



AUSTRALIAN LIQUEFIED PETROLEUM GAS ASSOCIATION (LPGA)

CARBON POLLUTION REDUCTION SCHEME GREEN PAPER

SUBMISSION

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LPG is a cleaner, low carbon, gaseous fuel, which Australia produces in abundance. Eighty percent of LPG comes from natural gas fields, which continues to grow, and 20% from refining oil.

Increased use of LPG can contribute to critical aspects of Australia's energy policy objectives.

The Australian Liquefied Petroleum Gas Association ("LPGA") represents the views of the LPG industry – suppliers, marketers, equipment manufacturers and suppliers, and the vehicle conversion industry.

This submission focuses on aspects of the Carbon Pollution Reduction Scheme (CPRS) Green Paper with direct impact on the LPG industry and its customers. It does not address general Scheme design or economic issues.

The Green Paper states:

“The Government will cut fuel taxes on a cent for cent basis to offset the initial price impact on fuel associated with the introduction of the Carbon Pollution Reduction Scheme.”

In its discussions with the Department of Climate Change, LPGA confirmed that the carbon offset mechanism will include LPG used as a transport fuel and this is the basis on which this submission is made.

If LPG is not included in the carbon offset mechanism, LPG prices will rise when compared with alternative, high emission intensive fuels. This will create the perverse incentive of reducing demand for the lower carbon intensive fuel source, the reverse of the desired outcome of the CPRS.

The Green Paper states:

“While the introduction of the Scheme will provide incentives for households and businesses to improve their energy efficiency, a complementary suite of energy efficiency measures can play an important role in contributing to emission reductions.”

LPGA believes that a national gas hot water programme is a key energy efficiency mechanism to assist in the reduction of household emissions.

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Caltex Australia Limited, a member of LPG Australia, does not concur fully with this Submission and may make its views known separately.

A. INTRODUCTION

LPG is used primarily in Australia as both stationary energy, and as a transport fuel which both contribute to Australia's CO₂ emissions.

LPG is also used as a petrochemical feedstock and a propellant for aerosol sprays. These uses do not ordinarily involve combustion of LPG and therefore do not have a CO₂ impact, and should thus not be subject to Scheme coverage.

LPG has an important role in Australia's energy policy, not the least due to its low carbon content. This role is described in Appendix 1.

The broad structure of Australia's LPG supply chain is as follows:

SUPPLIERS	Oil and Gas Producers, Refiners, Importers
MARKETERS	Petroleum fuel marketers, LPG marketers
DISTRIBUTORS	Small-medium intermediaries for stationary energy; Service stations as the distribution medium to motorists
CUSTOMERS	Household, commercial and industrial energy users; Motorists; Petrochemical producers where LPG is sequestered in products

This structure, together with the Government's undertaking to neutralise the impact of the Scheme on transport fuel prices, has been the principal determinant of LPGA's recommendations.

B. SUMMARY OF LPGA RECOMMENDATIONS

A summary of LPGA's recommendations follows. Section D below provides the rationale for them.

Recommendation 1 – Coverage and Point of Obligation

It is recommended that the primary Point of Obligation for LPG is by Marketers, at the point of their sale to downstream customers or resellers. This point will achieve full coverage, noting compliance issues discussed in this submission.

Obligation would rest with Suppliers only if they supply LPG to a Marketer, distributor or customer not nominated as a Scheme Point of Obligation for LPG.

Recommendation 2 – Reporting and Compliance

LPGA recommends that :

- the National Greenhouse Energy and Reporting Act 2007 methodology be used, and
- that the method of accounting for the quantity of LPG obligations be left to each responsible entity through its accounting systems (subject to assurance, which includes obligations on downstream recipients to differentiate stationary and transport use – see later discussion).

Recommendation 3 – Transport LPG Price Offset

LPGA recommends that a mechanism be established at the point of obligation to “offset the initial price impact on fuel (transport LPG)” by payment or permit issue. Marketers normal accounting systems would be used to identify transport LPG volumes.

