

# EXPANSION

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**Fuel of the Future**

The Federal Government's LPG Vehicle Scheme has spawned LPG industry business growth, resulting in new products such as this lighter, safer and easier to use Autogas dispenser nozzle developed by Philip Treloar.

## LPG VEHICLE SCHEME DRIVES BUSINESS GROWTH

**Businesses specialising in** the development and installation of LPG Autogas equipment are proliferating in the wake of the Federal Government's LPG Vehicle Scheme.

The scheme, which provides a \$2000 tax-free grant for motorists who convert a petrol-powered vehicle to LPG Autogas and \$1000 for a new LPG vehicle purchase, has proven popular with motorists.

Over 88,000 grants totalling \$175 million have been paid since the scheme's introduction.

Increasing demand for LPG conversions peaked following the scheme's announcement and the LPG industry responded by boosting production, supply and training, said LPG Australia industry development manager Phil Westlake.

"Autogas conversion demand has spawned many new small- to-medium businesses specialising in the importation, development and installation

of cutting-edge LPG equipment," said Mr Westlake.

"At the time of the scheme's announcement in August 2006 we conservatively estimated there were 1770 Autogas installation businesses.

"The country now has over 2500, so 730 new LPG-related businesses have been created in 15 months, which is a 40 per cent increase. These businesses now employ 7500 installers which means over 2000 new jobs have been created, the vast majority of which are directly attributable to the LPG Vehicle Scheme."

One business serving the needs of the installation industry is Australian LPG Warehouse in Frankston, Victoria, which is emerging as a key equipment developer and supplier.

The company specialises in developing latest-generation vapour sequential injection technology kits, its director, Michael Morabito, said.

"These systems deliver driveability

virtually identical to petrol power but at half the cost, and also produce lower exhaust emissions," said Mr Morabito.

He said the business commenced one month after the scheme's announcement last year, and was directly attributable to it.

"Our business can be 100 per cent linked to the LPG Vehicle Scheme. We wouldn't have embarked on the venture without the government's support for the industry because, without it, people would simply find our state-of-the art LPG Autogas technology too expensive.

"Our business is also definitely having a flow-on effect onto local hardware suppliers."

Australian LPG Warehouse started distributing complete LPG systems in January 2007 and, while the Victorian market is its mainstay, it has a growing presence in South Australia, Western Australia and New South Wales.

L. G. Equipment, a NSW-based company, specialises in the design

and manufacture of Autogas and industrial LPG refuelling nozzles sold under the GasGuard brand.

GasGuard director Philip Treloar said that although the nozzle and hose dispenser infrastructure in Australia was already very well established, the Scheme had resulted in a rapid increase in the amount of Autogas put through his products and had pushed his business to produce a new and improved interface system that would be appreciated by all Autogas users.

"The Scheme has certainly impacted on our product development program for the existing network," Mr Treloar said.

"The notable continuing growth in the sale of Autogas has further concentrated our efforts to maintain our market share. We do that by investing a lot of time and money in research and development, which allows us to introduce leading products."

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# LPG DELIVERS BIG SAVINGS FOR DIESEL TRUCKS



A & T Clark and Daughters managing director Allan Clark.

## An Australian-developed

LPG Autogas system is helping operators of heavy diesel-powered trucks reduce fuel bills by 20 per cent.

Green Fuel Systems International (GFSI) has developed a system which introduces LPG Autogas into the air intake of diesel engines to improve the diesel combustion process.

GFSI senior engineer Mark Kilburn said the process resulted in a number of efficiencies, including fuel-cost savings, increased torque and horsepower, lower emissions and reduced engine wear.

Mr Kilburn said that even minimal reductions in fuel costs were extremely important for line-haul operators due to the consistently high number of kilometres their trucks travel.

A B-double-configuration truck travelling approximately 250,000 kilometres per year can save between \$18,000 and \$23,000 by using the system, Mr Kilburn claimed.

"We conservatively estimate net fuel cost savings of 10 per cent across all truck applications. However, we have some B-triples running at a 23 to 24 per cent net dollar value saving, and a client running B-doubles at a 27 to 28 per cent net saving over diesel," Mr Kilburn said.

One of GFSI's earliest clients, A & T Clark and Daughters, has been taking advantage of the system's fuel cost savings since 2006.

"It has taken our fuel economy from around 1.5 kilometres per litre, to approximately 1.7 to 1.75

kilometres per litre," said A & T Clark and Daughters managing director Allan Clark.

"That's based on carting 64.5 tonnes the majority of the time, with an engine rated at 580 horsepower.

"At an average of 28,000 kilometres per month, the monthly cost savings per truck have been between \$1500 and \$2000, depending on where we purchased the LPG from."

Mr Kilburn said LPG Autogas had a faster burn rate than diesel, so when it is introduced to the combustion process, it helps diesel burn more efficiently.

"Diesel engines are typically only 75 to 80 per cent efficient, meaning 20 to 25 per cent of

diesel fuel is passed through the exhaust system unburnt," he said.

