ASIA PACIFIC NATURAL GAS VEHCLES ASSOCIATION (ANGVA)
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for cleaner air and better life in the Asia Pacific Region

ANGVA2U Info *03/2023. 19th March 2023 (for ANGVA members only)*

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1.0 Selected News / Articles

1.1 India

211 CNG stations to come up in North Andhra Pradesh by 2030: Union Minister Rameshwar Teli

14th March 2023. By Express News Service

Minister Rameshwar Teli said Indian Institute of Petroleum and Energy was established in Visakhapatnam for research, development and development of human resources with needed skill sets and expertise

VIJAYAWADA: As many as 211 CNG (compressed natural gas) stations will be installed in Srikakulam, Viziangaram, and Visakhapantam by 2030, Minister of State for Petroleum Rameshwar Teli said in Parliament on Monday while responding to YSRC MP V Vijaya Sai Reddy's query. He said authorised centres, which have qualified for establishment of CNG stations, have set up 13 CNG stations in North Andhra districts.

Piped gas connection and CNG stations are part of City Gas Distribution Network and the works will be done by the authorised organisations under the supervision of the Petroleum and Natural Gas Regulatory Board, Rameshwar explained and said permission for the city gas distribution across AP will be given after completion of 11-A CGD bidding round. Minister said Indian Institute of Petroleum and Energy was established in Visakhapatnam for research, development and development of human resources with needed skill sets and expertise.

Source: *https://www.newindianexpress.com/states/andhra-pradesh/2023/mar/14/211-cng-stations-to-comeup-in-north-andhra-pradeshby-2030-union-minister-rameshwar-teli-2555938.html*

1.2 Uzbekistan

Yutong to Deliver 800 Electric and CNG Buses to Uzbekistan

8th March 2023. By Tiana May

Yutong has commenced delivery of 300 Yuwei E12 electric buses and 500 CNG buses to Tashkent, Uzbekistan

The vehicles will be delivered to Tashkent to facilitate travel and help electrify Uzbekistan's public transport © Yutong

Yutong has commenced delivery of 300 Yuwei E12 electric buses and 500 CNG buses to Tashkent, Uzbekistan.

The vehicles will be delivered in batches throughout 2023 to improve public transport in Uzbekistan. This is the country's first order for a large quantity of 'new energy vehicles'.

By procuring 300 battery electric buses, Uzbekistan hopes to decarbonise public transport and become a leader of electrification in Central Asia.

The vehicles will be equipped with high-power air conditioning to promote passenger comfort © Yutong

As Tashkent has a hot and dry climate, Yutong has equipped the vehicles with several customised features, including an independent liquid cooling system for the traction batteries.

In addition, the new vehicles feature a motor sediment protection and anti-condensation structure to reduce the potential for faults.

Source: *https://bus-news.com/yutong-to-deliver-800-electric-and-cng-buses-to-uzbekistan/*

1.3 Egypt

Egypt launches first mobile centre to convert cars to run on natural gas

16th March 2023. Ahram Online.

Egypt inaugurated on Thursday its first mobile centre for converting vehicles to operate on natural gas as part of its efforts to expand reliance on clean and cheap energy.

A group photo for Egypt's Minister of Petroleum and Mineral Resources among other ministry officials before the first mobile centre for converting vehicles to operate on natural gas. (Photo courtesy of Ministry of Petroleum and Mineral Resources)

The centre is a mobile car and includes all components and kits for conversion, a statement by the Ministry of Petroleum and Mineral Resources said, describing it as the first of its kind in Egypt and the Middle East.

The centre, owned by the Egyptian International Company for Gas Technology (GasTech), can convert about 20 cars daily.

Equipped with all the necessary equipment and experienced staff, the centre can move to companies and institutions and provide the service at their places. It can also move to provide maintenance and repair services, the statement pointed out.

Minister of Petroleum and Mineral Resources Tarek El-Molla attended the project's inauguration ceremony.

