

Indian Oil Inaugurates its 100th Auto LPG station



Indian Oil Corporation Ltd recently commissioned its 100th Auto LPG Dispensing Station (ALDS) at M/s Parabrahmam S/Stn., Harippad on Cochin – Trivandrum National Highway. The facility was inaugurated by Mr Mrinal Roy, Executive Director (LPG) in the presence of Mr B Ashok, Kerala State Head of IOC. Recognizing the vast potential of Auto LPG in a small State like Kerala, IOC has already set up 20 ALDSs in Kerala alone.

IOC is the market leader in the Auto LPG business both in terms of ALDS infrastructure and Auto LPG sales. The ALDSs of IOC are being set up at existing petrol pumps and cover more than 50 cities across the country, including Guwahati in the North-East. The Corporation has an ambitious plan of adding at least another 100 – 150 LPG Stations during the current year.

The issuance of the amended Motor Vehicles Act in year 2000 by Ministry of Road Transport & Highways and the LPG (Regulation of Use in Motor Vehicles) Order in year 2001 by Ministry of Petroleum & Natural Gas paved the way for introduction of LPG as an automotive fuel in the country. The actual retailing of Auto LPG thru an Auto LPG Dispensing Station (ALDS) could commence only in late 2002 with the introduction of LPG conversion kits duly approved by ARAI. It has been more than 4 years since, and during this period, the Auto LPG Industry has been treading a path of steady progress, consolidation and above all, safety.

Like any other new marketing initiative, marketing of Auto LPG has been a unique phenomenon, particularly when the product is already being used by the customers, albeit in an unapproved / illegal method. It does not require any marketing effort – the vehicles / customers are already existing, thanks to the rising Gasoline prices. Technology for quality conversion kits is widely available now – both indigenously as well as through tie-ups with renowned international makes, giving the potential customer a wide choice of approved kits to choose from for retrofitment. OEMs like Bajaj Auto, Maruti Udyog and Hindustan Motors have further given a boost to the Auto LPG market through introduction of OEM-variants running on LPG. The LPG Station installers have played a pivotal role in constructing facilities with high safety standards. And lastly, but not the least, the statutory / approving agencies like BIS, PESO, ARAI / VRDE have contributed immensely by issuing / amending relevant standards in line with the requirements of the Industry.

The only issue during the above period has been to synergize the individual efforts towards a common cause, i.e. growth of the Auto LPG Industry in India. It is here that the Indian Auto LPG Coalition (IAC) has played a pivotal role in bringing all the stakeholders on a common platform and address the problems existing in the Auto LPG business. The progress made by the Coalition has been phenomenal and today the body is recognized not only within the country but also in international Auto LPG circles, including the WLPGA.

Let us all strive further to strengthen this Coalition and thus take the Auto LPG business in India to new heights.

**Sunil Mathur, Vice President, IAC &
Chief Manager-Indian Oil Corporation Ltd**

Message from the President

Dear friends,

I am extremely happy to bring to you the first edition of the "IAC" (Indian Auto LPG Coalition) Newsletter. Formed a few years ago, IAC now has in its fold most of the stakeholders connected with ALPG, such as ALPG dispensing companies, Retrofitters, OEMs, Equipment Manufacturers, State Transport Depts., Statutory authorities, and so on.



The mission of IAC is to "Promote LPG in an integrated manner, as an alternate, gaseous, environment friendly fuel by involving all stakeholders to bring a cost effective & safe auto fuel to Indian consumers, using the best global practices". The accelerated use of Auto LPG would give an impetus to the "clean air" movement in our country.

The formation of IAC in itself has been a major achievement and has given a major impetus to the coordinated promotion of Auto LPG in India. Our country's success in forming the coalition in such a short time is also being recognized and applauded across the LPG world through the participation of IAC in the World LPG Forum and other international forums.

This Newsletter gives you a snap shot of some of the major activities done by IAC towards achieving its mission. Many more activities are planned primarily with Transport Departments of major Auto LPG consuming states such as A.P. T.N, Gujarat, Kerala, etc, training for Auto LPG transporters and their crew, training of retrofitters, dialogues with Auto manufacturers and working conference among dispensing companies for accelerating growth and spread of dispensing stations.

