Egypt diversifies CNG application for vehicles

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South Africa and Egypt, Africa’s most active NGV countries

Egypt’s mobile restaurant with CNG

After successfully implement fuel switching from petrol and diesel to CNG-in public transport and companies fleets, Egypt now diversify the conversion to mobile restaurants. A demonstration project is currently on the way, in which, a vehicle that is used to sell food converted to CNG system. It is expected that similar vehicles across Egypt will be retrofitted to the “clean” CNG technology.

On the other hand, the government is forced to promptly deal with the persisting issue related to the cost of energy subsidy. Liquid fuel subsidy continues to increase, from LE 114 billion for Fiscal Year (FY) 2011/2012 to around LE 130 billion for FY 2012/2013. Thus, Minister of Petroleum Sheriff Ismail recently underlined the key importance of the adoption of new and renewable energy sources such as solar and wind power, as well as the utilization of unconventional fuel resources like shale gas. It is estimated that approximately 500 trillion cubic feet of shale gas is stored under Egypt’s land; of which 100 trillion cubic feet are technically fit for exploration and development.

South Africa and the Blue Corridor

With government support, related organization and private companies support and/or investment, South Africa has taken the interest of the Blue Corridor program. Below notes are mainly published in the Bluecorridor.org to promote and highlight the promising potential of CNG-for-transport market development in this country.

South Africa’s first commercial NGV dispensing station was established in November 2013 in the city of Ekurhuleni by gas company Novo Energy, in collaboration with a number of stakeholders such as fleet owners, public transport operators and pertinent government agencies. So far, the taxi industry has seen some of the most economic benefits of using natural gas in transportation, with an estimated yearly savings of about USD18.5 million. Even more stations are planned for 2013, spreading the uptake of natural gas as a transportation fuel in South Africa.

Although adoption of compressed natural gas (CNG) as a transport fuel is only beginning in South Africa, a number of NGV-focused initiatives are currently underway:

- The Benoni Taxi Association (BTA), which operates in the state of Gauteng, has committed to converting at least 20% of its fleet to CNG by 2014. Approximately 385 taxis and buses are fueled by CNG in the state, which contains the city of Johannesburg.
- The South African government’s National Climate Change Response program pushes for CNG use and emphasizes the importance of the transportation sector’s role in lowering greenhouse gas emissions.
- The Industrial Development Corporation encourages the use of biogas and CNG-fueled taxis and buses in public transportation and funds associated infrastructure development projects through the Green Energy Efficiency Program.
- The South African National Energy Research Institute collaborates with energy company as part of an ongoing initiative to help establish a CNG infrastructure for the automotive industry.

Apart from CNG, purified biogas (so-called biomethane) is also chosen to power Natural Gas Vehicles (NGVs), especially in Pretoria, a city in the northern part of Gauteng Province. Gauteng Province is also the place where South Africa’s first CNG filling station (opened for private fleets) is located.

Meanwhile, Johannesburg is also becoming a center for NGV-related events: the Institute for International Research’s Gas Week 2013 was held there, and the NGV 2014 South Africa www.ngv2014southafrica.com/wp/ will also take place in the city on 18-20 November of 2014.

What’s next for natural gas as a transportation fuel in Africa?

There are a number of public and private initiatives underway to increase the NGV population and necessary infrastructure in South Africa. Both will be key to advancing the use of clean natural gas in transport, not just in South Africa, but across the entire continent.

The next country Blue Corridor will address in our series on natural gas as a transportation fuel in Africa is also in the early stages of developing its NGV market: Morocco. Stay tuned for more!
**Restaurant mobile en Égypte**

Après avoir implémenté avec succès le passage de l’essence et du diesel vers le CNG au sein des flottes du transport public et des compagnies, l’Égypte maintenant se diversifie en réalisant la conversion de ses restaurants mobiles. Un projet de démonstration est actuellement en route par lequel un véhicule utilisé pour la vente de produits alimentaires a été converti pour l’utilisation du CNG. Il est attendu que des véhicules similaires seront convertis à la technologie “propre du CNG” partout en Égypte.

