

# NGV System Italia Association steps on the gas to accelerate natural gas solutions

By Jon Knox

**Natural gas vehicle manufacturers continuously encouraged governments across the globe to promote natural gas fuel technologies and infrastructure development.**

NGV System Italia (Italian Association of Natural Gas Industry for transport [www.ngvsystem.com](http://www.ngvsystem.com)) promotes the use of natural gas in Italy. Members include companies directly involved in the production and distribution of natural gas for transport, as well as research organizations and automakers.

"Research into natural gas for vehicle transport sector is aimed at many objectives, such as innovation of components and the adaptation of refueling stations to face the challenge posed by the new energy sources (natural biogas and blends of natural gas and hydrogen), not to mention improving vehicle performance and the construction of vehicles ready to use

**Automotive Industries asked Ziosi why natural gas was such a good option for fuelling vehicles.**

**Ziosi:** Security of energy supply is an increasing global concern, particularly following recent surging oil prices and doubts about the reliance on imports from less politically stable areas. There is also evidence that worldwide production of oil and natural gas will undergo a major decline in coming decades as reserves become depleted. There is growing consensus that renewable energy sources are a viable answer and this is supported in part by increasing concern over the pollution and possible climate change implications due to the continuing use of conventional fossil fuels.

Natural gas is the most available alternative to oil, with lower greenhouse gas emissions than

any other hydrocarbon fuel. It has extremely low emissions of pollutants, reduced noise and vibrations, and will reduce the overall fuelling costs due to incentives granted by authorities. In addition, our industry can offer the use of renewable biomethane without any mixing restrictions or other complications.

Biomethane can be efficiently produced via gasification of lignocellulosic feedstock, or anaerobic digestion of other biomass. Fuel yields per ton of waste, or per hectare of land, will be substantially higher than for competing biofuels.

**AI: What role does NGV System Italia play in the alternative fuel sector?**

**Ziosi:** NGV System Italia believes that it is important to gain consensus on a development plan within the future guidelines of European Union strategy for sustainable mobility, as well as creating a steady base that allows investors to make their calculations on reliable parameters (incentives schemes, infrastructures development, fiscal advantages, etc.). What we would like to see is an increasing synergy between the operators in the natural gas sector and the national and European institutions. One of our main objectives will be to involve distribution operators so that they will become aware of the opportunities offered by natural gas for transport. Investment, modernization of the network and new regulations would provide better service for drivers of vehicles fueled by natural gas and create the conditions for shedding its niche status.

**Michele Ziosi, NGV System Italia Director**



**Valves**



**Compressor for natural gas and biomethane**



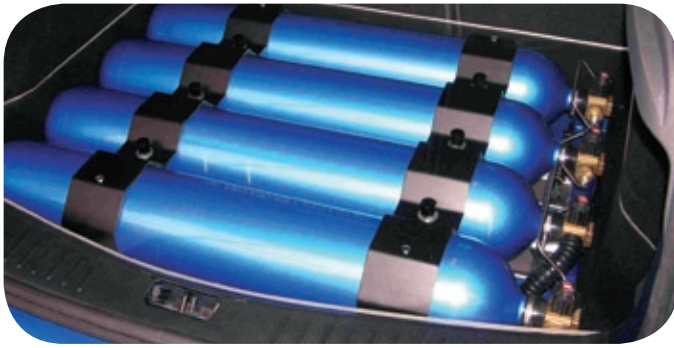
**Engine 1.4 bi-fuel gasoline/cng**

either biogas or natural gas/hydrogen mixtures," says Michele Ziosi director, NGV System Italia Association.

NGV System Italia has been working on persuading political decision-makers to appreciate the benefits of natural gas in terms of improved air quality. "Natural biogas is increasingly attracting interest due to its ability to substantially reduce greenhouse gas emissions, as well as the ample variety of biomasses from which it can be produced," says Ziosi.

In June 2009, NGV System Italia held a workshop with representatives of the Italian Government and executives of the industry to chalk out a range of measures to promote natural gas fuel technology and infrastructure development. "The meeting will open the door for further concrete political actions, now clearly identified, for real development of the NGVs market and the Italian industrial chain," said NGV Italia in a statement.

According to research consultant Nomisma Energia and Gruppo Italia Energia, the market for natural gas could grow threefold over the next five years, increasing current employment from 8,000 to 25,000 people. The market is expected to increase in value from the current €1.5 billion to €4 billion – with a supportive policy environment.



**Natural gas cylinders - compact design**



**CNG Bus – Irisbus**

**AI: What are some of the milestones NGV System Italia has reached?**

**Ziosi:** The Italian Ministry of Internal Affairs recently issued two new decrees on the safety norms for CNG refueling stations with important amendments that allow for the adoption of multi-dispenser and self service stations in public CNG refueling stations. Multi-dispenser and self service are two well developed aspects of the NGV sector that have been in application for a long period in European countries such as Austria, Germany, Czech Republic, Sweden, Switzerland and in many others such as Argentina, Brazil, and North America. However, NGV System Italia believes there is still room for improvement in this legislation. NGV System Italia wants to go further with the installation of Home Refueling Appliances. In addition, there are also the activities related to the technical regulations within the ISO and ECE-ONU arena.

**AI: How do Natural gas vehicles compare with LPG vehicles?**

**Ziosi:** Natural gas is the best-performing alternative to the traditional fuels. LPG is also a clean and safe fuel, with a very good distribution network. From a safety perspective, the main difference between Methane and LPG is that Methane (natural gas) is much lighter than air and any escaping gas would quickly rise and be absorbed in the atmosphere. LPG, on the other hand, is heavier



**Compressor for natural gas and biomethane**

than air and will fall to the ground and then spread sideways. Methane also has lower fire risks than petrol or diesel. CNG cylinders are many times stronger than LPG tanks. The base methane could, assuming identical energy efficiency, reduce tailpipe emissions by 25% in state-of-the-art vehicles, while for LPG the actual performance depends on the propane/butane ratio. Around 12.5% reduction of CO<sub>2</sub> emissions would represent state-of-the-art solutions – or half of the savings achieved by CNG cars. In terms of pollutants, NMHC (non-methane hydrocarbon) emissions are higher in a Euro 4 vehicle, with LPG vehicles emitting 20% less vs. gasoline, and CNG vehicles 80% less: the ratio is around 1 to 5 in favor of CNG.

**AI. Tell us about the international conference you host next June.**

**Ziosi:** The event is NGV 2010, the 12th Biennial Conference and Exhibition of the International Association for Natural Gas Vehicles (IANGV) is coming to Rome from June 8-10, 2010 ([www.ngv-2010roma.com](http://www.ngv-2010roma.com)). NGV System Italia bid for the event on the basis that Italy is the foundation of the global NGV industry.

Being the longest established NGV industry in the world, Italy is home to some of the world's leading OEMs, manufacturers of conversion equipment, cylinders, dispensers, compressors, components and more. **AI**

## Companies engaged in the natural gas vehicles sector

Italian industry is a **leader** in production and development of **natural gas technologies** in transport.

### The Italian Companies can offer:

- Filling stations from min to max size, from design to “turn-key” supply.
- Filling stations components; (compressors, dispensers, receptacles)
- Components, control modules and complete CNG fuel system for OEM and aftermarket. Valves, pipes, fittings and accessories for vehicles installations.
- Natural gas cylinders
- Natural gas engines R&D
- OEMs natural gas Engines for cars, LCVs, HDVs and buses
- OEMs vehicles (cars, LCVs, HDVs and buses)