The centre is one of the innovative solutions to support the petroleum ministry's plan to endorse the presidential initiative to convert vehicles' engines to run on natural gas instead of, or along with, gasoline, El-Molla said.

The presidential plan – which also includes replacing rickety cars with new ones with bi-fuel system models – targets to reduce fuel imports, decrease harmful emissions, ensure road safety, and tap into the potential of under-exploited auto factories.

It also targets to make use of the country's plentiful natural gas production resulting from recent oil discoveries.

The presidential initiative has witnessed "a major" boom since its launch, the minister said during the inauguration ceremony.

Minister El-Molla said that work is currently underway to increase the conversion rate to 100,000 cars yearly since the current rate hovers at around 6,700 vehicles monthly (nearly 80,000 annually), according to the statement.

The increase in the number of converted cars is accompanied by an increase in the number of centres for conversion and maintenance operations, which will reach about 130 conversion centres by the end of 2022.

It is also accompanied by an increase in the number of natural gas fueling stations, the minister explained.

Currently, Egypt has 800 gas stations nationwide, with plans to increase them to 1,000 soon.

The ministry also targets increasing mobile conversion centres to roll out such services to more citizens and companies.

Source: *https://english.ahram.org.eg/NewsContent/1/1235/491845/Egypt/Urban--Transport/Egypt-launches-first-mobile-centre-to-convert-cars.aspx*

1.4 Nigeria

International Breweries promotes Climate Action with gas-powered trucks

16th March 2023. By Daily Post Staff

In furtherance of its sustainability drive, International Breweries Plc, a proud member of the AB InBev Group, the world's largest beer maker with over 500 beer brands, has commenced the use of gas-powered trucks to distribute its products across the country. This is after the company unveiled its first instalment delivery of 540 gas-powered trucks on Tuesday at its Gateway Plant in Ogun State.

GT2: L-R: Permanent Secretary, Office of Ogun State Governor, Kehinde Onasanya; Ogun State Commissioner for Industry, Trade and Investment, Mrs Kikelomo Longe; Supply Director, International Breweries Plc (IBPLC), Tony Agah; Logistics Director, Anheuser-Busch InBev BU West Africa, Lize Kruger; Procurement Director, IBPLC, Akintunde Fayanmira, and Gateway Plant Manager, IBPLC, Akintayo Oguntunde, at the unveiling of new IBPLC Gas-powered trucks in Ogun State.

The company will receive a total of 540 state-of-the-art gas-powered trucks with a yearly instalment delivery of 180 trucks in three years arriving. This initiative is aimed at reducing the emission of carbon monoxide (CO2) on Nigerian roads, a common practice that leads to the deterioration of public health, in line with the UN's Sustainable Goal 13 which speaks to Climate Action.

Speaking at the launch, Commissioner for Industry, Trade and Investment, Mrs Kikelomo Longe, who represented the Governor of Ogun State, Prince Dapo Abiodun, emphasized the importance of International Breweries to Ogun State and commended the giant brewer for yet another laudable and pioneering initiative.

According to her, "The commissioning of 40 new eco-friendly gas-powered trucks is raising the bar and setting a standard that others must seek to follow. The positive effect on the environment is a major milestone which affects health, making the air cleaner. International Breweries has always been keen on eco-practices such as biogas converted from your bi-products, and using LNG to power your machines."

Longe also noted that IBPLC should be a case study for industries operating in Ogun State.

On his part, the Supply Director, International Breweries Plc, Tony Agah, said: "As a forward-looking organisation, we consistently explore ways to improve our operations and reduce the environmental impact of our activities, and our switch to gas-powered trucks is a significant step in achieving both of these goals. By using compressed natural gas (CNG) as fuel, our trucks emit significantly fewer pollutants than traditional diesel engines. This will help us reduce our carbon footprint and support Nigeria's efforts to address climate change."

