



# Heavy duty trucks hit the road with CNG

Since *Gas Today* first reported on iGas Energy's compressed natural gas system, iGas-equipped trucks have taken to Queensland's highways, undergoing in-service demonstration and reliability trials. What's more – an iGas equipped truck is about to commence similar trials between the Port of Los Angeles and Salt Lake City in Utah, the United States.

The iGas system allows for CNG to be used in place of diesel to fuel large highway trucks as well as off-road machinery such as mining equipment and rail locomotives. iGas Founder and Managing Director Paul Whiteman says that the technology is now in the early stages of commercialisation.

Australian Power and Gas, and APA Group, assisted iGas in installing a temporary gas supply at the Brisbane Truck Centre. This enabled iGas to connect a gas transfer system and refuel its two existing demonstration trucks.

"We commissioned that facility in February," says Mr Whiteman. "When we move to the next phase of ten or more trucks we will require additional and larger

high-pressure facilities. We have had discussions with the Port of Brisbane and others as to where that might be sited."

Currently, iGas has a prime mover fitted with its CNG technology in Simon Transport's fleet. The truck has been delivering approximately 20 tonnes of large-diameter water pipe from Wacol, Brisbane, to a site near Dalby for a CSG project.

Mr Whiteman says that transport fuel represents a huge market for the natural gas industry.

"Each truck in highway service running about 250,000 km per year consumes about 6 terajoules per annum. Our target market in eastern Australia is about 25,000 trucks – they use well over 120 petajoules per annum, around the same quantity

presently consumed in the New South Wales and Australian Capital Territory gas markets combined. We will not get them all, but it is a large untapped market for natural gas," he says.

### iGas' expansion to North America

After reading about iGas' technology in an article that appeared in the November 2010 edition of *Gas Today* and was re-printed in the US, a Salt Lake City-based trucking company, Carbon Cutter Transport, contacted iGas in late 2011.

"One of the principals is new to trucking, but has a gas vehicle background, having recently sold a business to Impco

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An iGas-equipped truck delivering linepipe for a CSG project in Queensland.



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Technologies Inc., a world leader in gas engine technology," explains Mr Whiteman. "He believes the conversion of US highway trucks to gas is both a national imperative and a business opportunity.

"He and his business partner flew to Australia and asked us to provide him with an iGas system for one of his trucks. We have built a fuel pack for them, and they will soon have a truck running between their base in Salt Lake City, Utah, and the Port of Los Angeles as the first iGas demonstrator in the US."

Mr Whiteman says that iGas also gained knowledge from the exchange.

"We learnt of the rapid ramp-up of CNG availability at service stations in the US. We also learnt of the determination of the Obama administration to establish natural gas as a transport fuel to reduce America's dependence on imported liquid fuels, and of the rapid build-up of shale gas production.

"There are over 6 million heavy-duty highway trucks in the US. It is a huge market for us, with Federal and state cash and tax incentives for conversion to natural gas now becoming available as the American economy rebuilds."

**CNG's time to shine as a transport fuel**

Mr Whiteman says there are a number of reasons why this industry is currently ready to take off in Australia.

"First and foremost, Westport has developed the Westport HD engine that runs on 95 per cent CNG directly injected into the combustion chambers of the engine.

"Second, carbon fibre-wound composite cylinders, which were developed for the space program, are now produced for commercial application: they are light-weight and extremely strong, able to contain gas at the 300 barg injection pressures required by the diesel-cycle engine.

"Third, crude oil prices have settled above \$A100 per barrel resulting in diesel prices above \$A35 per gigajoule. This price permits the additional capital requirements of a gas-fuelled engine including the provision of the fuel pack and refuelling facilities to be amortised within



An iGas-equipped truck.

*"Fifth and finally, we at iGas Energy have developed a CNG delivery system for the Westport HD engine that works, is reliable, fits on the truck, is not too expensive, and can deliver savings to the truck owner."*

*- Paul Whiteman,  
Founder, iGAS*

it, and provide a financial incentive to the truck owner to change to gas, provided a large enough market can be developed.

"Fourth, CSG and now shale gas reserves are proving to be immense, ensuring abundant competitive wellhead gas can be available, particularly here and in North America, while the cost of imported liquid fuels and energy security are becoming major political issues.

"Fifth and finally, we at iGas Energy have developed a CNG delivery system for the Westport HD engine that works, is reliable, fits on the truck, is not too expensive, and can deliver savings to the truck owner." ■

To read the extended version of this interview, visit [www.gastoday.com.au](http://www.gastoday.com.au)  
For more information on iGas' CNG technology, visit [www.igasenergy.com](http://www.igasenergy.com)



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