Par ailleurs, le gouvernement est obligé de s’occuper rapidement du problème persistant des subsides relatifs au coût de l’énergie. Les subsides accordés aux carburants liquides continuent à augmenter de 114 billions de LE pour l’année fiscale (FY)2011/2012 à environ 130 billions de LE pour FY 2012/2013. En conséquence le ministre du pétrole Sherif Ismail soulignait récemment l’importance clef de l’adoption de nouvelles sources d’énergies renouvelables telles que la puissance du soleil et de vent aussi bien que l’utilisation de ressources de carburants non conventionnels comme le gaz de schiste. Il est estimé qu’approximativement 500 millions de cubic feet de gaz de schiste sont stockés dans le sous-sol égyptien dont 100 millions de cubic feet sont techniquement adaptés à la recherche et au développement.

**L’Afrique du Sud et le Blue Corridor**


La toute première station de fourniture commerciale de CNG d’Afrique du Sud a été ouverte en novembre 2013, dans la ville de Ekutheleni par la société du gaz Novo Energy, en collaboration avec un nombre de partenaires tels que des propriétaires de flottes, des opérateurs de transports publics et des agences gouvernementales compétentes. Ainsi, l’industrie du taxi a vu quelques-uns des bénéfices les plus économiques par l’utilisation du gaz naturel dans le secteur du transport avec une estimation de bénéfices annuels de 18,5 millions de $US. Plusieurs stations ont été planifiées en 2013 permettant ainsi la fourniture de gaz carburant pour le transport en Afrique du Sud.

Quoique l’adoption du gaz naturel comme carburant pour NGVs a été récente, un nombre d’initiatives ciblées sur le NGV sont entreprises.

- La Benoni Taxi Association (BTA) qui opère dans l’État de Gauteng a décidé de convertir au moins 20% de sa flotte au CNG durant 2014. Approximativement, 385 taxis et bus roulent au CNG dans cet État qui englobe la ville de Johannesburg.


Ment à part le CNG, le biogaz purifié (appelé biométhane) est aussi choisi pour alimenter les NGVs et cela plus spécialement à Pretoria, une ville dans la partie nord de la province de Gauteng. C’est également dans cette province que la première station de fourniture de CNG a été localisée à destination d’une flotte privée.

Par ailleurs, Johannesburg est devenue aussi le lieu où se déroulent les événements relatifs aux NGVs. L’institut pour la Recherche International a tenu le Gaz Week 2013 et le NGV 2014 se tiendra donc en Afrique du Sud.


Qui a-t-il encore à dire au sujet du gaz naturel comme carburant en Afrique ?

Il y a un nombre d’initiatives publiques ou privées en cours pour accroître la population des NGVs ainsi que l’infrastructure. Tout deux sont la clé pour développer l’usage du gaz naturel “propre” dans le transport non seulement en Afrique du Sud mais partout sur le continent.

La prochaine région du Blue Corridor qui va se présenter dans nos séries sur le gaz naturel comme carburant et qui est aussi au début du développement du marché du NGV est : le Maroc. Restez branchés pour en savoir plus.
Zuid Afrika en Egypte, de meest actieve NGV landen van Afrika

Egyptes mobiele restaurants met CNG

Na een succesvolle overschakeling van benzine en diesel naar CNG, in het openbaar vervoer en bij bedrijf ‘s automobilie vloten, gaat Egypte nu de overschakeling van deze brandstof ook uitbreiden naar de conversie van mobiele restaurants. Een demonstratieproject is momenteel onderweg, waarbij een voertuig dat wordt gebruikt om voedsel te verkopen omgezet zal worden naar CNG. Verwacht wordt dat soortgelijke voertuigen in Egypte worden omgebouwd naar de “schone” CNG technologie.

Aan de andere kant, is de overheid gedwongen om een oplossing te vinden voor de kosten die de brandstof subsidie met zich mee brengen. De subsidies op vloeibare brandstof blijven toenemen, recent van LE 114000000000 voor het fiscale jaar (FY) 2011/2012 tot ongeveer LE 130 m voor het boekjaar 2012/2013. Mede ten gevolge daar van ondersteepre onlangs de minister van Petroleum, Sherif Ismail, het grote belang van de invoering van nieuwe en hernieuwbare energiebronnen, zoals zonne-energie, evenals het gebruik van onconventionele brandstoffen zoals schaliegas.

Naar schatting is er circa 500 miljard kubieke voet aan schalie gas reserves in de Egyptische bodem, waarvan 100 biljoen kubieke voet zijn technisch geschikt is voor de exploeratie en ontwikkeling.

