



THE PILBARA VIRTUAL GAS PIPELINE PROJECT

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PURPOSE

This information release on the proposed Pilbara Virtual Gas Pipeline Project from Mobile LNG Pty Ltd [MLNG] is to provide agencies, representative bodies, community groups, businesses, industries, companies and individuals with an update on Mobile LNG's endeavours to bring this exciting and large scale project to the region.

It is also intended to gauge community and industry support for the concepts and the directions the project proposes to take, and for the rate of its implementation.

Your letters of support will determine the level of priority the Government will give this project and the possible timeframe for its implementation in the Pilbara by MLNG.

INTRODUCTION

Mobile LNG Pty Ltd [MLNG] is a privately owned Australian company with national and international expertise in the mining, oil and gas industries, and is particularly passionate about achieving the market substitution of imported diesel fuel with Australia's own liquefied natural gas [LNG].

The substituting of Australian LNG for imported diesel will necessitate the production of sufficient quantities of locally produced LNG; and then applying the latest advances in technology and mechanical engineering to ensure more reliance is made on the advantages of using LNG as a replacement fuel in as many applications as possible.

The MLNG concept is to establish a production facility and distribution network, that will achieve the distribution of LNG and the associated benefits from its use, to industry and to the wider community.

This production of LNG and employing a multi modal distribution network direct to consumers is referred to as a "Virtual Gas Pipeline"

Towards this outcome, MLNG is designing and evaluating the first stage construction and funding of a multimillion dollar facility and network in the region.

Until now, a long history of diesel reliance in remote areas of Australia has built up systemic blockages to the development and utilisation of new LNG technologies for domestic consumption.

MLNG, through its Virtual Gas Pipeline Project, will replace high cost diesel use with cleaner and more affordable natural gas and this will reduce overall mine production costs whilst improving safety and delivering significant environmental benefits.

It will achieve this without any impediment to obtaining the optimum price for Australia's LNG, and without the need for legislation or quarantining of gas reserves away from their full export earning potential.



BENEFITS

The use of Australia's own LNG as a fuel will deliver many significant advantages and benefits to the Region, to participating mining/transport/and export industries, and to the Australian economy as a whole. These benefits include;

- Achieving up to a 25% reduction in fuel costs for;
 - remote power generation
 - heavy duty vehicle fleet use
 - mine haul vehicle use, and in
 - helping industry and exporters to be more competitive.
- Immediately achieving a 25% reduction in Carbon Dioxide Emissions
 - 25% reduction in CO2 emissions,
 - 85% reduction in Nitrous oxide
 - 100% reduction in Sulphur Oxide
 - 100% reduction in particulate emissions.
- Using Australia's own natural resource and reducing the need for Australia to import diesel from other countries.
 - Last year the cost of importing diesel and petroleum products into Australia exceeded \$40.2 billion;
- Stabilising fuel costs for businesses and export operators, insulating them from the current market volatility of diesel pricing and the constant increase in prices stemming from world oil price fluctuations and the variations in the currency exchange rate;

On current rates for currency exchange rates and Brent Crude prices, the saving of using LNG as opposed to diesel and expressed in a "diesel litre equivalents" basis was 28.5%!

- Improving the efficiency and longevity of equipment and reducing associated maintenance costs, to further enhance the efficiencies and benefits derived from the changeover in fuel types;
 - Case studies suggest mining company operations could save approx. 30% in fuel use costs
- Reducing contamination of waters and soil that can occur through diesel spills.

The use of LNG as a diesel alternative fuel has wider benefits for Australia by:

- Making more efficient use of Australian gas resources
- Reducing diesel imports, and the flow on costs to Government for rebates and subsidies
- Improving Australia’s energy security
- Increasing the competitiveness of Australian mining Exports
- Ensuring Australia remains at the leading edge of technological advances and efficiencies
- Provides a greater range of employment opportunities for the future by introducing new technologies.

These benefits and outcomes are closely aligned to the stated centrepiece objectives of Local, Regional, State, and Federal Government policies, as mentioned in documents from these sources such as the Energy White Paper (2012), Australia in the Asian Century, A Plan for Australian Jobs (2013), and the strategic plans of Council and the Development Commission for the region.



THE PROJECT

Mobile LNG (MLNG) is a company dedicated to the advancement of the application and uses of liquefied natural gas [LNG] in Australia, and in the logistics for its distribution and transportation to consumers.