I wish this medium of the newsletter also meets its objective of disseminating information about the developmental efforts being made by all concerned in making usage of Auto LPG in India grow as a safe and clean alternate fuel.

IAC will be very happy to receive your feedback and suggestions. To give this, I would request you to please log in to our website <http://www.iac.org.in>

With best wishes,

**John Joseph
President IAC &
Sr VP, Reliance Industries Ltd**

Messages



Mrinal Roy
Executive Director (LPG), Indian Oil Corporation Ltd

Dear Sunil,

At the outset let me congratulate the Indian Auto LPG Coalition (IAC) for taking the initiative to launch a newsletter that will promote Auto LPG in the country. As India's economy integrates deeper with the global economy, many of the challenges impacting the world will obviously have a greater bearing on our industry, as well.

Against this background, a newsletter from the IAC will be vital in not just sharing information on the trends in the business but will also go a long way in promoting Auto LPG as an economical, energy efficient alternative.

The future is clearly Gas. As the share of Gas in the primary fuels goes up, there is bound to be a shift in customer needs in both the industrial and the automotive sectors. In India, Auto LPG has caught the imagination of vehicle owners due to its unbeatable economy and environment friendly attributes. An important factor behind the huge growth of Auto LPG in our country has been the synergistic alliance between the Oil companies, LPG kit manufacturers, Vehicle manufacturers and the ALDS infrastructure providers. It is heartening to note that this grand alliance ensures sharper focus on delivering enhanced value to customers.

With the launch of this newsletter from the IAC, we have taken another step in strengthening the relationship shared by the members of the coalition.

On behalf of Indian Oil, I assure you all that we will go all out to promote the use of Auto LPG as a genuine alternative to conventional automotive fuels.

I also take this opportunity to wish all members of the Indian Auto LPG Coalition the very best in all their future endeavours.

Best Regards
Mrinal Roy



James Rockall
Managing Director
World LP Gas Association

Dear Suyash,

It gives me a great pleasure to convey my best wishes to Indian Auto Industry LPG body - IAC, for launching its quarterly newsletter to contain detailed updates on the Indian Auto LPG market.

The recent IPCC (Intergovernmental Panel On Climate Change) report is substantial enough reason to warrant a coherent global effort to move towards using cleaner fuels such as LPG. Indian cities have been looking towards LPG as an alternative fuel and its success in cities like Bangalore and Hyderabad is an example or how this can be achieved rapidly and safely.

World LP Gas Association has been watching the developments of the Indian autogas market keenly which is probably one of the most promising markets of the decade. We are supportive of your activities and would be glad to work together with you as part of the World LP Gas Industry's contribution to a cleaner environment as well as for the benefit of stakeholders worldwide.

Best Regards
James Rockall



Shrikant R. Marathe
Director, ARAI & Chairman- Training Committee, IAC

Dear John,

It gives me immense pleasure to learn that Indian Auto LPG Coalition (IAC) is bringing out this Newsletter.

The world is facing twin crisis of environmental degradation and fossil fuel depletion. Alternative fuels are seen as a promising solution for reducing vehicular emission. Liquefied Petroleum Gas (LPG) is a prominent alternative fuel. More and more vehicles are now being converted to run on LPG due to fuel economy and lower emissions they offer. New technologies are being evolved to enhance this performance and address the safety issues.

IAC is playing an important role in propagating the Auto LPG Programme in India through many initiatives like training programmes for installers and transport authorities; awareness campaigns for consumers and dissemination of information and guidance for safe installations. This Newsletter will further augment their role.

I would like to compliment IAC for bringing out this Newsletter and sharing the knowledge with a larger section. I am sure, this Newsletter will also provide a platform for exchange of knowledge among the experts in the field of Auto LPG and will help all the stakeholders to develop safe and reliable LPG vehicles.

My greetings to all those associated with this Newsletter and wish them all the success.

