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Mr Neil Wong
Project Director
Smart Transport for a Growing Nation Project
National Transport Commission

Via email: enquiries@ntc.gov.au and nwong@ntc.gov.au

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LPG AUSTRALIA

SUBMISSION TO THE NATIONAL TRANSPORT COMMISSION

Exploring the opportunities for reform discussion paper

Dear Mr Wong

LPG Australia appreciates the opportunity to make a submission in response to the National Transport *Exploring the Opportunities for Reform* discussion paper.

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distinct ways:

a. As a stationary energy source, it is the gaseous fuel used by domestic, commercial and industrial customers in the many parts of Australia or applications where natural gas is unavailable; and.

b. As an automotive fuel (Autogas), LPG provides a clean, economical fuel for some 700,000 light vehicles

LPG Australia is the national peak body which represents the LPG industry the participants in the LPG supply chain, LPG marketers and equipment manufacturers, and the providers of services to it. LPG Australia is responsible for the development and growth of the LPG industry
Australian community.

LPG Australia has over 150 members including some of Australia largest energy companies such as Origin Energy, Elgas Ltd and Wesfarmers Kleenheat Gas. Small to medium size manufacturers and technology companies are also well represented in our membership base.

LPG Australia has an ongoing working relationship with the National Transport Commission in respect to the safe transport of dangerous goods.

per cent of the LPG consumed in Australia. In particular, it will highlight how increased Autogas use can help address some of the key , including climate change, energy security, air pollution and social exclusion, that were identified in the *Exploring the Opportunities for Reform* discussion paper.

Combating climate change

LPG powered vehicles emit significantly less greenhouse gas (GHG) emissions than equivalent petrol powered vehicles. For example, the LPG powered Ford Falcon EcoLPi released in September 2011 produces 14 per cent less grams of carbon dioxide equivalent per kilometre travelled (203 gm CO2-e/km) than its petrol equivalent (236 gm CO2-e/km).

In addition, around 80 per cent of the LPG produced in Australia is sourced from natural gas fields, which has a lower GHG intensity (0.186 kilogram CO2-e per kilogram of LPG produced) than LPG produced in refineries (0.364 kg CO2-e/kg of LPG produced). Moreover, industry forecasts suggest the production of LPG from natural gas fields in Australia could double over the next ten years as a number of major natural gas developments come on stream. As a result, increased Autogas use could make a substantial contribution to the Australian transport

In 2010, LPG Australia commissioned research by Rare Consulting which showed the use of LPG instead of unleaded petrol in passenger vehicles in Australia could decrease GHG emissions by such vehicles by 13 per cent. This research, which could assist the Commission ther passenger vehicle fuels. A copy of the research can be found at:

http://lpgaustralia.com.au/site/library.php?task=detail&type=0004&id=0053

Improving energy security

Not only is Australia completely self-sufficient in LPG but it is also
exports of LPG totalled 859 kilotonnes, which reflects 2,737 kilotonnes of local production, from both natural gas fields and refineries, well exceeding total domestic demand of 1,806 kilotonnes.

In addition to natural gas field processing facilities and refineries to produce LPG, Australia also possesses well established infrastructure for the storage and distribution of LPG. In particular, there are over 3,200 Autogas refuelling stations across the nation.
to be reliably supplied to Australian consumers.

LPG is also very affordable. On average over time, Autogas costs up to 50 per cent less at the bowser than petrol.

The above factors demonstrate that increased Autogas use in Australia could offset the likely decline in 2009 National Energy Security Assessment as a result of issues such as:

a. a greater reliance on longer global supply chains;

b. a likely trend to high average crude oil prices and a greater global reliance on unconventional oil;

c. the significant investment challenge required to meet rising global demand; and

d. the continued risks of geopolitical uncertainty in key production centres.

Reducing air pollution

emissions and other pollutants than petrol-powered equivalents. In particular, LPG has two physical properties that are particularly relevant to its local air quality (LAQ) footprint:

a. while there is a degree of natural variation in its composition, LPG has a comparably high heating value, meaning it contains more energy per kilogram than most competing fuels; and

b. profile than most other fossil fuels.

In one of the most comprehensive studies of its kind, the European Emissions Test Programme (EETP) study, which was sponsored by governments and energy companies and conducted by four testing laboratories, directly compared LPG, petrol and diesel automotive emissions. Through well-to-wheel analysis, in 2004 the EETP study showed LPG to be:

a. clearly lower than petrol and diesel on nitrous oxides;

b. essentially equivalent to petrol and well below diesel on particulate matter; and

c. just below petrol yet well above diesel on hydrocarbons.