The combustion of natural gas dissipates much faster in the air, leaving no particles or residue behind, therefore, the acquisition of gas-powered trucks will improve the air quality in the environment for human, animal, and plant benefits.

Also speaking about the landmark achievement, Procurement Director, IBPLC, Akintunde Fayanmira, said: "As a responsible corporate citizen, we are consistently seeking ways to minimise the impact our operations have on the environment in line with the United Nations Sustainable Development Goals 7 and 13 which speak to Affordable and Clean Energy as well as Climate Action and the need to reduce greenhouse gas emissions and ultimately, global warming by adopting sustainable resource management. This will also see to the total elimination of sulphur dioxide, and particulate matter (soot)."

The launch was also graced by the Permanent Secretary, Bureau of Political Affairs and Administration, Office of the Governor, Kehinde Onasanya; representative of the Commissioner for Transport, Ogun State, Engineer Wale Sokunbi, and Traffic Compliance and Enforcement Corps (TRACE), Commander Seni Ogunyemi, among others.

Data from the Energy Information Administration shows that since 2006, increased use of natural gas has driven carbon dioxide savings.

International Breweries owns an estimated 900 heavy goods trucks across the country. The company's focus is to convert 20 per cent of trucks in its fleet into gas-powered trucks on an annual basis.

Source: *https://dailypost.ng/2023/03/16/international-breweries-promotes-climate-action-with-gas-powered-trucks/*

1.5 Peru

Peru allocates S/200 million for the conversion of 100,000 LPG vehicles to CNG

23rd February 2023.

The Ministry of Energy and Mines (MINEM) announced that a discount voucher of S/ 2,000 (U$S 530) is now available for owners of cars running on LPG interested in converting their vehicles to natural gas with the NGV Savings Program of the Fund of Social Energy Inclusion (FISE), within the framework of the widespread adoption natural gas plan.

Through the subscription of the addendum to the INFOGAS Trust Agreement promoted by the MINEM, carried out on February 15, 2023, the ministry makes available an additional amount of S/ 200 million (U$S 53,000) to finance these conversions of LPG to CNG, facilitating access to a national, economical, clean and safe fuel, which is not subject to the volatility of the international prices of oil and LPG.

By delivering this non-refundable bonus, the MINEM seeks to cover 50% of the maximum amount of financing for the conversion of vehicles through the NGV Savings Program, which is S/ 4,000 (U$S 1,200) for this 2023. The balance will be financed through the program, without initial fee, without interest and with a return within a maximum period of 3 years through CNG refills in favor of drivers.

The MINEM estimates that, with the application of this mechanism, the number of conversions to natural gas financed by the program will increase by approximately 50% in the next three months. These actions are expected to contribute to increasing the number of NGVs in the Peruvian automotive fleet and reach more than 450,000 vehicles this year.

The discount voucher is available in all regions where the NGV Savings Program is implemented, such as Lima, Callao, Piura, Lambayeque, La Libertad, Ancash, Junín, Ica and Cusco. Likewise, there will be a presence in other regions to the extent that they have a CNG service station. To access the bonus, drivers must visit authorized workshops that are affiliated with the NGV Savings Program to request a quote and inspection of the vehicle.

It should be noted that Peru has LPG production, but imports up to 30%, mainly from the United States and Bolivia, so the implementation of the discount voucher will allow part of the LPG consumption to be transferred to CNG, helping to reduce the deficit in the national energy balance.

In addition, increasing the consumption of natural gas will contribute to the process of the widespread growth of this energy, valuing a resource that the country produces in abundance and promoting the change of the energy matrix in transport to progressively reduce dependence on oil.