LPGA recommends that free permit issue is preferable to payment, as it ensures no change in the industry cost structure, and is administratively simple for the foreseen three year adjustment period. Permits should be issued quarterly.

Recommendation 4 – Household Assistance and Energy Efficiency

LPGA recommends that a national hot water replacement programme is designed and implemented, with funding from carbon pollution reduction permits as part of the household compensation package.

Funding should also be applied to replacement of electric heating with gas heating.

C. LPG INDUSTRY - GREENHOUSE EMISSIONS

LPG is produced together with oil and natural gas, and as an oil refinery product. It is marketed as a transport fuel, and as stationary energy. It is used (sequestered) in chemical products.

LPG consumption in Australia, and the supply/demand balance, was (2007):

	KTonnes	Petajoules (PJ)
DEMAND		
Transport	1,100	55
Stationary	700	35
Petrochemical	300	15
Total	2,100	105
SUPPLY		
Refinery RGP	300	15
Refinery LPG	500	25
Oil & Gas Fields	2,400	120
Total	3,200	160
Imports	400	20
Exports	1,500	75

LPG's contribution to Australia's 2005 greenhouse gas inventory was as follows:

	Australian Mt CO₂-e	LPG Mt CO₂-e	LPG %
Stationary Energy	279	2.3	0.8%
Transport Energy	80	3.6	4.5%
Other Sources	300		
Total	559	5.9	1.1%

(LPG - full fuel cycle figures for end-use emissions)

D. DISCUSSION OF ISSUES FROM GREEN PAPER

ISSUE 1 – COVERAGE AND POINT OF OBLIGATION

LPGA agrees that both stationary and transport LPG should be covered by the Scheme.

Point of Obligation - Ref: Green Paper page 112, Preferred position 2.12:

“Scheme obligations for emissions from liquefied petroleum gas would be applied to producers, marketers, distributors and importers of liquefied petroleum gas supplied to energy users.”

In Appendix 3, LPGA provides information on the LPG supply chain. A definition of “Suppliers” and “Marketers” is given to simplify the consideration of the Point of Obligation.

LPGA assumes that:

Emissions from energy used during the production of LPG (in refineries and oil and gas separation plants) will be the responsibility of the Suppliers.

Emissions from energy used in LPG distribution will be the responsibility of LPG Marketers, contract transport companies and other energy providers (such as electricity generators who provide energy to LPG depots).

LPGA is aware of only one facility where emissions from LPG alone exceed 25,000 tonnes CO₂-e pa. It is assumed that obligations for all other LPG will be upstream from customers.

To ensure that coverage is as close as possible to the point of end-use, and that costs and pass-through can be most efficiently managed, LPGA recommends that:

The primary Point of Obligation for LPG is by Marketers, at the point of their sale to downstream customers or resellers.

It is assumed that the Scheme would formally nominate Marketers responsible for coverage. At present, nominated LPG Marketers would be:

Shell, BP, Mobil, Caltex, United Petroleum, Milemaker Petroleum, Gull Petroleum
Origin Energy, Elgas, Wesfarmers Kleenheat, Supagas (Vic, SA, NSW and Qld).

Suppliers - producers/refiners/importers - should be the point of obligation only if they sell LPG directly to end-use customers, or to small resellers who are not “nominated” LPG Marketers.

ISSUE 2 – REPORTING AND COMPLIANCE

Methodology for Calculating LPG emissions

Ref: Green Paper Section 5.1 page 198

Emissions from energy used in LPG production and distribution will be captured by the Scheme separately from LPG Point of Obligation emissions.

An agreed, simple method for calculating LPG end-use (i.e. customers' Scope 1) emissions is thus the only LPG-specific requirement.

LPGA recommends that the National Greenhouse Energy and reporting Act 2007 methodology be used.

Technical aspects to be considered in applying the default method are:

Transport LPG is sold as litres. Stationary LPG is sold both as litres, and by weight (e.g. when in cylinders). However, conversion from weight to volume is straightforward.

