ANGVA2U Info *05/2023. 25th June 2023 (for ANGVA members only)*

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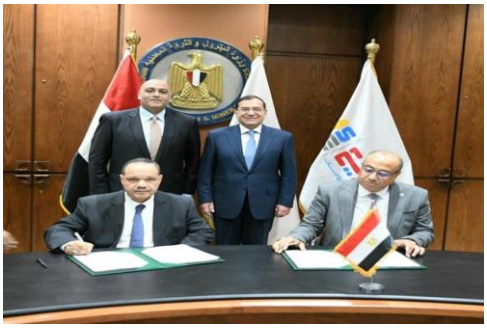
1.0 Selected News / Articles

1.1 Egypt

Egypt to convert 17,000 more cars to natural gas fuel

16th June 2023. By Ahram Online.



Minister of Petroleum Tarek El-Molla during the signing ceremony. Cabinet

The Micro, Small and Medium Enterprises Development Agency (MSMEDA) has signed two contracts at EGP 200 million with two companies to convert thousands of vehicles from gasoline to natural gas, according to a cabinet statement on Monday.

The contracts were signed with Egyptian International Gas Technology (GASTEC) and CARGAS, affiliates of Egypt's Ministry of Petroleum and Mineral Resources.

The agreements implement the ninth phase of an initiative to convert 150,000 vehicles to run on natural gas that was started by the Ministry of Trade and Industry in early 2021.

Bassel Rahmy, CEO of MSMEDA, said that the Egyptian government has converted 103,000 cars to natural gas fuel so far, at a cost of EGP 715 million.

Between July 2022 and the end of March 2023, 61 natural gas fuelling stations were built, bringing the total in the country to 688, added Rahmy.

A further 221 stations are projected to open in the near future, with 1,000 total planned, he said.

The growth in Egyptian gas production in recent years has encouraged the government to pursue fuel conversion.

Egypt expects to produce about eight million tons of liquefied natural gas (LNG) in 2023 after the discovery of a new gas field in the Narges area of the Eastern Mediterranean in January.

Source: *https://english.ahram.org.eg/NewsContent/3/16/503329/Business/Energy/Egypt-to-convert-,-more-cars-to-natural-gas-fuel.aspx*

1.2 Nigeria

Subsidy: Two years after, NNPCL's autogas programme falls short

20th June 2023. By Adetola Bademosi

Over two years after the Nigerian National Petroleum Company Limited (NNPCL) formerly Nigerian National Petroleum Corporation (NNPC) launched its autogas policy under the National Gas Expansion Programme, progress seems to have been at snail pace.

This has further been accentuated by the recent removal of subsidy on the Petroleum Motor Spirit (PMS).

In December 2020, the Federal Government kick started the initiative aimed at converting one million vehicles from petrol to gas utilization.

The Group Chief Executive Officer of the NNPCL, Mr. Mele Kyari had described the move as a palliative measure to cushion the impact of subsidy as agreed with the organized Labour.

Also, in January 2022, Kyari met with oil marketers in the downstream sector to perfect plans for the full deployment of autogas in filling stations and the conversion of 200,000 commercial vehicles to run on gas.

At the meeting, which was convened by former Minister of State for Petroleum Resources, Timipre Sylva, the government unveiled the 2022 Framework for the deployment of Compressed Natural Gas (CNG) also known as autogas in Nigeria.

Sylva disclosed that the government was out to ensure that it made available the alternatives required before the removal of subsidy on PMS stressing that the deployment of autogas was one of such key alternatives.

According to him, CNG was selected as the fuel of choice because it holds a comparative advantage, due to its ease of deployment, its comparatively lower capital requirements, commodity's supply stability, existing in-country volumes, and local market commercial structure which relies predominantly on the naira.

In the framework, one of the three implementation options, targeted the conversion of one million public transport vehicles and installation of 1,000 refueling centres within 36 months.

For the first 18 months it targets to achieve 500,000 conversions and 580 refueling centres supplied by five Original Equipment Manufacturers, among other targets.

In the plan, the government targeted converting 200,000 commercial vehicles in 2022, including tricycles, cars, mini-buses and large buses.

The cities captured in Phase 1 of the project include Abuja, Kaduna, Kano, Kogi, Kwara, Lagos, Ondo, Oyo, Edo, Delta, Bayelsa, Niger, and Rivers.

Cities under Phase 2 were listed as Sokoto, Katsina, Jigawa, Borno, Bauchi, Gombe, Yobe, Osun, Ekiti, Enugu, Anambra, Imo, Cross River, Abia, Akwa Ibom and Plateau. For Phase 3 cities, they were listed as Kebbi, Zamfara, Yobe, Gombe, Taraba, Adamawa, Benue and Ebonyi.