Best Regards
SHRIKANT R. MARATHE



P. Raghavendran
President (Refinery Business), Reliance Industries Limited

Dear friends,

It gives me great pleasure in having been invited to give my message in the inaugural issue of the "Indian Auto LPG Coalition (IAC) Newsletter". The initiative taken by IAC in promoting the development and safe usage of Auto LPG (ALPG) in India has been commendable and note worthy.

ALPG, as you would be aware, is not just a cheaper alternative to petrol. It is far less polluting and hence goes a long way in our search for a cleaner environment, especially in our metros / towns. The usage of LPG in Automobiles is also fully legal if fitted by an authorized retrofitter and very safe. With new ALPG dispensing stations coming up rapidly in all parts of our country, the availability factor has also improved considerably. This alternate fuel now has a pan India presence with close to 300 ALPG dispensing stations.

With IAC to support the development of ALPG infrastructure and in creating increased awareness, the situation is not far when we can see a large no of LPG variants of different types of automobiles plying on the Indian roads with this clean and economical alternate fuel.

I wish IAC and its members all the very best in their ventures.

Best Regards
P. Raghavendran.



Balraj Bhanot
Former Chairman, CMVR Technical Committee and Former Director ARAI

I am extremely pleased to be associated with LPG coalition as one of the founders of this esteemed trust, which takes in its hold all stake holders as may be connected with promotion of LPG, a clean fuel in these days when everyone is concerned with vehicular pollution. Vacuum was felt for such an organization for a long time since CNG still lacks that. I am glad IAC has thought of bringing its inaugural news letter as well which will go a long way in serving the interests of all and provide useful information at one point. With the dynamic people, the organization has at its helm of affairs, I am sure it will rise to greater heights in time to come. I wish them good luck in their noble cause which will benefit the society at large.

Best Regards
Balraj Bhanot

Auto LPG Cleans Bangalore Air

A World Bank study had found that 800 out of every 10,000 children born in India die due to pollution-related diseases. Alarming situation! There are many such findings by various agencies pointing out air pollution as major health hazard especially in children in many cities in India. The burgeoning number of vehicles is the single largest cause of air pollution. It is in this context that environmental friendly alternative fuels like Auto LPG is gaining attention across the country.

The 'Garden City' of Bangalore is no exception. Bangalore is one of the 10 most polluted cities in the country thanks to rapid growth in vehicle population in the city. The city has a vehicle population in excess of 30 Lacs with 20 Lacs of two-wheelers and nearly 90,000 registered three-wheelers (autorickshaws). The numbers are increasing with increase in economic activity and inflow of workforce to the city. No wonder tackling pollution in Bangalore is one of the environmental priorities for the State Government.

Auto LPG is a clean transportation fuel with excellent environmental benefits offering immediate and practical solution in improving air quality. It is mandatory for three-wheelers in Bangalore to use LPG. The State Government is also offering a subsidy of Rs 2,000/- for every three-wheeler on the conversion cost. The State Government has also urged various stake holders in the industry to launch two-wheelers with Auto LPG as fuel citing huge number of such vehicles in the city contributing to vehicle pollution.

The increasing public awareness and proactive approach by the State Government in promoting use of LPG as automotive fuel are paying dividend. Today, Bangalore has emerged as the leading city in the country in using and popularizing LPG as automotive fuel. The city has 35 Auto LPG Dispensing Stations (ALDS) set up by companies in public sector and private sector. Nearly 48,000 three-wheelers have already converted to Auto LPG. The city is poised to regain its clean and green status with more and more three-wheelers and four-wheelers switching to LPG as fuel and concerted effort by policy makers, fuel suppliers and equipment suppliers driving the show.

Auto LPG as transportation fuel was introduced in Europe in 1960s. Since then, the fuel has gained acceptance world over due to its low emission characteristics, abundant availability, cost advantages and being inherently safe. The environmental benefits of Auto LPG are obvious with low emissions of particulates, carbon monoxide, nitrogen oxides and hydrocarbons compared to conventional fuels. Auto LPG yields 50% less carbon monoxide, 40% less hydrocarbons, 12% less carbon dioxide, 35% less nitrogen oxides and 50% less ozone forming potential compared to petrol. Auto LPG has among the lowest life-cycle greenhouse gas emissions of all commercially available fuels. It is also non-toxic and non-poisonous and does not contain heavy metals. Compared to petrol and diesel, Auto LPG has lower volatile organic compounds, formaldehyde, acetaldehyde, butadiene and benzene emissions.

