

# evolving

## Official opening of Western Australian LNG plant



**Wesfarmers Energy celebrated the official opening of its 175 tonne-per-day liquefied natural gas (LNG) plant in Kwinana WA on 30 April 2009, with a ceremony attended by the Hon Peter Collier, Western Australian Minister for Energy, the Hon Gary Gray, Member for Brand and Wesfarmers Limited Managing Director, Mr Richard Goyder.**

The construction of the new LNG production facilities and downstream infrastructure has expanded the availability of LNG in WA as a diesel alternative fuel for heavy-duty vehicles (HDVs) and for industrial gas and remote power generation markets.

Wesfarmers Energy Managing Director, Tim Bult said "LNG should become an essential fuel within the overall energy mix in Australia and would play a key role in reducing carbon pollution emissions."

"Recent Australian Government sponsored testing of an ADR80/02 15-Litre engine, showed that it produced 25 per cent less greenhouse gas emissions (CO<sub>2</sub>-e) than the equivalent diesel engine," Mr Bult said.

"Air quality is also improved through the use of LNG fuel, with a significant reduction in harmful particulate matter (PM) and nitrous oxide emissions."

The \$137 million project is the result of persistent effort and innovation during a development period that extended several years. The project, commissioned in September 2008 was delivered virtually on budget, but was delayed due to the Varanus Island incident.

"Early work involved establishing a pilot plant, commercial customer trials and working with industry to help adapt heavy vehicle engine technology to suit Australian standards and conditions," Mr Bult said.

The plant currently supports approximately 130 heavy-duty vehicles, a significant road tanker distribution fleet, two remote power stations with onsite LNG storage and a large industrial customer. With capacity to expand, EVOL LNG is well placed to deliver cheaper operating costs and environmental benefits to numerous industries as demand increases.

### New Starter

Mark Lindup has recently joined EVOL LNG as the Key Account Manager (WA). Mark joined Pioneer Construction Materials as a graduate trainee and spent the next seven years progressing through a wide variety of operational, sales, development and support roles in the company.

In 2004, Mark took up a production based role with Boral Construction Materials that quickly expanded to include contract management, plant development and systems implementation. In 2006, Mark became the Distribution Manager for Boral Concrete, a challenging experience that he draws on today when he interacts with potential EVOL LNG customers.

"Having to manage 80+ trucks, each carrying a product with a shelf life of one hour, certainly tests your organisational skills," said Mark.

"The nature of the transport industry has changed significantly over the last five years, with today's consumer not only wanting their freight delivered on-time at the best possible price, but they also want it delivered using the most environmentally responsible method available."



# EVOL LNG Public Debut at the ATA National Convention

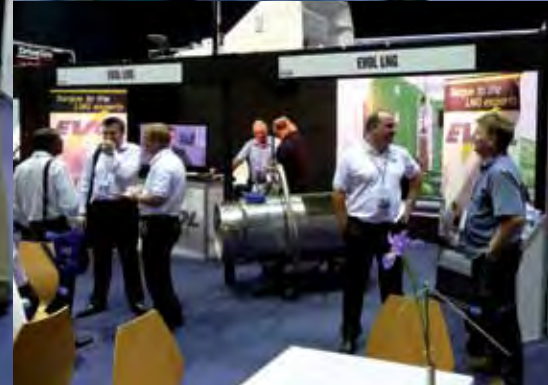
Truck Industry Council CEO Tony McMullan

The Australian Trucking Association National Convention is an important event on the transport industry calendar. This year was even more special as the ATA celebrated its 20th anniversary at the Gold Coast Convention Centre.

EVOL LNG made its inaugural public appearance at the 2009 Convention, debuting its interactive display booth featuring a cutaway LNG fuel tank complete with "JC Carter type" refueller coupling and hose.

Delegates and visitors were invited to don the sample face shield and protective gloves and see for themselves how easy it is to refuel an LNG truck.

Following the success of this display booth debut, EVOL LNG will make several appearances at truck shows and conferences throughout 2009 with similar displays.



Trevor Martyn, ATA Chairman finds out how easy LNG refuelling can be!

## All Gassed Up

**Kenworth Australia's service technicians recently completed a two week LNG course in Melbourne's West through the South West Institute of TAFE based in Warrnambool, Victoria.**

The students from Kenworth Australia



The first week was held at Kenworth's own branch in Derrimut, while the second week was hosted at the Ocean Engineering Systems registered workshops in Hoppers Crossing.

Craig Stannard of Kleenheat Gas and EVOL LNG's own Peter Powell provided the course attendees with a detailed overview of the EVOL LNG refuelling facility at Deer Park, and demonstrated the product filling process.

The Murray Goulburn Co-operative kindly loaned a truck from Koroit to demonstrate the installation. SW TAFE also provided their own training vehicle, an Isuzu NPR 400 CNG which has been converted to operate from either the original CNG tanks or an enclosed LNG tank. This vehicle allowed easy access to on-board fuel systems and plumbing for the students.

Other highlights included guest speakers from:

- Locktite Australia, informing on the correct use of sealers and primers for LNG systems;
- Swagelok, providing a "hands on" pipe bending and thread identification session; and
- OES CNG to present an overview of the company, and their goals for the Natural Gas Vehicle Industry.