Transport LPG fuel specification allows a range of propane, butane and mixed refinery LPGs to be sold. Each constituent product has a different emission factor. Stationary LPG is primarily propane, but can also be butane or a mix.

Current NGA Scope 1 factors are 1.53 kg/litre for stationary LPG, and 1.6 kg/litre for transport LPG. This demonstrates that the variation among different mixes of LPGs is not large, and standardisation to simplify administration is required.

LPGA recommends that a Scope 1 Emissions Factor be established for each of propane and a standard mix, as kg CO₂-e/litre

“Upstream Fuel Liabilities”, and Assurance – LPG Position

Ref: Green Paper Section 5.5 page 203

The paper discusses the possible use of the fuel excise administration system to track permit obligations.

LPGA notes that LPG is not within the fuel excise system, and that the non-oil company marketers do not have excise administration systems.

LPGA recommends that the method of accounting for the quantity of LPG obligations be left to each responsible entity through its accounting systems.

LPGA accepts that Assurance will be required, and notes the Green Paper Preferred Position 5.11 that further consultation will occur “with a view to minimising compliance costs”.

In differentiating LPG used for transport fuel from stationary LPG for the purpose of quantifying the issue of free permits or the payment of rebates, LPG Marketers will use their customer accounting systems. The type of customer is known. However, there is the possibility (limited by the safety and technical requirements for handling LPG), for a customer to divert transport LPG to stationary use without the knowledge of the LPG Marketer.

Marketers will thus need to rely on data supplied by customers, agents or resellers about end-use, particularly in situations where the agent or reseller supplies LPG for multiple uses (ie: transport fuel and cylinders for domestic heating).

LPGA believes that further clarity will be required as to where the liability rests for ensuring the accuracy of volumes provided by the agent /reseller and the process by which this will be verified. This may require that the law clearly requires that any customer receiving transport LPG may not divert it. Penalties should apply to the customer for the provision of false information.

The market players and structure may also change over time. At this stage the market is relatively stable and well defined. However the LPGA notes that Government will need to ensure that changes to the market participants and market structure is accounted for over time to ensure CPRS coverage is maintained.

ISSUE 3 – FUEL TAXES AND LPG AS A TRANSPORT FUEL

Ref: Green Paper Summary Report Page 16

The Green Paper states Government policy on the impact of the Scheme on fuel prices to be as follows:

“The Government will cut fuel taxes on a cent for cent basis to offset the initial price impact on fuel associated with the introduction of the Carbon Pollution Reduction Scheme. The Government will periodically assess the adequacy of this measure for three years and adjust this offset accordingly. At the end of the three year period the Government will review this adjustment mechanism.”

LPG is not subject to excise. The previous Government proposed to apply excise to LPG and other alternative fuels from July 2011, applying 2.5c/l then and increasing by 2.5c/l annually to reach a ceiling of 12.5c/l in 2015. This proposal has not been legislated, and has not been confirmed as policy of the current Government. Fuel taxes are included in the current review of *Australia’s future tax system* (“the Henry Review”).

LPGA has maintained for some time that, due to LPG’s significant stationary energy use with around 1 million end-use customers, and the common supply and distribution chain for the transport and stationary sectors, the inclusion of LPG in the excise system would create significant administrative costs and difficulties for the industry. The “bonded store” excise system would be very difficult to apply to LPG. There has been no preparation by Government and industry for this to occur. It would be unreasonable to require the LPG industry to introduce the excise system at the same time as it implements the Scheme.

However, to provide a mechanism for the Government to meet its undertaking on transport LPG pricing, the Marketers will be able to identify, and assure, the quantity of LPG they supply for use as a transport fuel, subject to the issues raised in the previous section’s discussion of compliance. Suppliers, which are upstream of Marketers, are unable to make this distinction. It is noted that the identification would be through the normal accounting systems.