The following table compares emissions of Auto LPG with that of petrol and diesel.

As discussed earlier use of LPG as automotive fuel is more than 40 years old. Today, there are more than 10 million vehicles across the world fuelled by Auto LPG. Countries like South Korea, Turkey, Poland, Mexico, Japan, Italy and Australia lead in global Auto LPG consumption.

India has more than 350 Auto LPG Dispensing Stations in operation and the number is increasing. The city of Bangalore, an early starter, is leading in consumption of Auto LPG in India followed by cities like Hyderabad, Ahmedabad, Chennai etc.

It is needless to say LPG as an automotive fuel deserves to be supported and promoted considering environmental, social and economic benefits. However, despite accepted environment friendliness of Auto LPG, the spread and use of the fuel will be driven by factors like clear and long-term government policies, incentives on use of the fuel and conversion of vehicles, curbing use of cylinders in automobiles, support from statutory authorities and wider network of dispensing stations.

Tail pipe emissions (g/km)	Auto LPG	Diesel	Petrol
Particulates (PM)	< 0.001	0.040	0.001
Nitrogen Oxides (Nox)	0.04	0.40	0.06
Hydro Carbons (HC)	0.05	0.06	0.08
Greenhouse Gas (Co2)	170	170	190
Carbon Monoxide (CO)	0.3	0.5	0.6

Source : World LP Gas Association

Saji Pillai, General Manager- Sales- Elf Gas India Ltd.

More than 100 Cities & Towns Covered with an ALDS Network of over 350 stations

Agra	Chennai	Gwalior	Korukkupet	Nasik	Shirdi
Ahmedabad	Chennarayapatna	Hyderabad	Kota	Nathdwara	Solapur
Ajmer	Cherthala	Ichalkaranji	Kotakkal	Navi Mumbai	Surat
Alwaye	Chiplun	Indore	Kottarakara	Navsari	Surendranagar
Amreli	Cochin	Jaipur	Kottayam	Nizamabad	Thane
Anand	Coimbatore	Jabalpur	Kottivakkam	Palakkad	Thiruvalla
Anantpur	Dahod	Jalgaon	Lucknow	Palanpur	Thiruprayar
Angamaly	Deesa	Jamnagar	Ludhiana	Pallikaranai	Thrissur
Ankleshwar	Delhi	Junagarh	Madurai	Pathanamthitta	Tirupati
Aurangabad	Dharmaj	Kalyan	Mangalore	Perumbavoor	Tirupur
Bangalore	Dhule	Kanjirappallay	Mehsana	Piravom	Trivandrum
Bhilwara	Durg	Kanpur	Miraj	Pune	Ulhasnagar
Bilaspur	Ernakulam	Khedshivapur	Morbi	Puttur	Vadodara
Bilimora	Erode	Kishanganj	Mallapuram	Raipur	Vasai
Bhayander	Gandhidham	Khopoli	Mumbai	Raigarh	Vijapur
Bhopal	Gandhinagar	Kozhikode	Mysore	Rajkot	Vijaynagar
Chandigarh	Goa	Kodimatha	Nadiad	Ratnagiri	Vishakhapatnam
Chandrapur	Guntur	Kolhapur	Nagpur	Sabarkhantha	Warangal
Changanasserry	Gulbarga	Kolkata	Nalgonda	Satara	Yavatmal
Changarmkulam	Guwahati	Korba	Namakkal	Secundrabad	

RELIANCE INDUSTRIES' FORAY INTO AUTO LPG



In spite of uncertainties on the future of ALPG way back in 2003, Reliance Industries Ltd (RIL) ventured ahead and put up its first ALPG outlet at Dhirubhai Ambani Knowledge City (DAKC), Navi Mumbai. The purpose was to use this outlet and the nearby market as a test case, where developmental activities could be tried out. Indeed, in a span of

6 months, this outlet grew in sales from 50 Ltrs/day to 3,500 Ltrs/day and is presently doing 10,000 Ltrs/day, being one of the highest selling ALPG outlets in this region. This was made possible by facilitating mass conversion of Auto rickshaws in the nearby Vashi, Koparkhairne and Ghansoli belts and a significant no. of car conversions (300 nos.) of RIL's own employees. It was soon very clear to RIL, both from the performance of employee vehicles and of the auto rickshaws running in Navi Mumbai on ALPG that ALPG had truly arrived and had a bright future in the country.