The use of Australia’s own LNG as a fuel for the mining and export industries in particular will have many ongoing benefits to regional communities and to the Australian economy.

Over the last three years in particular, MLNG has been conducting constant analysis and research of world’s best practices, the latest advances in technologies and in the related opportunities for the increased use of LNG to replace diesel as a source fuel in the Australian economy.

MLNG proposes to unlock the benefits of the use of LNG to the region through the development of its own mid-scale LNG production facilities; and then with the introduction of transportation and regasification systems that will permit the delivery of natural gas in LNG form to customers as an important energy alternative to diesel in remote areas.

The Virtual Gas Pipeline Project and its LNG production facilities will be based in an industrial estate with close proximity to available gas, haulage routes and existing infrastructure. These are key factors in minimising the environmental footprint and economic costs of the project.

The LNG produced will then be transported to customer sites in vacuum insulated vessels, from which the LNG will then be re-gasified and used in power generation, and/or delivered as liquid fuel for mobile plant and equipment fuel needs.

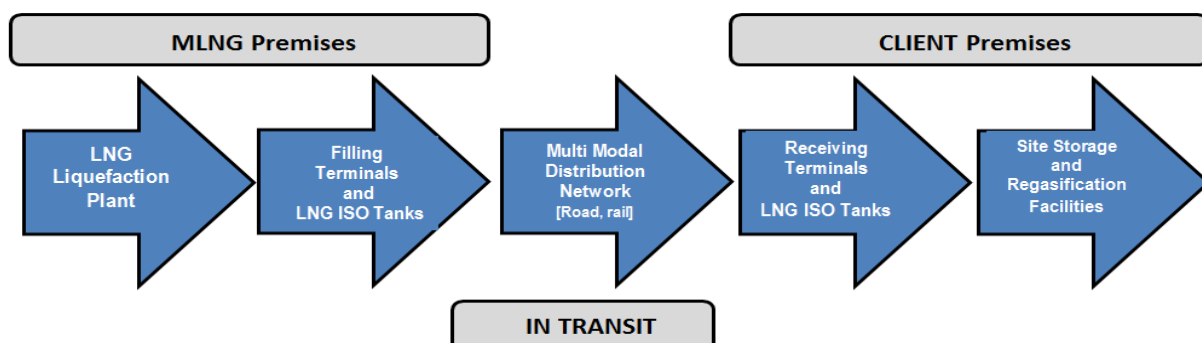
MLNG can also facilitate the transition from diesel to gas for the production of electrical power, depending on the specific customer requirements.

The Virtual Gas Pipeline Project will produce and distribute LNG to industry in a manner that has the reach and reliability of a pipeline, but with the added benefits of having more flexibility and responsiveness to individual customer needs, and without the upfront capital costs and land acquisition constraints of an on ground pipeline.

A Virtual Gas Pipeline solution can be delivering the benefits of LNG use to industries in the region approximately 3 to 5 years sooner than a conventional pipeline alternative, and **with your support and endorsement it could be delivering LNG use to the Pilbara within the next 12 - 15 months.**



The project has five key process phases in the supply chain from MLNG’s Premises to the Client’s premises as outlined by the following diagram.



STAGED DEVELOPMENT

MLNG foresees the long-term transition to LNG through the virtual gas pipeline project to take place in a number of stages, such as:

Stage 1:

Works to produce LNG from pipeline gas and in its transportation and supply to customers for regasification and initial use in power generation.

This phase includes design elements, extensive community consultation and securing industry support to ascertain the magnitude of infrastructure and investment levels required.

Stage 2:

LNG Trials on various mobile plant and equipment and configurations in conjunction with Original Equipment Manufacturers [OEM's] and LNG engine technology providers

Stage 3:

Conversion of Mine Haul Vehicles, Heavy Duty Vehicles and light vehicles to LNG and CNG (from LNG), in concert with machinery manufacturers and users

Stage 4:

Conversion of Rail Locomotive fleets to LNG, in consultation with Original Equipment Manufacturers [OEM's] and LNG engine technology providers

Stage 5:

Development of conversion options for marine and agricultural industry applications to further enhance the efficiencies and environmental gains on offer

OTHER REGIONAL BENEFITS

With the decreased need for costly imports of diesel, and the many supply side advantages that LNG use will provide to exporters in the region through significantly reducing their cost structure; the conversion to LNG use particularly for the high diesel consumers in the mining industry, is vitally important to Australia's economic future and productivity.