The Government’s undertaking to prevent any impact of the Scheme on transport LPG prices can be met either by payment to Marketers, or by the issue of free permits. Payment would be at a rate determined by the Government, and thus may not equate to a marketer’s actual permit cost. Issue of free permits would, however, leave Marketers cost neutral, and thus best meet the Government’s objective of cent-for-cent offset.

LPGA thus recommends that, for transport LPG, the government adjustment to offset Scheme costs be at the point of obligation – “Marketers”. The adjustment could be either by issue of free permits (the recommended method), or by payment.

ISSUE 4 – HOUSEHOLD ENERGY EFFICIENCY

Ref: Green Paper Section 8. Pages 287-288.

The Government has committed to (Summary Report page 26):

“Provide additional support through the introduction of energy efficiency measures and consumer information to help households take practical action to reduce energy use and save on energy bills so that all can make a contribution”.

Box 8.2, page 287, states:

“Hot water heating accounts for a significant portion of household energy use – an electric storage hot water system can account for around 30 per cent of electricity use. Upgrading a household’s hot water system can deliver significant savings”.

Because of the longevity of household hot water systems, and the capital cost barrier to changeover, Federal and State Governments have acknowledged the need for assistance and incentive programmes.

A changeover from an electric storage system to an LPG system can reduce CO₂ emissions by 70% (by installing a continuous flow LPG system) or over 90% by installing an LPG boosted solar system. The higher cost of electricity flowing from the Scheme will not be sufficient to overcome this market failure.

There are a number of State schemes which provide assistance, and under MRET further assistance is provided through Renewable Energy Certificates for solar systems. There is currently a review underway which will look at whether hot water should be included in RET or be a stand alone system. State schemes also included incentives for 5 star gas hot water systems to replace electric storage. The recent introduction of State Energy Efficiency Trading Schemes will provide indirect incentives for electric to gas change over.

In many of the warmer growth areas in Australia – Queensland, Northern NSW, many parts of WA – the capital cost of natural gas distribution systems makes it unviable. Even when close to reticulated natural gas systems, households can be asked for many hundreds of dollars for connection. LPG is available throughout the country, and the capital cost of its connection to a household is relatively low – around \$200.

LPG provides a viable way to accelerate the move from electric to low emission hot water where natural gas is not available, or LPG is a less expensive option, increasing Australia’s CO₂ abatement.

Further, changeover from electric to gas heating can similarly make a significant impact on heating energy emissions. The Queensland Government has recognised this in its household rebate scheme. Extension of the hot water programme to heating can provide further emission reduction.

LPGA recommends that a national hot water replacement programme is designed and implemented with funding from carbon pollution reduction permits. Extension to home heating should be considered.

APPENDIX 1

LPG'S ROLE IN AUSTRALIAN ENERGY POLICY

LPG is a cleaner, low carbon, gaseous fuel, which Australia produces in abundance. Eighty percent of LPG comes from natural gas fields, which continues to grow, and 20% from refining oil.

Increased use of LPG can contribute to critical aspects of Australia's energy policy objectives:

Climate Change Policy and Greenhouse Gas Emission Reduction - The use of LPG as a transition fuel for automotive and stationary energy delivers an immediate reduction in greenhouse gas (GHG) emissions compared to conventional energy sources.

Energy Security – Australia is an exporter of LPG but remains a growing net importer of oil and petrol. The Australian Bureau of Agricultural and Resource Economics (ABARE) has forecast production of naturally occurring LPG to double by 2030.

Cleaner, Transitional, Stationary Energy Fuel for Regional Australia – LPG is the most portable, low GHG fuel available throughout regional Australia, and is an important part of the rural economy. LPG's established infrastructure offers flexibility in meeting energy demand in fast growing areas.

Economical Transport Fuel Option for Australian Consumers – LPG offers lower fuel costs for Australian motorists.

National Environment Protection Measure (NEPM) for Air Quality – As an automotive fuel, LPG poses a lower health risk from particulates and air toxics than petrol and diesel.

