Efficient Transport
reducing emissions while maintaining mobility

Wednesday 12th November, 5:00pm – 6:30pm
VicRoads Theatrette, 60 Denmark Street, Kew

Our speakers tonight are...

Bruce Thompson  Chief Executive, Advanced Fuels Technology Pty Ltd.
President, Alternative Fuels Association

Chris de Gruyter  Transport Planner, Maunsell Australia Pty Ltd.
Recipient, 2007 Janet Brash Memorial Scholarship
Advanced Fuels staff members sit on Standards Australia committees and are Board members of International Natural Gas Vehicles Associations. We are either members of, or have certification from the following institutions:
Car Conversion Technology & Installation

Advanced Fuels have installed & prototyped a range of vehicles, as there is a strong interest in operating these vehicles on Natural Gas.

The Australian CNG Bus Market - OEM Products

Mercedes

Scania

MAN
Dual Fuel Technology for:
1. Caterpillar C-12 (410HP) &
2. Caterpillar C-15 (500HP)
Approx 200 in service in Australia

Westport HPDI Technology for the Cummins ISX Engine 485 – 550HP
8 vehicles in service and are undergoing evaluation from October 2007 to July 2008
‘Australian Rigid NGVs’
Dedicated NGVs using the Cummins Westport CGasPlus engine. (250-280 HP)
Available in Iveco, Mack, Kenworth & Stirling trucks.

2008 Isuzu NLR standard cab CNG-MPI model
Available in Australia for orders greater than 40 vehicles
‘Australian Rigid NGVs’
Dedicated NGVs Re-engineered by AEC Limited

Development of NGV Technology for SE Asia

Development of Gaseous Fuels Conversion Technology for application in South East Asian Markets is integral to our future.
Training & Consultancy

We are registered Training Provider by Automotive Training Australia as well as a 'Vicroads Approved' Training Service Provider. Courses that we offer include:

- Licensed Vehicle Testers Inspection Courses for Alternative Fuels
- CNG Mechanics Installation and CNG Service & Maintenance
- LNG Mechanics Installation and LNG Service & Maintenance
- Natural Gas Vehicle Driver Training & Gas Workshop Design

Forklift Conversion Technology & Installation

We have established relationships with Original Equipment Manufacturers of forklifts, as there is a strong interest in operating these vehicles on Natural Gas.
Natural Gas Vehicle Storage Solutions

Advanced Fuels imports CNG cylinders from around the globe and has existing relationships with the major manufacturers. We are the exclusive Australian Distributor for Ullit Type 4 cylinders from France and Inflex Type 1 Cylinders from Argentina. Furthermore, we develop and package individual storage solutions in order to meet the demanding needs of the Australian transport market.

**Natural Gas – Australia’s Natural Fuel**

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<th>Natural Gas</th>
<th>Crude Oil</th>
<th>LPG</th>
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<tbody>
<tr>
<td><strong>Reserves (PJ)</strong></td>
<td>50,000 - 100,000</td>
<td>12,000 - 24,000</td>
<td>3,000</td>
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<tr>
<td><strong>Net Annual Demand (PJ)</strong></td>
<td>1,700</td>
<td>1,800</td>
<td>100</td>
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<tr>
<td><strong>Supply (Years)</strong></td>
<td>25 - 50</td>
<td>7 - 14</td>
<td>30</td>
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Australia Currently:
Exports in the order of 40% of our Natural Gas Production
Imports approx 40-50% of Crude Oil to meet its needs

**That is - we export a lower economic value indigenous fuel (Nat Gas) and import a higher economic value fuel (Crude Oil)**
Australia's Major Pipeline System as at 2007

Micro CNG Station developer 1 – 3m3/hour
Public CNG Stations

Advanced Fuels Technology Pty Ltd

Advanced Fuels Technology
Head Office
15 Garden Drive
Tullamarine
VIC 3043
AUSTRALIA
Phone: +61 (0)3 9338 1722
Fax: +61 (0)3 9338 1599
Email: advancedfuels@advancedfuels.com.au
Web: www.advancedfuels.com.au
Investigating approaches to TDM in The Netherlands, UK and other parts of Europe

AITPM Janet Brash Memorial Scholarship

Chris De Gruyter
12 November 2008

What is the scholarship about?