However, the initiative seemed to have stalled even as some Nigerians are now beginning to convert to using gas to power their vehicles as well as generating sets.

Meanwhile, the PwC in its latest report titled: “Fuel subsidy in Nigeria- issues, challenges and the way forward” recently released, said the adoption of CNG as alternatives will bring lower cost, reduced emissions, and improve fuel efficiency.

It said: “One of the most significant benefits of CNG is that it is considerably cheaper than petrol, which could result in substantial savings for vehicle owners. Additionally, the cost of CNG is more stable than the volatile price fluctuations experienced by petrol.

“Also, the use of CNG could reduce vehicle maintenance cost due to its cleaner burning properties, which produce fewer engine deposits that clog up the engine over time.”

However, it said the adoption of CNG in Nigeria also presents some challenges which include the initial investment required to retrofit existing vehicles with CNG engines, the need to establish a robust distribution infrastructure for CNG, and the need for government policies and incentives to promote the use of CNG.

“While CNG presents a number of benefits compared to PMS, there are challenges to its adoption making it an unlikely alternative to petrol in the short to medium term,” it concluded.

Oil and Gas expert, Mr. Michael Faniran said CNG is a viable alternative to petrol based on the current pricing noting that:”with the current deregulated price of PMS, CNG is a cheaper alternative to PMS and commercially viable to invest in the business. Also, in terms of pollution control, CNG is a cleaner fuel.”

However, he noted that the previous government’s efforts on conversion of vehicles to autogas did not materialise,”because it was not bankable from investor point of view when PMS was still subsidised.”

On his part, Prof. Adeola Adenikinju, Director, Centre for Petroleum, Energy Economics and Law said the use of CNG is one alternative way of deepening the local utilization of the country’s massive gas resources rather than flaring or exporting.

He stressed the need for car owners to consider the switch to autogas even as he urged state governments to also tap into the programme.

His words:”With the current policy of fuel subsidy removal, the CNG becomes a very attractive alternative that vehicle owners can use to mitigate the effects because gas is cheaper than petrol if we are able to successfully encourage and provide infrastructure for the use. I hope that the state governments, not only Federal should tap into this.”

Meanwhile, the FG had in 2022 disclosed plans to support with 50 per cent of the conversion kits to fast-track the process.

While reacting to this, the national Spokesperson for the Independent Petroleum Marketers Association of Nigeria (IPMAN), Mr. Chinedu Ukadike said although the government came with various strategies and funding supports that were stalled.

“Those promises were just like policies. If you go to Eastern zones, no filling station has been empowered to convert vehicles to CNG except for one or two places in Abuja and Lagos,” he said.

He noted that the government would have provided, "technical committee or workshop whereby managers of these organisations can go there and learn and be trained so they will be able to convert vehicles and motorists who always patronise them in their filling stations so that we can have a seamless movement from a petrol reading carburetor to compressed natural gas combustion."

However, he said removal of Subsidy will promote the use of CNG which will in turn reduce the pressure in PMS.

"Since we produce CNG here and we don't even have enough facility for storage, so if governments would be able to radically increase orientation on CNG it would have helped force down the price of PMS as an alternative," he added.

Source: *https://tribuneonlineng.com/subsidy-two-years-after-nnpcls-autogas-programme-falls-short/*

1.3 Nigeria

Subsidy Removal: 5,600 Vehicles Run On CNG In Benin — Obaseki

21st June 2023. By Unini Chioma

The Edo State governor, Mr Godwin Obaseki, has disclosed that 5,600 vehicles run on Compressed Natural Gas (CNG) in Benin City, the Edo State capital.

The governor disclosed this in Benin while speaking to journalists on fuel subsidy removal.

"Data from NIPCO Gas, a joint-venture company between NIPCO and Nigeria Gas Company Limited (NGC), indicate that over 5,600 vehicles in Benin City run on Compressed Natural Gas after the initiative was rolled out in 2007 and commissioned in 2009," he said.

He called on investors to make investments in alternative sources of energy such as natural gas in the wake of subsidy removal, which had led to a hike in transportation costs.

According to him, the state has the largest deposit of on-shore gas in the country.

"We are blessed with a lot of gas in Edo. There is really no reason why our tricycles and vehicles should be using petrol. We have more gas stations in Edo than any other state. We should be using more gas.

"Price levels would always go up. What we have to do is to open up the economy so that people will have more work to do. We need more manufacturing companies in Edo State."

