

Auto LPG is the *Future*



**Indian
Auto LPG
COALITION**

Warming up to all the action with more than **200 stations** in the country now and a **300% growth** in Auto LPG in year 2005, India is expected to touch **150 TMTA** this year. As it all builds up with Auto LPG already available in more than **30 cities** in the country, OEs launching LPG Vehicles aggressively and more and more filling stations coming up, India is poised to become the largest Auto LPG market in the world in the next few years.

Low costs of infrastructure and conversion, easy availability, versatility of use and of course, an impeccable safety record make Auto LPG the only viable, un-adulterable and environment friendly alternative auto fuel in India.



*To facilitate
on international*

About Auto LPG in India

India imports nearly 60% of its oil requirements.



At current world oil prices, India pays about \$28 billion per year for imported oil, comprising nearly 25% of the value of its total imports.

Vehicles account for over 70% of air emissions in India with emissions having increased, by more than 8 times over the past 20 years, making India the world's fifth-largest emitter of carbon. India is therefore, looking very seriously towards LPG as one of the most feasible options for improving the air quality. Armed with a 'late mover' advantage, India has the benefit of learning from world experiences. With over 200 existing Auto LPG stations and about 50 under commissioning, India is now striving towards an AutoLPG regime, which would be safe and sustainable.



IAC at Mumbai Marathon 2006



IAC organized Workshop at ARAI, Pune



(Officials of USDOE along with Indian delegates at the 10th Annual Clean Cities conference, held May 2004, in Fort Lauderdale, Florida.)

Background

To ensure that AutoLPG in India did not experience those birth pangs, which other alternate fuels witnessed, and instead benefitted

from world experience in the usage of LPG as a



IAC Delegation at 11th Clean Cities International Conference at Palm Springs, California

sustainable auto fuel, some stakeholders together with US DOE (United States Department of Energy) and US-AID (United States Agency for International Development), took initiative in trying to create an

auto LPG coalition. In Dec 2002, an expert US delegation visited India and met with virtually all the stakeholders of industry, including the main oil companies - Indian Oil Corporation Limited (IOCL), Bharat Petroleum Corporation (BPCL), Hindustan Petroleum Corporation (HPCL), Reliance Industries Limited (RIL) and Essar Oil. They also met regulatory authorities like CCOE (Chief Controller of Explosives), ARAI (Automobile Research Association of India), transport authorities, pollution control boards and SIAM (Society of Indian Automobile Manufacturers).

Based on various one-to-one interactions with all these stakeholder groups, the first 'all stakeholders' meet was hosted by IOC at its headquarters in Mumbai in Jan 2004. This was followed up with a meeting at RIL's headquarters at Mumbai in October 2004, where a Charter of

**LPG is the only viable fuel which gives economy
performance of a Petrol Engine.**

tainable growth of Auto LPG in India, within the legal framework, standards and in a safe and professional manner.

-Mission

Intent was signed and a working group formed, to ensure the incorporation of the stakeholder group as a legal entity. On the strength of the recommendations of the working group, the stakeholders were incorporated as a trust known as Indian Auto LPG



Indian Oil Chairman Shri Behuria at IAC booth in World LPG Forum at Shanghai 2005

Coalition (IAC).

During this interim period, the USDOE/USAID facilitated visits for some of the stakeholders to have a first hand assessment of the LPG conversion technologies and refueling infrastructure in US. Some of the stakeholders also participated in Clean Cities International Conferences at Fort Lauderdale (Florida) and Palm Springs (California) in 2004 and 2005 respectively.

Stakeholders

IAC identified 9 stakeholder groups as critical partners, who are to work together closely at all times for ensuring a smooth and safe development of AutoLPG in India. These stakeholder groups are the Oil Companies, Station equipment manufacturers, Explosives Dept, Kit manufacturers, Vehicle certifying agencies –

ARAI/VRDE, Automobile manufacturers / SIAM, Government transport departments, International agencies and Environment agencies.

Now known as IAC (Indian Auto LPG Coalition), the Coalition is seen by both - the government and the private sector enterprises, to be the singular nodal point to assist the Industry in solving issues



Left to right, Mr Curtis Donaldson (President, CleanFUEL USA), Mr David Garman (Under Secretary, US Department of Energy), Mr John Joseph (President, IAC) and Mr Suyash Gupta (General Secretary, IAC)



IAC organized Seminar on Inspection and Safety in Mumbai on Sep 12, 2006



BPCL Director Marketing Mr Radhakrishnan and ED LPG Mr RK Singh in World LPG Forum at Shanghai 2005



IAC organized LPG Kit Safety Check up camp at IOC LPG Station in New Delhi on Sep 10, 2006

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP ENVIRONMENTAL LEADERSHIP AWARD

This award recognizes outstanding contributions made through working in partnership to improve the environment and quality of life for the people of Asia.

PRESENTED TO:

INDIAN AUTO LPG COALITION

USAID | ASIA



Diesel Vehicle, emissions of a CNG Engine and



Why LPG-as an alternative fuel?

- ✍ LPG impacts greenhouse emissions less than any other fossil fuel.
- ✍ LPG is a clean burning, high octane and an environment friendly fuel.
- ✍ In one of the studies, findings state that LPG vehicles emit significantly less pollution than their diesel and petrol fuel counterparts. Compared to Petrol, LPG produces;

- Up to 15% less greenhouse gas
- Up to 50% less particulates
- Up to 60% less CO
- Up to 33% less NO
- Virtually Zero Evaporative emissions of hydrocarbons
- Up to 80% less air toxics like benzene and 1,3 butadiene

A brief comparison of vehicular emissions of Auto LPG vis-à-vis Petrol and Diesel is:

Auto LPG Emissions*	
Compared to Petrol	Compared to Diesel
75% less Carbon Monoxide	90% less Particulates
85% less Hydrocarbons	90% less Oxides of Nitrogen
40% less Oxides of Nitrogen	70% less Ozone forming potential
87% less Ozone forming potential	60% less Carbon Monoxide

10% less Carbon Dioxide

* Based on tests undertaken at the independent Millbrook Vehicle Emissions Laboratories (UK) in 1998 and 1999.

Member



WORLD LP GAS ASSOCIATION

Advantages of ALPG

- ✍ Can be used in trucks, buses, LCV's, MUV's, passenger cars, three wheelers and two wheelers.
- ✍ Can be easily transported and stored in stand-alone facilities.
- ✍ LPG is pressurized as 5-7 bars as against 200 bars for CNG, which makes it safe and conventional fuel.
- ✍ The automotive use for LPG has an excellent safety record and various crash tests and fire tests proved that owing to the strength and integrity of the fuel tank, it is safer than petrol and at par with diesel.
- ✍ The infrastructure cost on ALDS is far economical at around Rs 50 lakhs (US \$ 100,000) compared to CNG station at Rs. 200 lakhs (US \$ 450,000)
- ✍ The retrofitment cost on existing vehicles in case of LPG is about Rs 21000 (US \$ 475) whereas case of CNG the same is about Rs 40000 (US \$ 900)
- ✍ LPG fuel systems are sealed and evaporative losses are negligible.
- ✍ No possibility of theft/pilferage.
- ✍ Life of the engine is extended as a result of the absence of acids and carbon deposits.

Would you not be a part of the success story... ?



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Visit IAC at www.iac.org.in. Fill in the application form on-line and submit with details.

Our representative would contact to assist you in joining IAC!!