• Scholarship opportunity created to honour the memory of Janet Brash who was one of AITPM’s strongest and most active members

• The aim of the scholarship is to further knowledge in the transport profession and to transfer this knowledge to members of AITPM

• My application was supported by Maunsell and was used to meet with Travel Demand Management (TDM) representatives in The Netherlands and to attend the European Conference on Mobility Management (ECOMM) in London
What is Travel Demand Management (TDM)?

Overarching framework for initiatives designed to better manage the demand for travel. TDM initiatives can be grouped into:

- **Improved asset utilisation** – carpooling, transit lanes, park and ride schemes

- **Traffic restraint** – link limitations, capacity reductions, priority to other transport modes such as public transport, better signal timing

- **Pricing** – parking restrictions, fuel taxes, road and cordon pricing

- **Urban and social changes** – land use changes, increased density, transit-oriented development, travel behaviour change programs

TDM generally excludes the provision of major infrastructure and is about moving from the more traditional predict and provide approach, to one about managing existing resources better.
Mobility Management Policy in The Netherlands

- Focus on shifting ownership of Mobility Management issues towards mobility generators (such as employers)
- Mobility Management still undertaken on voluntary basis, although legislation for this has been prepared and can be implemented if required
Mobility Management for road works on A4/A10

Spitsmijden (avoid the peak hour) initiative

- Trial targeted 350 motorists that regularly travel by private vehicle between the towns of Zoetermeer and The Hague
- Participants rewarded with up to €7.00 for each trip they avoided by private vehicle during the AM Peak (7:30am-9:30am)
- Trial lasted for 10 weeks and saw a 50 percent shift in travel behaviour (e.g. changing to public transport, travelling outside of the peak, etc)
- Enforcement of the initiative was undertaken using an extensive network of cameras located on all roads heading out of the town of Zoetermeer
- Project partners included both private and public
Vervoer Coördinatie Centrum (VCC) Rijnmond

- TMA operating in Rotterdam (7 staff)
- Traditionally received government funding, but over the last 1-2 years has being solely commercial-based (employers pay annual membership fees)
- Employers only pay membership fees if TMA achieves its target results (i.e. reduction in single occupancy vehicle trips of X percent)
- Implies that sufficient changes in travel behaviour can be achieved confidently

Mobility Management at Rabobank

- Largest bank in The Netherlands (over 70,000 employees across the country)
- €0.19/km reimbursement offered to Dutch employees driving to work was abolished, but all public transport costs for staff were covered
- Currently developing ‘remote-working’ facilities in each of branch so that staff can work closer to their home - expected to have an impact on reducing trip distances to work
- Rabobank are a funding partner for the Spitsmijden initiative
• ECOMM involved TDM representatives from all over Europe
• Focus on Workplace Travel Plans

Bankside Business Improvement District (BID)

• BIDs involve businesses working with governments to fund improvements to an area’s public realm and trading environment

• Bankside BID involved an area-wide travel plan to increase walking and cycling (as opposed to encouraging public transport)

• Less than 5% of staff drive to work

• Some initiatives to date have included 50 new cycling parking stands, events on bike servicing and security, guided walks, and the development of online tools showing walking routes
Mobility Management in Budapest, Hungary

• One traffic lane on a main bridge in Budapest was changed for cycling only during the weekends – big political decision

• Increase from 484 cyclists per hour (before) to 592 cyclists per hour (after) – 22% increase

• Small initiative, but significant for Budapest as political decisions are beginning to be made in the area of Mobility Management

Overall conclusions from the trip

• Approaches to TDM are not entirely different from Australia, particularly with respect to workplace travel planning

• In some ways, Australia is more advanced (i.e. TravelSmart Communities)

• TDM is undertaken on a much larger scale in Europe and UK – may be due to higher population densities, greater levels of congestion, relevant legislation, greater political will, etc.