In this very promising scenario in terms of the growing adoption of natural gas, AltFuels Peru 2023 will be held from April 19 to 22, at Villa Complejo Ferial, in the city of Lima. The event will include conferences led by more than 70 speakers, experts in natural gas, alternative fuels

and sustainable mobility, as well as an exhibition with more than 120 companies that will exhibit their latest generation products and services, including vehicles, engines, refueling equipment, components and conversion systems, among others. For more information, please contact info@altfuelscg.com.
Source: *https://altfuelscg.com/en/conversions/peru-allocates-s-200-million-for-the-conversion-of-100000-lpg-vehicles-to-cng/*

1.6 Mexico

Engie developing Mexico's first biomethane project to connect to natural gas grid

13th March 2023. Meghan Sapp.

In Mexico, Natural Gas Intel reports Engie is developing the first biomethane project in Mexico to be connected to the natural gas grid. Although the company is exploring opportunities for hydrogen in the country, it is first focusing on biogas not only because it already has extensive experience in Europe, but also because industrial consumers don't need to make any changes to their infrastructure in order to use the gas supplied via the natural gas grid, allowing them to decarbonize easier.
Source: *https://www.biofuelsdigest.com/bdigest/2023/03/13/engie-developing-mexicos-first-biomethane-project-to-connect-to-natural-gas-grid/*

1.7 Europe

Shell acquires Europe's largest biomethane producer Nature Energy

21st February 2023. By Aida Čučuk

Shell Petroleum NV, a wholly-owned subsidiary of Shell plc, has completed the acquisition of 100% of the shares of a Denmark-based renewable natural gas producer (RNG, also known as biomethane) Nature Energy Biogas A/S.

By purchasing the shares, Shell has acquired Nature Energy's portfolio of operating plants, associated feedstock supply and infrastructure, its pipeline of growth projects and its in-house expertise in the design, construction and operation of innovative and differentiated RNG plant technology.

According to Shell, the acquisition supports its ambitions to build an integrated RNG value chain at a global scale and to profitably grow its low-carbon offerings to customers across multiple sectors. In addition, the acquisition is expected to be accretive to Shell's earnings from completion and to deliver double-digit returns.

To note, in its future endeavours, Nature Energy will operate as a wholly-owned subsidiary of Shell, initially under its existing brand.

Nature Energy, founded in 1979 as a natural gas distributor, established its first biogas plant in Denmark in 2015 and now has 14 operating plants with associated infrastructure, feedstock arrangements and 2022 production of around 6.5 mln MMBtu/yr (3,000 boe/d1). The company also has a pipeline of around 30 new plant projects in Europe and North America.

Shell said the transaction fits Shell's Powering Progress strategy to accelerate its energy transition and will be absorbed within its 2023 capital range of $23-27 billion.

RNG is chemically identical to conventional natural gas and can be used in existing transmission and distribution infrastructure, and according to Shell, it makes it a competitive option to help decarbonise multiple hard-to-abate sectors including commercial road transport, marine, heating and heavy industry.

Shell has an existing RNG production business in North America, as well as an existing RNG trading portfolio in Europe.

Shell has a target to be a net-zero emissions energy business by 2050.
Source: *https://www.offshore-energy.biz/shell-acquires-europes-largest-biomethane-producer-nature-energy/?utm_source=lngworldnews&utm_medium=email&utm_campaign=newsletter_2023-02-22*

1.8 Europe

EBA welcomes recognition of biomethane in the Net-Zero Industrial Act

17th March 2023. By Jessica Casey, Deputy Editor Energy Global.

The European Biogas Association (EBA) has welcomed the recognition of biomethane among the strategic net-zero technologies in the Net-Zero Industrial Act (NZIA). The new regulation proposal puts the supply of clean technologies at the centre. In 2022, the REPowerEU's action plan featured the objective of 35 billion m3 (370 TWh) annual biomethane production by 2030, a 12-fold increase from 2020 production volumes. The NZIA proposal will facilitate the roll-out of the necessary industrial capacity to achieve the REPowerEU's objective.

