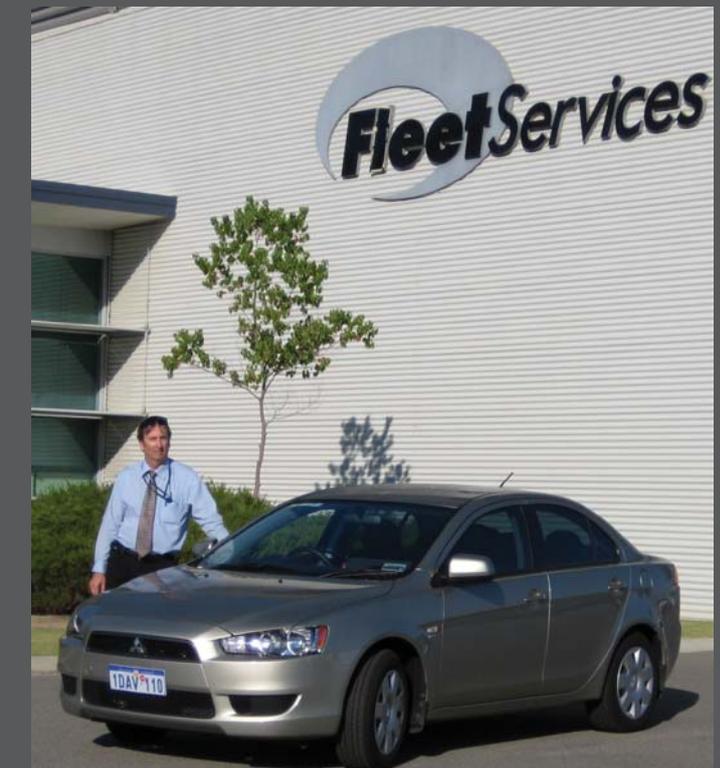
"The first Lancer has already done 3-4,000km with different drivers and we're happy," he said.

Western Power has a fleet of 1800 vehicles and as a member of the Greenhouse Challenge Plus Program, has a policy of implementing vehicle fleet initiatives which improve energy efficiency and use more greenhouse friendly fuel sources. It decided on an LPG 4 cylinder car to meet its targets on emissions, safety and costs.

"So motorists who want to be green have the option of a four cylinder car powered by LPG," said Lovatt.

The Lancer is using a standard IMPCO BRC kit that is available to any consumer that wants to convert a Lancer, which has been a popular model with retail customers.

LPG has been half the price of petrol, even adjusted for its



energy content, but the Lancer's fuel efficiency means that fuel savings will not pay for the LPG conversion in the three year fleet life.

"Drivers of big thirsty V8s used to switch to LPG to cut fuel costs, which paid for the installation.

Now with the rebates the private motorist can get nearly \$4000 back in this State, so they can afford to be green," he said.

"LPG is performing better than it used to. With the vapour injection system, it has done better than expected."

LPG CLEANER AND GREENER



Hillsong College lecturer

John Scott bought a small car to go easier on the planet – and switched from petrol to LPG Autogas to go \$5000 easier on his wallet. In the process he puts out 10% lower greenhouse gas and only one fifth air toxic emissions with LPG.

It was the shock of the price of petrol reaching \$1.70 last year that convinced him to select a Toyota Corolla. At the time LPG was nearly half price and he estimated converting the Corolla to run on Autogas would save him \$5000 in fuel bills during the life of the car, or \$750 per annum.

Broady Automotive Repairs of Hornsby in Sydney's northern suburbs installed the Eurogas vapour injection system supplied

by Australian LPG Warehouse using an Icom Tank. Corolla conversions are commonly done for commercial vehicles (such as delivery and learn to drive cars) doing high enough mileage when hefty fuel bills justify the conversion costs.

The full cost installed was \$4000 installed. Mr Scott half offset this with the Federal Government LPG Vehicle Scheme's \$2000 grant to switch a petrol car to LPG Autogas. (In Western Australia the government tops this up to \$3000).

"I expect the LPG conversion to pay for itself in three years, and for the next 7 years I expect to get half price fuel," he said. "That is a significant

saving over the life of the car, with the environmental benefit of lower emission fuel."

Mr Scott did his sums based on the calculator on the LPG

Autogas website, estimating his travelling distance at about 20,000 kms. "Overall, the changeover has been so far so good – I have not noticed any drop in power," he says.



LPG HYBRIDS OUT IN JULY



Kia's release of a LPG-electric hybrid car shows how world car makers are waking up to the green and clean benefits of Autogas.

The hybrid model Cerato, which does 5.7L / 100kms on a litre of LPG, will go on sale in

Korean in August. It is earmarked for countries with LPG infrastructure – notably China and Australia – and could arrive here next year.

LPG is a popular fuel in Korea – as it is in Australia, where half of our 6,500 petrol stations offer Autogas and the network covers rural areas.

The Cerato employs a hybrid system where a small 15 kW electric motor supports the 1.6 litre Liquefied Petroleum

Injected HEV engine and a continuously variable transmission during motor starts and acceleration.

The LPG hybrid will use new lithium polymer batteries which are smaller, lighter, more robust, longer lasting and more powerful.

Kia's Cerato launch in August follows its parent company Hyundai's Elantra LPG hybrid which goes on sale in July as a world first.

The Hyundai hybrid will be economical, according to Dr. Hyun-Soon Lee, president of the Research and Development

Division that has been working on the hybrid project since 1995.