South Africa en de “Blue Corridor”

Met steun van de overheid, met betrekking organisatie en de ondersteuning en/of investeringen van privé-bedrijven, heeft Zuid-Afrika het belang van de Blue Corridor programma omarmd. Onderstaand enkele korte berichten uit de Bluecorridor.org die tot doel hebben het veel belovende potentieel van het ontwikkelen van een cngfortransport markt te bevorderen en benadrukken: Zuid-Afrika’s eerste commerciële NGV verdeelstation werd opgericht in november 2013 in de stad Ekurhuleni, door gasbedrijf Novo Energie, in samenwerking met een aantal belanghebbenden, zoals fleetowners, openbaar vervoerbedrijven en relevante overheidsinstanties. Tot nu toe heeft de taxi-industrie het meeste economisch profijt behaald, door de door gebruik te maken van aardgas in het transport, met een geschatte jaarlijkse besparing van ongeveer USD18.5 miljoen. Nog meer nieuwe stations zijn gepland voor 2013, ter ondersteuning van de verdere overschakeling op aardgas als transport brandstof in Zuid-Afrika. Hoewel het gebruik van gecomprimeerd aardgas (CNG) als transportbrandstof net pas is begonnen in Zuid-Afrika, zijn er toch al meerdere op NGV - gerelateerde initiatieven in gang gezet:

- De Benoni Taxi Association (BTA), die actief is in de staat van Gauteng, heeft toegezegd 20% van haar vloot te converteren naar CNG in 2014. Ongeveer 385 taxi’s en bussen rijden nu op CNG in de staat Gauteng, die de stad Johannesburg omvat.
- Het National Climate Change Response programma van de Zuid-Afrikaanse regering propageert het gebruik van CNG en benadrukt het belang van de rol van de transportsector in het verlagen van de uitstoot van broeikasgassen.
- Het Zuid-Afrikaanse National Energy Research Institute werkt samen met energiebedrijven als onderdeel van een lopend initiatief om een CNG - infrastructuur voor de auto-industrie te ontwikkelen.

Afgezien van CNG, wordt gezuiverd biogas (zogenaamde bio methaan) vooral in Pretoria, (gelegen in het noordelijke deel van de provincie Gauten) ook ontwikkeld als brandstof voor Natural Gas Vehicles (NGVs). Provincie Gauteng is ook de provincie waar het eerste CNG tankstation in Zuid-Afrika (particuliere vloten) is gevestigd.


Wat biedt de toekomst voor aardgas als transportbrandstof in Afrika? Er zijn een aantal openbare en particuliere initiatives aan de gang om het aantal NGV voertuigen uit te verhogen en de noodzakelijke infrastructuur in Zuid-Afrika verder uit te breiden. Beide zijn belangrijk bij de het bevorderen van het gebruik van schone aardgas in het vervoer, niet alleen in Zuid-Afrika, maar over het hele continent. De eerst volgende Landen Blue Corridor, in onze serie over aardgas als transportbrandstof in Afrika, zal gaan over een land dat ook in een vroeg stadium is in de ontwikkeling van de NGV markt: Marokko. Volgende keer meer hierover!
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To diversify the applications of the CNG for vehicles in Egypt, a pilot project was launched aiming at powering mobile restaurants with CNG. CNG cylinders and conversion kits were installed in a model vehicle to demonstrate CNG adaptability. Big demand is expected to come from all over the country. It is anticipated that various mobile restaurants will be converted especially since CNG is highly economical compared to liquid fuels as well as being environment friendly. The construction of relevant standards of operations & safety is currently underway. Related authorities involve in the making of the norms include EGAS and affiliated NGV companies. On the other hand, several CNG stations are expected to be constructed within this year. Projects relates to this will be the realization of business agreements previously concluded in 2013, which were formed by companies or authorities operating fueled stations. The agreements incorporate the installation of CNG fueling services in petrol stations plus a part regarding gas sales and vehicle conversion. Given the skyrocketing prices of lands fit for the stations, the NGV companies are driven to incorporate the CNG filling services within existing petrol stations. Hence, CNG dispensing facilities were added to fueling stations affiliated to TOTAL, the state-owned “Misr Petroleum & Co-Operative” companies and National Petroleum Company affiliated to the Armed Forces. Targeting yet to cross the boarders and capitalize its genuine experiences accumulated since mid-90s, Egypt’s major NGV company Gas Tec. sought tendering to execute NGV projects in other countries. Countries being eyed include those in the Emirates that recently took stride in this field, aiming at retrofitting its fleets to natural gas. Pursuant yet to the stable NGV growth, NGVs in Egypt reached 198,852 by end of December 2013 with 172 stations and 73 conversion centers. The lingering issue of energy subsidies urges the government to look for cheaper energy sources as the price of liquid fuels subsidy amounted to LE 114 billion for fiscal year 2011/2012 and about LE 130 billion for 2012/2013. In a recent statement, the Egyptian Minister of Petroleum, Eng./Sherif Ismail referred that the state subsidizes daily both diesel with LE 180 million and the petrol with LE 100 million. He reiterated the importance for a prompt adoption of new & renewable energy sources like solar power and wind as well as shale gas. According to foreign estimates, Egypt has around 500 trillion cubic feet of shale gas, of which 100 trillion cubic feet are technically fit for exploration and development.