In an effort to understand customer behavior and to get their loyalty, various promotional schemes were successfully run during the subsequent months; the most popular among them was the "Group Accident Insurance Scheme" for Auto rickshaw drivers. What RIL achieved through these schemes was developing a strong bond with the customers who have, since, been patronizing RIL outlets. Armed with the lessons at DAKC, RIL took aggressive steps into the Industry and soon had 50 operational outlets spread across both small and big markets in the country.

ALPG customers have not disappointed RIL in any market. A more adventurous step was taken recently by RIL, when 4 outlets were setup on highway locations without any formal local traffic base; even in these locations volumes justified the investment.

RIL now believes strongly in the future of ALPG and is planning a fast track execution (for which RIL is generally known in the Industry) of ALDS in many more of its retail outlets covering a much larger geographical area.



RIL is ready for the big leap from 50 outlets to a larger ALDS representation in various towns and cities in the next 12 months. Similar expansion by other Oil Cos and private players will ensure that customers of ALPG can get their favorite fuel all across the major cities and towns of India.



General Secretary's Report



Dear Stakeholder,

Ever since our first meeting in October 2002 at IOC office in Mumbai, the coalition has come a long way with more than 24 members already on board, to include all critical stakeholders now.

IAC's membership now includes Indian Oil, Bharat Petroleum, Reliance, Essar, ELF, Caltex, Shell, Aegis & CleanFUEL as infrastructure providers, L&T & MIDCO on the Equipment side and Vialle, ACE, BRC, CLH, O3, Longas, Lovato, Stargas Shrimankar & Bhiwadi on the conversion side. IAC also has liberal and proactive support from ARAI, SIAM and US-AID, who have been extremely instrumental in IAC, today, being the only such "All Stakeholder" body of its kind in the world.

Nationwide Auto LPG covers more than 100 cities and towns today, with more than 350 stations already. Leading OE's like Maruti and Bajaj have taken initiative and launched their mainstream models like WagonR / Omni and 3 wheelers in LPG version respectively. More OE's are expected to follow. Also the industry has been experiencing a tremendous growth in Auto LPG consumption with a figure close to 200 TMT this March, up from 130 TMT last year. It is indeed a very exciting time for the Indian Auto LPG industry.

Among various IAC activities during the recent times, we organized Seminars for Inspection & Safety for the benefit of RTOs from both Maharashtra and Karnataka respectively. In coordination with ARAI- Pune, we also organized a workshop for all the Type Approval holders. IAC also participated in World LPG Association events at Shanghai, China and in Chicago, USA. To increase OE confidence in the availability of the fuel, IAC has also been following up with leading players like Maruti, Hyundai, Ford and GM, which has involved participation from them at their top-management levels as well.

More such activities are in the pipeline with IAC planning to organize workshops and training programs for LPG truck drivers, Station Operators and others. IAC together with the leading Kit manufacturers and RTOs is also trying to work out practices for better enforcement and tackling the menace of illegal, non-approved fitments.

The support and encouragement of all our members and other Industry stakeholders has been immense in the past few years, for which IAC is very grateful. We would also like to take this opportunity to express our sincere appreciation & gratitude to Mr. Balraj Bhanot, who has been guiding us since the year 2002 and of course, the very dynamic leadership of Mr. John Joseph, President IAC, whose proactive approach and zeal has been very instrumental in bringing the industry together.

IAC today is an excellent team with all our members working towards the realization of our mission and making the Industry tread a path of rapid, yet safe and sustainable development.

Best Regards

Suyash Gupta

**General Secretary, IAC
& Managing Director, CleanFUEL India Autogas (P) Ltd**

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