"LPG assists the diesel fuel combustion process. This results in 20 to 25 per cent higher energy extraction and translates to a roughly similar increase in horsepower and torque."

LPG Australia industry development manager Phil Westlake said diesel fuel emissions included fine particulate matter, toxic chemicals and greenhouse gases.

"Given the enormous distances diesel-fuelled heavy vehicles travel in Australia every year, an LPG Autogas system that reduces the emissions of these vehicles is of huge benefit to the environment and public health," Mr Westlake said.

## LPG VEHICLE SCHEME DRIVES BUSINESS GROWTH

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GasGuard's latest product is a lighter hose and nozzle that vastly improves the refuelling process. It is lighter to hold, easier to activate and offers a unique safety feature that prevents gas leakage.

The new GasGuard nozzles will eventually replace all older GasGuard nozzles, which comprise 99 per cent of the national market.

GasGuard is now also exporting to all major overseas markets,

including Canada, USA, Mexico and Chile, China, India, Sri Lanka, Malaysia, Germany, Italy and the UK. Its gross annual export turnover is \$1.3 million.

Allan Grice, twice winner of the prestigious Bathurst 1000 motor race, became interested in entering the LPG equipment industry after an installer assisting Allan's V8 Ute motor racing ventures informed him of the industry's tremendous potential for growth.

Allan went overseas to research and source components.

"That was actually just before the LPG Vehicle Scheme was announced, which we warmly welcomed anyway," Mr Grice said.

"The announcement certainly reinforced the fact that our decision to get involved in the industry was the correct one and that we were heading in the right direction. Since then our numbers have been up across the board."

Mr Grice's Gold Coast business,

LPGricey Tanks, designs tanks, tank brackets and tank multi-valves in Australia.

It also imports full multi-point sequential conversion kits to suit high-production model vehicles.

"The Scheme has been a huge boost for the industry and has certainly changed things for us. We're progressing our distribution carefully but will eventually be providing attractively priced systems Australia-wide," said Mr Grice.

# LPG AUTOGAS HELPS PUT MORE COPS ON THE BEAT

## The New South Wales Police

Force can afford more officers on the beat thanks to fuel cost savings from using LPG Autogas-powered vehicles, according to its Fleet Management Service director, Keith Simmons.

"By using LPG Autogas-powered vehicles, the NSW Police Force fleet saved over \$1 million in fuel costs in 2006 and simultaneously reduced its greenhouse gas emissions," said Mr Simmons.

"The fuel cost savings are retained at Local Area Commands and are used to fund other police requirements, such as overtime and investigations."

The NSW Police Force has the State government's largest single vehicle fleet.

Every year since 2004, around 500 of the force's fleet vehicles (totalling approximately 3700) have been dedicated LPG-powered E-Gas Ford Falcons and Futuras.

Its LPG-powered vehicle ranks were more recently boosted by the addition of another 82 dual-fuel (petrol- and LPG-powered) sedans – Mitsubishi 380s and Holden VZ and VE Commodores.



Director of NSW Police Force Fleet Management Keith Simmons (left) and Constable Simon Moore with the fleet's latest LPG Autogas vehicles.

It is also trialling dual-fuel Toyota HiLux utes as caged prisoner transport vehicles.

Mr Simmons underlined the NSW Police Force's commitment to reducing greenhouse gas and particulate emissions, explaining that "Autogas has contributed significantly to the achievement of our emissions targets".

"Choosing LPG over petrol equivalent vehicles prevented around 450 tonnes of CO<sub>2</sub> being released into the environment last year," Mr Simmons said.

Constable Simon Moore of Bankstown Local Area Command has been assigned one of the fleet's new dual-fuel Mitsubishi 380s and said he was quite impressed by the car's power.

"I tested both fuels on the first day I used the vehicle and there was no real difference when operating on petrol or gas," Constable Moore said.

"Prior to being a police officer I worked as a mechanic and qualified LPG fitter, so I have played with quite a few LPG vehicles. The 380's LPG power delivery is impressive."

# NRMA MOTORS INTO LPG AUTOGAS

## NRMA Motoring & Services,

one of the country's largest private vehicle fleets, aims to convert 95 per cent of its Roadside Assistance vehicles to run on cost-efficient and clean-burning LPG Autogas by 2008.

By doing so, the NRMA estimates it will save over \$1 million in annual fuel costs and simultaneously reduce the greenhouse gas emissions of every LPG-converted vehicle by 15 per cent, amounting to 406 tonnes of CO<sub>2</sub> over the past year.

NRMA logistics manager Sam Caruana said the NRMA trialled dedicated E-Gas Ford Falcons in early 2005 and has most recently introduced 90 dual-fuel Toyota HiLux utes to its fleet.

Impco Fuel Systems performed the HiLux LPG conversions for the NRMA, fitting its BRC Sequential Injection system to the vehicles.

Impco dealer development manager Brett Smith says the BRC Sequential Injection system uses the latest-generation LPG kit technology and offers performance indistinguishable from that of petrol-powered engines.