"By: Hamdy Kamal, Gas Tec, Egypt"
Egypt NGV SWOT analysis update

Strengths
- Environmental aspects, poor air quality
- Low CNG price
- Egypt's potential gas reserves (60-120 trillion cubic feet)
- Available country standards
- Credit payment system of vehicle conversion
- Government subsidies for liquid fuels
- Potential export opportunities for liquid fuels
- Highly qualified labor & experts.
- Strategic national project (in three phases)
- New applications for CNG as a clean energy.

Weakness
- High cost of fuelling station (all equipment is imported)
- Fluctuating exchange rate
- Scarcity of land
- Governmental administration in issuing license
- Poor CNG awareness
- Local OEMs do not produce dual CNG/liquid fuel engines
- Business is government controlled
- Lack of strong government support to expand utilization of CNG.

Opportunities
- Global environmental concerns
- New vehicles segments e.g. fleets, private cars
- Replacement of diesel vehicles by dual fuel (gas/gasoline) vehicles.
- Long-term petroleum price increase
- Increase in industry demand for liquid fuels
- More government support
- New applications for utilizing CNG as an alternative clean energy.

Challenges
- Optimize economics of CNG refuelling station
- Attract new business segments to CNG (e.g. private, diesel, etc)
- Local manufacture of components (kits, compressors, etc)
- Introduce new diesel conversion technology
- OEMs to produce bi-fuel and CNG dedicated vehicles.
- Market deregulation
- Gas network development
- Government declaration of decrees to support the CNG industry and generalize CNG utilization.

Thanks to: Hamdy Kamal, Gastec
South African CNG market is bound to flourish

National Energy Regulator of South Africa (Nersa) has underlined that while the growth of the compressed natural gas (CNG) market in South Africa has been slow, it is steadily picking up, especially in the transport sector.

Piped gas regulation executive manager of Nersa, Nomfundo Maseti, last year outlined the various CNG projects and initiatives that are ongoing in South Africa. The CNG market can flourish, but it also depends on supply growth and government support. The market could expand to other provinces in South Africa as there are already an existing pipeline infrastructures in KwaZulu-Natal, Mpumalanga and the Free State. Government initiatives and funding were already under way since 2013. These initiatives include the National Climate Change Response flagship program, which has advocated CNG use and recognized transport sector’s role in contributing to the reduction of greenhouse-gas emissions in South Africa. The Industrial Development Corporation has also promoted the introduction of biogas- and CNG-powered taxis and buses for public transport and will fund any associated infrastructure development projects through the Green Energy Efficiency Programme.

Moreover, the South African National Energy Research Institute (SANEDI) has been partnering with energy company Virtual Gas Network (VGN), a division of CNG Holdings and CNG Technology, since 2009, in an ongoing initiative to help establish CNG infrastructure for the automotive industry.

CNG infrastructure in South Africa is still insufficient, however, compared with its pipelined counterparts, despite the long-term benefits it may yield in contributing to the objective of reducing carbon dioxide emissions.

Local access to gas supply is also a challenge facing the growth of CNG in South Africa, as it can take between 18 and 24 months for distributors to complete a supply contract with main gas supplier Sasol Gas.

Maseti believes Sasol’s monopoly on supplying gas to the local market hinders market growth, as the price charged by Sasol Gas is, at times, not competitive, according to CNG traders.