APPENDIX 2

LPG INDUSTRY BACKGROUND

LPG as Stationary Energy

LPG can be stored and transported as a liquid, and used as a gas. It thus reaches homes and businesses outside the natural gas reticulated systems, or within them where connection is not available.

The principal uses are:

In around 1 million homes for hot water, heating or cooking

In around 50,000 commercial and industrial businesses

Powering 180,000 forklift trucks (as off-road use, and mainly supplied in cylinders, are included in the stationary sector)

By two thirds of households for barbecues

LPG as a Transport Fuel

LPG has been an alternative fuel to petrol. New technology is now allowing diesel engines to use up to 25% LPG – this is a minor aspect at present.

On an energy equivalent basis, LPG has displaced 8% of petrol consumption. About 15% is consumed by taxis, 35% by business vehicles and 50% by around 400,000 private motorists. Assisted by the LPG Vehicle Scheme

APPENDIX 3

LPG SUPPLY CHAIN

To provide a clear basis to describe the LPG supply chain, the classifications below are proposed. A diagram of the supply chain follows this Appendix.

SUPPLIERS

“Suppliers” is defined as “producers and importers of LPG”, and includes oil and gas producers, refiners and importers, as follows:

Producers:

Queensland	- Santos (Surat), Origin (Kincora)
NSW	- None
Victoria	- ExxonMobil and BHP Billiton Bass Strait. Bass Gas (Yolla) JV. AWE, Cal Energy, ARC, Origin Otway JV, Woodside, Origin
South Australia	- Santos represents Cooper Basin JV
WA	- Wesfarmers LPG Kwinana from Dampier to Bunbury Pipeline
Tasmania	- None
NT	- None

Refiners:

BP, Mobil, Shell, Caltex, Hydrocarbon Extractions (AGL), Basell, Qenos

Importers:

NSW - Elgas Sydney LPG Cavern terminal.
Supply generally from international sources for logistical optimisation.
Some from Bass Strait. Also re-exports to New Zealand and Pacific Islands.

Queensland - Origin Coastal terminals in Brisbane, Gladstone, Townsville and Cairns.
Supply by ship generally from Bass Strait, Sydney LPG Cavern, or directly from international sources. Can re-export to Pacific Islands.

Tasmania - Origin Coastal terminals in Hobart and Devonport.
Supply generally from Bass Strait, but capable of international imports

NT - Wesfarmers-Kleenheat Darwin
Supply generally from international sources.

WA - Wesfarmers LPG Kwinana
Terminal export and import capable.

MARKETER

“Marketer” is defined as sellers of LPG to end-use customers and to agents and resellers such as service stations (for transport LPG and stationary BBQ LPG), and local cylinder distributors (agents or resellers for stationary LPG).

Marketers source their LPG from Suppliers (which may be an internal transaction)

Marketers are:

BP, Shell, Mobil, Caltex, United, Milemaker Petroleum, Gull Petroleum, Woolworths

Elgas, Origin, Kleenheat, BOC, Supagas (Vic, SA, NSW and Qld)

LPG SUPPLY CHAIN OPERATION AND POINT OF OBLIGATION

The LPG supply chain operates in a variety of modes. Assuming that the point of obligation is firstly Marketers (as defined above), Suppliers should be responsible for coverage only if they sell LPG directly to end-use customers, or to small resellers who are not “nominated” LPG Marketers.

MODE	Point of Obligation
Supplier to Marketer	None
Marketer to Marketer (wholesale)	None
Marketer to end-use customer*	Marketer’s sale to customer
Marketer to Reseller/distributor/agent	Marketer’s sale to Reseller/distributor/agent
Supplier to end-use customer*	Supplier (deemed Marketer) to end-use customer
Supplier to reseller/agent	Supplier (deemed Marketer) to reseller/agent

*Note: LPGA is aware of only one end-use customer where LPG consumption itself is above the threshold. Use of LPG by end-users who are above the threshold from other fuels is assumed to remain the Marketer’s obligation.

LPG SUPPLY CHAIN