The whole biomethane value-chain, including manufacture of anaerobic digestion and gasification systems, is solidly based in the EU. EBA also supports the commission's plan to monitor workforce demand and supply and to facilitate the set-up of training programmes. The biogas and biomethane sector today provide more than 220 000 jobs and will provide 420 000 and 1 million jobs, by 2030 and 2050 respectively.
Source: *https://www.energyglobal.com/bioenergy/17032023/eba-welcomes-recognition-of-biomethane-in-the-net-zero-industrial-act/*

1.9 Italy

Anaergia commissioned northern Italy biomethane facility

15th March 2023. Meghan Sapp.

In Italy, Anaergia Inc. has commissioned a new biomethane facility in northern Italy, expanding its extensive waste-to-biomethane platform in Europe.

The plant, Ambiente & Risorse, is owned by Anaergia and has the capacity to anaerobically digest 40,000 metric tons of landfill-diverted food scraps, converting it to 3,900,000 cubic meters of renewable natural gas (biomethane) for injection into the region's natural gas pipelines. In addition, the plant captures carbon dioxide created in the anaerobic digestion process. The biogenic carbon dioxide is liquified and combined with the digestate that remains after the anaerobic digestion process to create up to 9,000 tons per year of calcium carbonate fertilizer. The plant also has a separate soil remediation unit that can bioremediate up to 30,000 metric tons of contaminated soil annually.
Source: *https://www.biofuelsdigest.com/bdigest/2023/03/15/anaergia-commissioned-northern-italy-biomethane-facility/*

1.10 International

Battery electric or hydrogen? We'll need both, and more, to decarbonize heavy transport

14th March 2023. By Lars Stenqvist

Battery electric, fuel cells running on green electricity or green hydrogen, and the trusty internal combustion engine have the potential to decarbonize the transport industry.

Image courtesy of Volvo Truck Corporation. All rights reserved.

[GreenBiz publishes a range of perspectives on the transition to a clean economy. The views expressed in this article do not necessarily reflect the position of GreenBiz.]

When it comes to delivering a more sustainable transport future, there is no silver bullet. The shift toward fossil free transport is underway in many parts of the world.

Battery electric trucks are rolling onto public roads, and sales are starting to pick up. But there is a long way to go, and we need to speed up the pace of transformation. So how do we do this when the population is growing and demand for heavy duty transport is only likely to increase?

Battery electric trucks running on green electricity are not the only route to decarbonization we should be pursuing. A single solution response will not be sufficient to meet the huge demand for decarbonized transport systems. Instead, we need to invest in multiple solutions in parallel to cater to different customer and market demands, and to tackle the immense infrastructure challenge we face.

One size does not fit all

At Volvo Group, we believe, like many other industry observers, that most heavy-duty vehicles will be electric by 2040, but these will need to be a mix of battery electric and fuel cell electric. Battery electric vehicles are generally best suited to applications where the vehicle will return to base at the end of the day for recharging, such as city distribution, refuse collection and regional haulage, and electric vehicles for these purposes are available today.

Battery technology has improved by leaps and bounds — and the scale of innovation continues apace — so that today we see batteries with almost double the kilowatt-hours of first-generation electric vehicles.

This means Volvo Group has been able to introduce series production of heavy-duty battery electric trucks so that we have a broad lineup to suit a variety of applications. This supports Volvo Group's ambition to have at least 35 percent fully electric vehicles sales by 2030. Our premium global truck brand, Volvo Trucks, is targeting that at least half of the global new trucks sales will be electric by 2030.

Sustainable heavy transport is within our grasp, but to make it a commercial reality we must not put all our eggs in one basket.

But battery electric isn't the right solution for all applications. We believe fuel cell electric vehicles powered by green hydrogen are the perfect complement and offer a promising solution for heavy duty applications and true long-haul transport.

Infrastructure and price will be key drivers

Access to charging infrastructure and the price of green electricity and green hydrogen will determine which technologies are adopted and where, and we are likely to see differences across the world. In some areas, grid capacity and stability will be issues, particularly when it comes to charging multiple trucks in a truck stop at the same time. The power requirements will be considerable, making it impractical in certain locations.