“Further, compared with conventional liquid fuel, it costs more to set up CNG facilities in terms of training, storage and dispensing facilities,” she said at the event.

Other challenges facing the CNG sector in South Africa include the public’s negative perception regarding the safety of CNG and users at commuter level often confusing CNG with LPG. Nevertheless, growth is steady on the rise. So far, about 385 Gauteng-based taxis and buses have been converted to run on CNG, with the Benoni Taxi Association (BTA) committing to convert at least 20 percent of its fleet within this year (2014).

Besides ongoing initiatives by licensed local CNG traders, VGN and Natural Gas Vehicles, both owned by CNG Holdings, integrated gas company Novo Energy launched South Africa’s first commercial CNG dispensing station in November last year, offering the City of Ekurhuleni the opportunity to use an alternative fuel source for transport.

Novo Energy partnered with several stakeholders, including public transport operators, fleet owners and related government sectors to initiate the project, but says the taxi industry has realised more value through the regular use of CNG as an alternative fuel, including economic benefits and longevity of their vehicle assets, through operating their vehicles with a cleaner fuel.

The price of CNG, which is currently R8.66 a liter, averages 30 percent less than conventional fuel equivalents, and Novo Energy reports that the average daily spend on fuel for a taxi driving over 300 km daily, is R600, as reported at the Engineering News.

Meanwhile, the BTA spends a daily average of R2.5-million on fuel for its fleet, which adds up to R619-million in yearly spend.

Considering these statistics, Novo Energy spokesperson Kgakgamatso Phatlane said that the BTA’s prospective yearly saving on fuel through the use of CNG will, therefore, amount to R185-million.

Following the COP17 CPMP7 conference in 2011, among other commitments, South Africa committed to championing innovative solutions to introduce cleaner alternative fuels, thereby reducing carbon emissions.

Novo Energy has, therefore, risen to government’s call by opening the first commercial NGV dispensing station in the City of Ekurhuleni offering comparable services to conventional petrol and diesel stations.

The company says using CNG as an alternative fuel source for vehicles has been encouraged by original equipment manufacturers, such as Tata, Volkswagen South Africa and Mercedes-Benz South Africa, which are conducting feasibility-studies for introducing dedicated NGVs onto the South African market.
A new gas bill

The Gas Amendment Bill, to be tabled in Parliament in 2014, aims to provide for the orderly development of South Africa’s gas industry and changing technologies in the sector.

Last year, the South African Cabinet approved the Gas Amendment Bill 2013. The Amendment Bill aims to address the loopholes, omissions and challenges experienced in the process of implementing and enforcing the Gas Act by the Department of Energy and the National Energy Regulator of South Africa.

It is also meant to promote and facilitate gas infrastructure development and investment. It will review compliance, monitoring and enforcement in the natural gas sector, to incorporate new transportation technologies of natural gas as well as other unconventional gases not included in the current Gas Act. It seeks to support mobile gas storage through regulations to enhance health and safety matters.

In the Bill “Gas” means – all hydrocarbon gases (transported by pipeline), including natural gas, artificial gas, hydrogen rich gas, methane rich gas, synthetic gas, coal bed methane gas, liquefied natural gas, compressed natural gas (CNG), re-gasified liquefied natural gas (LNG) and liquefied petroleum gas (LPG) or any combination of these.

SANERI’s CNG project

The South African National Energy Research Institute (SANERI) is hosting a Green Transport Programme. Part of it is Compressed Natural Gas (CNG), a clean alternative fuel that can be used to power the transport sector.

CNG has been used for many years across the globe as an alternative energy source and fuel for vehicles. CNG has thus been identified by the program as one of the eco-friendly fuels to promote and help in setting up the conversion and refueling infrastructure. At the moment South Africa’s CNG automotive industry is almost nonexistence. SANERI has partnered with industry to help set up the CNG infrastructure. One of the partners is CNG Holdings. This is a company that is committed to promote the use of Natural Gas and provide the required technology to achieve this goal.

Its activities regarding CNG includes a demonstration program with conversions of petrol vehicles to CNG system, to be refueled at Langlaagte CNG filling station.

In 2011, Vehicle branding experts, Graffiti, recently branded 14 energy efficient vehicles in bold green: two belonging to SANERI’s Green Transport Centre and 12 owned by the Gauteng Province Department of Roads and Transport (G-Fleet), as part of the Gauteng Province’s Green Transport initiative.