Ross Johnstone of SW TAFE was impressed by the endeavour shown by the course participants.

"The course was excellent due to the hunger to learn of all concerned, and the willing participation of all the suppliers", said Mr Johnstone.

# Brisbane Truck Show 2009: It's a Gas

Wesfarmers LNG was proud to exhibit it's EVOL LNG branded product at this year's Brisbane Truck & Machinery Show.

The interest in natural gas vehicles by the trucking industry and general public was very strong, with the cutaway LNG fuel tank and refuelling hose in EVOL LNG's booth attracting plenty of attention.



Tony Monahan of Toll IPEC with EVOL LNG's Brad Lawson and Simon Humphries

Significantly, no less than four OEMs had factory built natural gas vehicles on display.



Mack

**Mack** — Gained much attention with an 8x4 Granite Concrete Agitator sporting a psychedelic "Hippy" livery for Boral. This truck is powered by a Cummins-Westport 8.9 Litre ISL G 300HP natural gas engine, which complies with the latest US EPA 2010 emissions standards, which are

the toughest exhaust emissions standards in the world at present (next step beyond Euro5 or ADR80/03).

**Iveco** — Displayed its first factory built natural gas ACCO vehicle. The rubbish collection unit powered by a Cummins-Westport 8.3G natural gas 280HP



Isuzu

engine is the first of a fleet of 20 vehicles that SITA Environmental will put into operation in Adelaide.

**Kenworth** — had it's K608 innovation truck and a K908 Road Train prime mover, both fitted with the Westport GX 15-L High Pressure Direct Injection (HPDI) LNG system on display.

**Isuzu** — Displayed two Toll Ipec branded trucks powered by Isuzu's own natural gas 4 and 6 cylinder spark ignition engines.

*The growing interest in natural gas compliments EVOL LNG's plans to expand the supply of LNG across Australia.*



Iveco



Kenworth

## Kenworth and Kalari Pioneer a New Era for Road Transport

Leading Australian truck manufacturer, Kenworth, a division of PACCAR Australia Pty Ltd, is pioneering road transport's environmentally-sustainable future with the handover today of the first Australian-engineered and manufactured LNG-fuelled prime mover.

The technologically advanced Kenworth K108 is the first customer ordered LNG-fuelled prime mover to be built at Kenworth's Bayswater production facility in Victoria. The prime mover will go into service hauling a 68 tonne GCM B-Double curtainsider with one of Australia's most innovative and dynamic freight logistics companies, Kalari Pty Ltd.



Kalari, part of the global Swire Group, is proud to announce the launch of Australia's first custom built prime mover with an LNG fuel system. Kalari is continually adopting new technology and business processes to ensure it can gain environmental, efficiency and cost advantages.

"We recognise that the nature of the transport industry is changing," Managing Director Greg Stevenson said. "Amid a context of increasing concerns about climate change, volatile fuel pricing and a potential Emission Trading Scheme, Kalari knows that we must rethink how we consume resources.

"To prosper in the years to come, improving our emissions intensity is crucial, and this vehicle is an exciting step towards realising this goal," said Greg.

With 250 trucks operating across all mainland states of Australia, Kalari travels about 600,000 kilometres a week.

The company estimated that in 2008 it consumed 18 million litres of diesel fuel.

The LNG-fuelled Kenworth K108 has the potential to reduce greenhouse gas emissions by 20-25% relative to diesel engines, without sacrificing power or torque output.

Darren Whyte, Kalari Pty Ltd's General Manager of Fleet, highlighted Kenworth and Kalari's close association, saying the handover of the first production-built LNG Kenworth wasn't just an important milestone for both companies, but a significant development for the entire Australian road transport industry.

"We employ the latest technology and methods so that we can improve our fuel efficiency and reduce our impact on the environment, including reducing greenhouse gases."

EVOL LNG fuels the new Kalari prime mover with its refuellers at Deer Park, west of Melbourne.

## EVOL LNG exhibit at perth truck and trailer show

**EVOL LNG, Kleenheat Gas' LNG brand, promoted the benefits of LNG at this year's Perth Truck and Trailer Show, with a stand that featured an interactive demonstration of the latest LNG refuelling technology.**

The EVOL LNG stand provided general information on LNG and highlighted the cost and environmental benefits of using LNG as a diesel alternative in heavy vehicles.

Kleenheat Gas has supplied LNG to Australian heavy vehicles since 2002; nearly 200 vehicles nationwide operate on EVOL LNG, the majority of which are located in Western Australia.

EVOL LNG Manager, Brad Lowson and the sales team were on hand to field enquiries and demonstrate the refuelling process.

Recent developments in the heavy vehicle transport industry in Australia will assist in the uptake of alternative fuels such as LNG.

"In past weeks, no less than four truck manufacturers have announced plans to

release gas-powered vehicles this year," Brad said.

"The wider availability of factory-backed trucks that can operate on either LNG or CNG (Compressed Natural Gas) will certainly spark greater interest in this alternative fuel.

"This, combined with expanding refuelling infrastructure, a greater environmental awareness on the part of fleet operators and rising diesel prices, will tempt many operators to trial LNG technology."

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