Investment in charging infrastructure is integral to the transformation. Volvo Group is playing its part, partnering with Pilot Company in North America and forming a joint venture, Milence, with Daimler Truck and the Traton Group in Europe to roll out public high-performing charging for medium and heavy-duty electric vehicles. But this is a drop in the ocean for what will be required. And that's where hydrogen comes in.

Green hydrogen — produced through fossil-free resources such as solar and wind — has tremendous potential to meet the world's future energy demands and investment in this area is growing. Development of fuel cell stacks at cellcentric, Volvo Group's joint venture partnership with Daimler Truck, is progressing well. The company was set up to speed up development, and the first test vehicles are on the road, with fuel cell electric trucks ready for commercialization in the second half of this decade.

The internal combustion engine lives on

But it's not time to bid farewell to the internal combustion engine. While most commercial vehicles will be battery electric and hydrogen fuel cell electric, the internal combustion engine remains a valid and important third technology, and there will still be applications where it is the best solution.

Reality is that in some parts of the world, the charging and infrastructure required to support real-life commercialization and implementation of electric transport solutions is simply not there yet. With internal combustion engines running on natural gas or biogas rather than diesel, we can take a positive climate action there as well.

The technology development in this area is very encouraging. Volvo Penta, for example, has been successfully using hydro-treated vegetable oil to power its fleet of test vessels at its Gothenburg marine testing facility for a number of years and is working with customers to help them make the shift too.

Volvo Trucks has gas-powered trucks running on compressed natural gas or liquid natural gas — produced from either natural gas or biogas — readily available that can help organizations to significantly reduce their carbon footprint. These gas-powered trucks have horsepower engines with a performance comparable to their diesel equivalents and are a good complement to electric transports for long, demanding transport tasks.

Another solution — which has the potential to be a game changer — is the combustion engine running on hydrogen. This can play an important role in applications for on and off-road assignments where access to fast charging for electric vehicles is limited or vehicles are double shifted, as a complement to the battery electric and fuel cell electric propulsion technologies.

Hydrogen is a clean, storable energy carrier. This means that hydrogen technology will play a key role as we leave the age of fossil fuels behind us. Thanks to its shorter filling times, high payload, versatility and attractive range, green hydrogen is a promising fuel for sustainable transport logistics. To that end, Volvo is part of a consortium called HyCET, where, together

with a number of industry players, we are developing trucks powered by hydrogen combustion engines.

Collaboration and partnership

It is clear to me that we need options, so that across the board we can act, leaving no one behind. Sustainable heavy transport is within our grasp, but to make it a commercial reality we must not put all our eggs in one basket. We should invest in all three technologies so that we can apply the right solution to each use case.

Together, battery electric, fuel cell electric and the trusty internal combustion engine have the potential to decarbonize the transport industry.
Source: *https://www.greenbiz.com/article/battery-electric-or-hydrogen-well-need-both-and-more-decarbonize-heavy-transport*

1.11 Italy

Hydrogen breakthrough: 36 new refueling stations approved in Italy. That's where

18th March 2023. .

ROME – A big step forward for the creation of the Italian hydrogen refueling network which in 2026 will be able to count on a large number of "service stations".

In addition to the only two public distributors present today in Italy (Bolzano and Mestre), 36 new hydrogen refueling points will be added throughout the national territory, which will be created following the publication of the ranking of projects admitted to public financing by the Ministry of Infrastructure and Transportation.

A contribution from the State of around 103.5 million euros is expected, financed thanks to the Pnrr and the first part of the total 230 million euros contemplated in the plan to develop the national hydrogen refueling network.

Source: *https://www.breakinglatest.news/entertainment/hydrogen-breakthrough-36-new-refueling-stations-approved-in-italy-thats-where/*

End