This green branding exercise is aimed at highlighting the fact that each of the 14 vehicles are eco-friendly and operate on Biodiesel, Compressed Natural Gas (CNG) and Liquefied Petroleum Gas (LPG).

At that time, South Africa’s first CNG filling station at Langlaagte, South of Johannesburg City has been servicing four CNG vehicles.

By end of May 2010, there were already 10 vehicles converted under SANERI’s program plying in South Africa. Those include:

- G-Fleet belong to Gauteng Department of Transport
  - Toyota Corolla
  - Corsa Lite
  - Volkswagen Golf 4
  - Volkswagen Golf 1
- Riverlea Taxi Association
  - Toyota Hi-Ace
- Private owned minibus
  - Toyota Quantum
- SANERI’s own fleet
  - Mercedes Benz C200
- Volkswagen / MAN bus
- Two units of Barloworld Equipment Company
  - 1.8 ton forklifts
- After that, four units of Riverlea Taxi Association, a passenger vehicle, and a 2.5-ton forklift of Barloworld Equipment were converted.

SANERI’s Green Transport Centre is a one-stop facility for information sharing, technology development and technology demonstration and deployment in relation to the use and testing of alternative fuels and vehicles. The newly-branded vehicles have been converted to utilize ‘green’ alternatives and have been branded in the most startling and attention-grabbing of greens to make them difficult to miss and to essentially take SANERI’s green transport message where traditional media may have failed to reach.
French company Chomarat, working with the US firm VX Aerospace, has developed the VX-1 KittyHawk, a 1:4 scale blended wing aircraft fabricated with Chomarat’s C-Ply thin-ply, low-angle advanced composite reinforcement. The VX-1 KittyHawk aircraft is designed by VX Aerospace and fabricated with C-Ply, Chomarat’s thin-ply, low-angle advanced composite reinforcement material.

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What makes KittyHawk™ so different from other aircraft is its shape: it has no wings! The fuselage and wings are combined into one shape called a ‘lifting body’ or ‘blended wing’ aircraft. The aircraft features a blended wing design, which offers greater usable internal volume, greater payload capability, better structural efficiency, better durability and better manufacturability. The construction is thus facilitated as this design will have fewer parts and will therefore be easier to assemble, according to Chomarat. In addition, the aircraft can be scaled to accommodate the intended mission. Manned or unmanned, the VX-1 KittyHawk’s massive internal volume is a huge advantage.

“The volume will also allow KittyHawk to lead the way in adopting CNG as an aviation fuel. Existing technology CNG cylinders fit inside the aircraft with no aerodynamic compromise. At less than one-third the cost of avgas, the KittyHawk will have unparalleled operational economy with emissions that are 40 percent cleaner,” says Bob Skillen, VX Aerospace CEO.

Flight testing of the KittyHawk will begin in March. A 1:4 scale version of the aircraft will be on display at JEC Europe 2014 in Paris this March. Chomarat is an international group in textile innovation. The composite brand provides a large spectrum of technical reinforcements (glass, aramid, carbon), especially designed to match a variety of composite process requirements for a broad range of applications.
GE Energy's business will deliver CNG dispensers to Sochi 2014 Winter Olympics

Wayne announced it has been selected to supply the technology that will serve fleet and passenger vehicles, as well as buses transporting athletes and spectators. The Wayne Global Star™ CNG X11-11 fuel dispenser was displayed during a ceremony at the fueling site for the Games. Russian government officials have recommended a natural gas fueling option at all fuel retail sites in the country, with the Olympic site in Sochi as a pioneer location.

“Our rich history of CNG expertise, along with our ability to provide leading technology in durable dispensers built for any climate, have uniquely positioned us to provide environmentally-friendly fuel initiatives for major events such as the Olympic Winter Games,” said Neil Thomas, Wayne Global President. “We are very pleased to serve the world’s best athletes and fans in Sochi.”

Wayne has previously delivered fueling technology and equipment for the Olympics. Two years ago the Wayne Helix™ fuel dispenser was the official fuel dispenser of BP’s “Fuelling the Future” Showcase in London during the 2012 Olympic and Paralympic Games.

“We are proud to support the alternative fueling efforts at the Sochi 2014 Olympic Winter Games and the infrastructure needed for Sochi to deliver cleaner, cost-effective, environmentally friendly fuel solutions,” added Andrei Belomestnykh, General Manager, Wayne, Russia and CIS.