"Our system replicates the HiLux's normal operating conditions, so it drives as a petrol-powered version would," said Mr Smith.

"Autogas affords significant



NRMA logistics manager Sam Caruana.

savings over petrol, despite consumption being 20 to 25 per cent higher to match distances achieved with petrol.

"Yesterday, unleaded petrol cost \$1.30 per litre, but I filled up for 60 cents per litre using Autogas. That's a saving of 70 cents per litre, including the higher consumption factor."

Sam Caruana said the NRMA had already accrued some impressive savings by using Autogas.

"We conservatively estimate Autogas fuel cost savings will exceed \$1 million in the 2006-07 financial year and we're expecting that figure to increase," Mr Caruana said.

LPG Australia industry development manager

Phil Westlake said he was impressed by the NRMA's Autogas uptake.

"The NRMA is about to achieve virtually full LPG penetration and has embraced the bountiful economic and environmental benefits Autogas readily provides," Mr Westlake said.

# MOTORIST SAVES WITH LPG ON OUTBACK TREK

A Toyota LandCruiser owner recently reaped the benefits of using LPG Autogas fuel on an 11,000-kilometre return trip from Queensland to Western Australia, saving \$1000 in the process.

Motorist Lou Puls had his 4.7-litre petrol V8 Toyota LandCruiser converted to optionally run on low-cost, low-emission LPG Autogas before embarking on a return journey from Clermont in Qld to Geraldton in WA.

"I took my family of four on a touring holiday from central Queensland to my home town of Geraldton, driving across the Nullarbor and through Perth," Mr Puls said.

"We saved over \$1000 in fuel costs on the trip, which is impressive considering the 'Cruiser is a heavy vehicle and that we towed a one-tonne camper trailer and all our gear along the way."

Mr Puls said he took meticulous fuel records during the 11,290km journey and was pleasantly surprised by the overall results.

"At the end of the trip I averaged out the fuel cost savings, factoring in a 20 per cent higher fuel consumption difference over petrol, and found we had saved \$1046 by using LPG."

Mr Puls said he saved over \$30 per tank on several occasions during the trip by refuelling with Autogas rather than unleaded petrol, including \$45.87 at Broken



Motorist Lou Puls saved over \$1000 on a Qld to WA return trip by converting his petrol V8 Toyota LandCruiser to run on LPG Autogas.

Hill, \$44.59 at Port Augusta and \$44.26 at Bendigo.

An early adopter of LPG technology, Mr Puls said he had his LandCruiser converted before the Federal Government introduced its \$2000 rebate for private motorists as part of the LPG Vehicle Scheme.

"We didn't get a cent back from either the Federal or WA State governments, but the conversion

has still paid off for us," he said. He estimated that he will have saved \$14,500 in fuel costs by the time his LandCruiser has driven 157,000 kilometres on LPG.

Phil Westlake, industry development manager for LPG Australia, said that first-time LPG motorists are often surprised by the ready availability of Autogas fuel on long journeys.

"Autogas infrastructure has

proliferated in recent years and nearly half of the nation's 3200 Autogas outlets are located in country areas," Mr Westlake said.

Mr Puls said he had no need to use the LandCruiser's petrol capability, even on the most remote legs of his cross-country trek.

"There was only one outback town we couldn't get gas from, and that was because the only service station was shut."

## INDUSTRY DEVELOPMENT PROGRAM GETS RESULTS

Mitsubishi Motors Australia Ltd has launched a factory-backed LPG Autogas option for its new 380 Series III sedan. It joins Ford and Holden as the third Australian manufacturer to provide a factory-endorsed LPG-powered large sedan.

Mitsubishi Motors president and CEO Robert McEniry said the move marked an unsurpassed commitment to LPG Autogas technology by the company.

"The new 380 Series III LPG system is a fully endorsed and approved factory option," said Mr McEniry.

"The engine is completely covered by Mitsubishi's 10-year new car warranty."

The 380 Series III retains the unleaded petrol fuel system and additionally provides an Impco BRC Sequent 56 LPG system as a \$4050 option.

Mitsubishi Motors product and project manager James Tol said the 380 Series III's 175kW engine was uniquely developed to suit LPG. The Sequent 56 LPG system was co-developed between Impco and Mitsubishi.

"The Sequent 56 LPG system features the latest refinements in fuel vapour injection technology and allows us to deliver fuel cost savings and environmental benefits without any loss in peak power," said Mr Tol.



Impco Technologies general manager John Coggins said the BRC Sequent 56 system embodied Impco's commitment to developing sustainable platforms for the OEM industry.

"It's truly cutting-edge," said Mr Coggins. "It provides optimum

performance and reliability in an affordable, highly integrated package."

LPG Australia industry development manager Phil Westlake welcomed LPG's inclusion in yet another Australian-built large car.

"Selling for around half the price of petrol, Autogas is an environmentally responsible way for families and businesses to make easy savings at the bowser," said Mr Westlake.

Private motorists qualify for a \$2000 Federal Government rebate after purchasing a new LPG-equipped 380 Series III, under the LPG Vehicle Scheme.