The benefits the virtual gas pipeline project will bring to the Region and local businesses and the mining/transport and export industries are significant and many, and include;

- There will be direct employment/contracting and supply opportunities generated by the construction and implementation phase of the project. Early estimates are that this will require a capital expenditure of approx. \$250 million;
- The operations, distribution and service delivery phase will then create other direct and indirect employment/contracting and supply opportunities,

- The introduction of new technology and the transition to using LNG and dual fuel equipment will generate new employment and training opportunities in vehicle conversions, motor fitting, etc.
- The larger opportunities for the mining and transport industries as they derive the benefits of significant cost reductions and fuel efficiency benefits from the use of LNG; to retain existing markets and to also place our export companies on a footing to be more competitive towards acquiring further international markets.
- The progressive conversion of Remote power generation sites, heavy duty vehicle fleets, mine haul vehicle fleets, locomotives, and shipping to the use and benefits of LNG fuels and the efficiencies of the new technologies.
- The increased regional activity and local company spending as companies and industries derive the financial benefits from the use of LNG as a diesel substitute
- New infrastructure and new fields of employment will follow the introduction of the opportunities the MLNG project will deliver to the region.



YOUR SUPPORT

The project is soon to enter its community consultation and engineering design phases and in order to do this in a coordinated manner to magnify the benefits brought to the region, MLNG will be required to indicate to all tiers of government [Local, State and Commonwealth] the level of community and industry support and the potential level of local participation it can anticipate.

Support and endorsement from the local industries and communities, will assist Government to ascertain priorities and if there will be any emerging demands or requirements for new infrastructure or services.

The level of local support this project receives will determine the rate at which it can be brought to the region, and the rate of introduction of the benefits of change to the mining, export and transport industries.

Your support and participation to bring this exciting and beneficial project to the Region is now being formally sought.

Letters of support have to be genuine, sincere and able to be validated, and hopefully

They do not have to be in any great detail and can be as a complex analysis or simply a brief comment, as shown in the text of the examples provided below;

Example of letter of support – from Company

Addressed to Managing Director, MLNG Pty Ltd

Re: **Virtual Gas Pipeline Project to supply LNG to the mining, export and transport industries of the Pilbara region.**

Dear sir,

Please record that our company, XYZ Mining Services is fully supportive of the endeavours and directions of MLNG and in the proposal to build an LNG plant and distribution facilities, so as to create local opportunities for the substitution of imported diesel fuel with Australia's own LNG.

There are many sound commercial and environmental benefits that will flow to the region, and to our industry in particular from having the virtual gas pipeline project promptly implemented.

The initiative and project have our full support and we would welcome Government at all levels [Federal, State and Local] to provide support to this initiative to ensure it comes to fruition for the region in the shortest possible time frame.

Example of letter of support - from a Peak Agency

Addressed to Managing Director, MLNG Pty Ltd

Re: **Proposal of your company to implement the Virtual Gas Pipeline Project to supply LNG to the mining, export and transport industries of the Pilbara region.**

At a special members meeting of ____ it was unanimously decided that our organisation wishes to be recorded as being in full support of requesting the Government at all levels to provide endorsement and support of the virtual gas pipeline project.

The members present at this meeting were;

....

....

Further, we would like the opportunity to have your representative present material to us in a question and answer segment to ascertain how our industry can make maximum readiness for the advantages and opportunities the availability of LNG will provide to our industry and members, and of the opportunities that may be derived from the construction and implementation phases of your project.

Please remember that this project and its implementation timeframe are determined by the support of you and your local community.

Your letter of support and comments and feedback will greatly assist in reaching an informed decision, and in having the correct infrastructure for its success.

Please provide your letters of support and contact details electronically to:

Managing Director, Mobile LNG

Andrew White,

Managing Director

Fax: +61 8 9477 1833

Email: andrew.white@mobileLNG.net.au



Mobile LNG Pty Ltd

ACN 142 886 600

23 Brennan Way

Belmont WA 6104

Ph.: +61 8 6555 7731

Fax: +61 8 9477 1833

Email: mail@mobileLNG.net.au

Web site: www.mobileLNG.net.au

THE PILBARA VIRTUAL GAS PIPELINE PROJECT

Contact Person:

Andrew White,

Managing Director

Mobile: +61 419 489 582

Email: andrew.white@mobileLNG.net.au