For carbon monoxide, LPG came out higher than petrol and both were significantly higher than diesel. On emissions of so- ydes, benzene, toluene, xylenes, polyaromatic hydrocarbons and so on), LPG nearly always generated lower

More information about the EETP study and other similar studies is provided in a 2009 study by Atlantic A copy of the Study can be found at:

http://lpgaustralia.com.au/site/library.php?task=detail&type=0002&id=0027

Preventing social exclusion

The affordability of Autogas, discussed above in relation to energy security, is especially important for disadvantaged groups living in urban fringes and regional areas where public transport coverage is often poor and access to affordable private transport is critical to preventing social exclusion. In addition, second-hand vehicles, which are much more affordable for such groups than new vehicles, have often been previously converted to run on LPG or can be readily converted to do so.

The affordability of Autogas also helps prevent the social exclusion of other Australians on low incomes such as the elderly and people with disabilities who rely on taxis, the majority of which run on LPG, for mobility.

Helping meet Australia's transport system's key challenges

Australia has the supply, infrastructure, technology and vehicles available for increased and widespread market uptake in the short term without prohibitively high infrastructure and user costs. This is especially so given the readily available capability to retrofit petrol vehicles to run on LPG. In addition, a widely available and skilled service workforce to support an increased uptake of LPG vehicles already exists.

uniquely placed to quickly t
climate change, improve energy security, reduce air pollution and prevent social exclusion.

Indeed, the release of dedicated LPG Ford and recently announced GMH vehicles represents a significant and industry. New Australian developed factory fitted LPG systems deliver better performance than their petrol equivalents with up to 16% less CO2 emissions. The new LPG systems include vapour and liquid injection technologies which now, more than ever, match and more often surpass the power and drivability of petrol systems, as well as extend vehicle maintenance schedules. The

computer systems which maintain optimal engine tuning, improving performance and further reducing emissions.

The entry of new LPG vehicles and technology into the Australian market presents an opportunity for governments and industry to work closely together to remove a range of entry barriers which impose additional flow-on costs to consumers and restrict the uptake of new advanced LPG technologies in Australia. These barriers include:

a. Autogas

b. slowness to update Australian Standards applicable to the Autogas sector (eg, LPG fuel Standards) to take account of new LPG technologies; and

c. lack of public awareness about the value and benefits of advanced Autogas technologies, including improved vehicle performance and lower emissions of CO2 and air pollutants.

In 2010, LPG Australia commissioned research by Rare Consulting on the prospects for LPG as a light duty vehicle fuel in Australia to 2030. This research conc
competitors out to 2025 and that improved LPG technology is the key to LPG increasing its market share over this period. A copy of the research can be found at:

http://lpgaustralia.com.au/site/library.php?task=detail&type=0004&id=0054

While both new and used vehicles can be converted to run on LPG, the number of conversions, and hence the number of motorists who can transition to the less expensive and cleaner LPG fuel, are constrained due to a range of barriers. These include:

a. inconsistency between state regulations applicable to the Autogas sector (which for example require different LPG conversion kits to be sold in some jurisdictions);

b. differences between Australian and international Standards, especially European, for Autogas equipment design and compliance standards;

c. the inability to recognise international, particularly European, Standards for, and testing of, Autogas equipment;

    1) Most European LPG system suppliers are able to draw on engine management computer system test results for at least 30 to 50 models of vehicles supported by original equipment manufacturers (OEMs). If Australian suppliers were able to use these tests results the Australian motorist could have many more models of 4, 6 and 8 cylinder conversion kits available immediately, at little or no extra cost to consumers;

d. limited access to vehicle OEM specifications and technical data that inhibits the development of compatible LPG conversion kits;

e. a lack of support by vehicle OEMs and dealerships for vehicles converted to LPG including voiding of warranties and additional servicing costs; and

f. no national compliance and certification for persons performing LPG conversions, including compliance standards for equipment and the utilisation of certified kits.

Further information about the prospects for LPG as an automotive fuel in Australia, along with the barriers to its further take-up, is covered
prepared by LPG Australia. A copy of the Road Map can be found at:

http://lpgaustralia.com.au/site/library.php?task=detail&type=0004&id=0052

Conclusions

Exploring the Opportunities for Reform discussion paper. At the same time, the sector faces a number of barriers to increasing

industry working closely together to implement reforms that would deliver the community dividends increased use of LPG offers.

Recommendations

Transport for a Growing Nation Project and more generally in relation to makin transport system more safe, sustainable, accessible and affordable.

a. Project where possible as requested.

b. mart Transport for a Growing Nation Project acknowledge and seek to leverage the contribution make in addressing climate change, energy security, air pollution and social exclusion which are some of the key challenges facing identified in the *Exploring the Opportunities for Reform* discussion paper.

c. LPG Australia and the National Transport Commission continue to work together on issues of mutual interest, including developing and implementing reforms that benefit the Australian community.

For your consideration.

Yours sincerely,

Michael Carmody
Chief Executive Officer

Distribution: National Transport Commission

For Information:
LPG Australia Council Working Group Road Map LPG Vehicles
LPG Australia Technical Committee Chairpersons
LPG Australia State Representatives
LPG Australia Secretariat