Estimates are the car will be 40 per cent cheaper to operate than similar models and half that of a conventional petrol Elantra model. As well, the Elantra LPG hybrid emits 90 per cent fewer emissions than a standard petrol powered Elantra.

Buyers can expect to recover the extra cost of the LPG hybrid vehicle in about two years of use.

LPG ECO LINE BADGED HOLDENS ARRIVE



GM Holden dealerships are now receiving their first deliveries of Holden EcoLine LPG badged sedans and utes.

The EcoLine range use an alternative fuel or fuel saving technology and offers consumers affordable solutions to tackle fuel efficiency, highlighting Holden's commitment to a range of energy diverse vehicles.

LPG is available on selected Commodore and Ute models and when combined with the \$2000

government rebate for eligible private buyers, the net cost of an LPG Ute is only \$1400 more than its petrol equivalent and only \$400 more for the LPG sedan.

GM Holden has also announced the launch of an E85 (ethanol) capable vehicle in 2010 and the much-anticipated Volt extended range electric vehicle in 2012. Holden believes the future of the motor car is electric, according to Holden's

Manager Environmental Activities and Strategy Peter Vawdrey,

"Petrol powers 96 per cent of transportation and that's unsustainable" he said.

GM's energy strategy is to displace petroleum through energy efficiency and diversity. LPG Autogas is a very complimentary technology, with serious advantages such as good refueling infrastructure, potential for increased performance and economy - LPG fuels a

Commodore for 40 per cent less than to fill the Corolla with petrol – and Holden

acknowledges LPG is a known commodity, a known technology, which offers fast return on investment in development by car makers.

"The present dual fuel LPG Commodore was developed with a strong focus on reduced running costs, with fuel efficiency and CO₂ as a second priority," he said.

"Going forward, we are seriously looking at LPG and doing some interesting work - We haven't realised the "green" potential of LPG yet."

Vawdrey said Holden wants to change the LPG brand, from what was a "fuel for taxis" to a green alternative that competes strongly with diesels, hybrids, ethanol and anything else out there.



LPG GETS *SPORTY*

LPG at the Melbourne

International Motor Show featured a Supercharged Commodore and a red Mustang GT to prove LPG can deliver power as well as fuel and greenhouse gas savings.

Holden made a splash with a clean green theme, displaying its Ecoline range of LPG models including the dual fuel Commodore Omega.

The spectacular take-up of LPG in the past year – another 125,000 vehicles were converted to Autogas – has boosted scale and traction for the alternative fuel at a significant discount to petrol.

A sign of LPG's steady move into the mainstream was the

Autogas pump on the AFI stand to demonstrate how easy it is to fill up a car with gas.

"It shows filling with gas is different – but not difficult," said Steve Woodward, CEO of LPG Australia.

"With the Government \$2,000 rebate, the high tech LPG system is only \$400 extra in the dual fuel Commodore Omega."

The increasing line up of factory fitted models is increasing LPG's credibility as a clean and green alternative for car manufacturers trying to meet emission and fuel efficiency standards.

Ford has had the lion's share of factory fitted LPG fleet sales, but is being chased by Holden models with the latest sequential LPG vapour injection.

Supplied by IMPCO Technologies, the LPG system is similar to that fitted to the muscle cars, with the VE Commodore R8 upgraded by Walkinshaw to racing specifications and featuring an advanced sequential vapour LPG injection system.

"The aim is to show that

supercharged motors can run on this LPG technology successfully," said IMPCO's general manager John Coggins.

"It is not only the family man's fuel but can be used for sport just as effectively."

Other LPG systems were on show in Melbourne from Alternative Fuel Innovations (AFI) and the Ford stand featured its successful e-Gas series utes and cars.



LPG CAN BOOST LOCAL INDUSTRY

LPG can help rebuild local car manufacturing, according to LPG Australia's industry development officer Phil Westlake.

Against a backdrop of total declining vehicle sales over the last year, LPG vehicle sales have been on the increase.

Ford, Holden and Toyota together sold 21,377 locally produced cars in 2008, another slide as buyers opted for smaller imported vehicles. In 2002 locally built cars represented over 30 per cent of the total Australian passenger vehicle sales. In 2008, local car sales accounted for about 15 per cent.

Bucking these trends, LPG vehicle sales, were up by 3.6 per cent in 2008, mostly due to the sale of Ford's Falcon E-Gas option and supported by Holden's Dual Fuel Commodore. Aftermarket LPG installations have also been on the increase with sales up by 20 per cent in 2008, buoyed by the government grant for private motorists to convert their vehicles.

In November the Prime Minister doubled to \$2000 the grant for a new LPG vehicle, as part of the government's New Car Plan for a Greener Future. It was an incentive to encourage the three local car makers to further develop new LPG fuel-injection

technologies, which lower running costs and can cut carbon dioxide emissions by about 10 per cent and reduce other pollutants. Our big 3 carmakers are interested in these LPG technologies, in which Australia has lagged.

Consumers are accepting green and clean LPG and there is a good service station network. Australia has huge natural reserves of LPG - which has the potential to reduce Australia's dependence on imported oil - and is a large exporter of the gas.

In addition, the Federal Government's recent Green Car Innovation Fund provides even

more incentive to adopt the latest LPG technology to rebuild local car manufacturing and cut our dependence on imports.