Source: GE

Audi A3 g-tron goes on sale in Germany

Advance sales at dealerships in the country kicked off on February 13, the automobile manufacturer has reported. The Audi A3 g-tron forms part of a new, integrated and sustainable mobility concept from the brand with the four rings. Its 1.4-liter TFSI engine developing 81 kW (110 hp) can be operated using either natural gas, e-gas generated by Audi or gasoline. In pure e-gas mode the g-tron is entirely CO2-neutral.

Audi e-gas is synthetic methane produced at the Audi e-gas facility located in Werlte in Lower Saxony, Germany – the world’s first industrial power-to-gas plant. An A3 Sportback g-tron fueled by Audi e-gas is currently the most environmentally friendly form of long-distance mobility. This is because the process for generating Audi e-gas using green electricity binds as much CO2 as is released when the Audi A3 g-tron is driven in gas mode. On average the Audi A3 g-tron consumes between 3.2 and 3.3 kilograms of gas per 100 kilometers. Fuel costs at present start at around 3.50 euros per 100 kilometers.

The buying principle for Audi e-gas is straightforward and corresponds to how green electricity is distributed: Audi records the quantities of gas that the customer pays for using their Audi e-gas fuel card and ensures that exactly this amount of e-gas is fed into the German natural gas network.

Customers who choose this option can obtain an Audi e-gas fuel card for a flat price of 14.95 euros per month. In addition, the costs for the quantities of gas refueled by each customer are deducted via the Audi e-gas fuel card. The card can be used to purchase Audi e-gas at over 650 fuel stations in Germany.

Prof. Dr. Ulrich Hackenberg, Board Member for Technical Development at Audi AG, emphasizes: “In addition to our e-mobility developments, the Audi e-gas project is an important pillar of our sustainability strategy – as is the development of other synthetic fuels.”

Source: Audi AG.
WEH® Nozzle-Hose-Assemblies for installation at natural gas fuelling stations

WEH offers complete and fully functional CNG refuelling assemblies for cars, buses and trucks. Each assembly consists of a fuelling nozzle, hose and breakaway coupling ready for turnkey installation at fuelling stations. Assembled and certified - the complete solution! The Nozzle-Hose-Assemblies come preassembled according to customer specifications. Our customers may specify the length of the filling hose and choose from a variety of CNG fuelling nozzles and breakaway couplings based on their application requirements. The breakaway couplings can be assembled for installation directly to the dispenser or as an ‘inline’ part of the hose assembly. The individual refuelling components all feature high flow rates, short filling times and high-grade manufacturing materials. WEH® Nozzle-Hose-Assemblies are designed for fastfill CNG fuelling of vehicles at self-service stations and meet the requirements of the Pressure Equipment Directive PED97/23/EC.

Contact: WEH GmbH Gas Technology - Josef-Henle-Str. 1 - 89257 Illertissen - Germany - www.weh.com
Contact Person: Birgit Burkhart
Phone: +49 (0) 7303 95190-21
eMail: presseinfo@weh.com

NGVAfrica is quarterly journal that cover stories and information on natural gas vehicle related issues in the African region. Editorial Outlook: Objective reporting, comments from main NGV players and stakeholders, and statistics in Africa.

Media Profiles 2014

JULY
Edition: 9
Deadline: June 20th
Special report:
Vehicle conversion segment

NOVEMBER
Edition: 10
Deadline: October 3rd
Special report:
NGV 2014 South Africa
With extra magazine distribution in the events

DECEMBER
Edition: 11
Deadline: November 27th
Special report:
The balance of NGV2014 South Africa expo: Market response
NGV statistics

Notes: The column ‘theoretical monthly consumption’ is calculating total monthly consumption if cars consume 180, buses 3000, trucks 800, and other vehicles 50 Nm3 per month. There is, of course, a huge difference between different truck types. A 44 ton truck may consume up to 8000 (not 800) Nm3 per month.

<table>
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<th>Country</th>
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Cities with CNG refuelling stations

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A multimedia portal in the service of the industry. NGV Journal, the first worldwide NGV newspaper.

This online newspaper exclusively covers the NGV market in the United States and Canada. It is one of the most active ones, whose share in the NGV sector grows exponentially every year.

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