"The gas initiative was launched after a presentation by NIPCO Plc to roll out a pilot scheme to an inter-ministerial team of the Federal Government in 2007.

"NIPCO Gas has established 15 CNG running stations in Benin to provide an alternative for the Gasoline run automobiles," he said.

Source: *https://thenigerialawyer.com/subsidy-removal-5600-vehicles-run-on-cng-in-benin-obaseki/*

1.4 Bangladesh

CNG filling stations to remain open round-the-clock for 13 days from June 24

22nd June 2023. UNB News. Dhaka.

CNG filling stations to remain open for 24 hours for 13 days from June 24 to July 6 to facilitate smooth movement of motor vehicles across the country during Eid vacation.

Energy and Mineral Resources Division of the Ministry of Power, Energy and Mineral Resources in an office order, issued on Thursday, gave the instruction to the owners of the CNG stations.

The order said that the CNG filling stations will remain open round-the-clock for 5 days before Eid-ul-Azha, on the Eid day and seven days after Eid.

Currently, CNG pumps remain closed for 5 hours a day from 6 pm to 11 pm as part of gas rationing plan due to gas crisis.

Source: *https://unb.com.bd/category/Bangladesh/cng-filling-stations-to-remain-open-round-the-clock-for-13-days-from-june-24/117723*

1.5 Bangladesh

Bhanga microbus gas cylinder blast death toll rises to 7

24th June 2023. News Desk || risingbd.com

Seven people were killed and several others injured as the gas cylinder of a CNG-driven microbus exploded after the vehicle hit a divider in Faridpur's Bhanga upazila.

The incident took place on the Dhaka-Bhanga expressway at Maligram area of the upazila around 10:45 am on Saturday (June 24).

The deceased could not be identified immediately.

Ziarul Islam, officer-in-charge (OC) of Bhanga police station, confirmed the incident.

The OC said, the microbus hit a divider of the Dhaka-Bhanga expressway in Maligram approach road area losing control.

The microbus soon caught fire after its cylinder exploded, leaving five passengers dead on the spot, the OC said.

The number of the deceased may increase further, he said, adding that the microbus has been removed from road.

Source: *https://www.risingbd.com/english/country/news/96752*

1.6 United States of America

HOW LANDFILLS ARE DECARBONIZING COMMERCIAL TRANSPORTATION

20th June 2023. By Puneet Singh Jhawar, General Manager – Global Spark Ignited Business

Commercial fleets are increasingly moving toward alternative fuels to reduce their greenhouse gas emissions. Renewable natural gas (RNG) has enormous potential to help the transportation industry come closer to carbon neutrality. So, how do landfills play a role in this decarbonization journey?

TURNING LANDFILL WASTE INTO RENEWABLE NATURAL GAS (RNG)

How is it possible to obtain fuel from landfills ? It starts with organic waste, such as food scraps stacked and compacted in the landfills. The organic matter buried under other layers of trash then starts to rot without oxygen -- this is when anaerobic bacteria come to play. They break down the organic matter into smaller compounds, including CO2 and methane, and they end up collecting in specific cavities throughout the landfill.

The gas is then recovered and processed. When moisture, CO2, nitrogen and other impurities are removed, the result is nearly pure methane, which is known as Renewable Natural Gas (RNG). It can be used interchangeably with methane obtained from fossil resources and can sometimes be injected into the local natural gas distribution network. Cummins' natural gas engines, for example, are fully compatible with RNG.

California's approach offers a compelling example of how turning garbage into fuel can help decarbonize the transportation sector. In 2022, an impressive 97 percent of all on-road fuel used in natural gas vehicles in California was RNG. What are some of the main reasons for this incredibly high number? Supportive state policies and incentives for RNG production, like the Low Carbon Fuel Standards. Local governments' demand for decarbonization also played a role in RNG's increased growth.

THE BENEFITS OF USING LANDFILL-DERIVED RNG IN COMMERCIAL VEHICLES

Converting landfill waste into RNG presents an exciting opportunity to reduce carbon emissions in commercial transportation. In some cases, RNG from landfills can even have a negative carbon impact. Burning and releasing CO2 derived from captured and refined biogas reduces the contribution to global warming more than releasing methane directly into the atmosphere. This is because methane's world warming potential — compared to CO2 — is greater.

Waste management companies have established partnerships to obtain RNG directly from the landfills where they handle waste disposal. This creates a circular economy where waste becomes fuel, powering the trucks that collect and transport it. Besides having lower emissions, the garbage collection company can save money on fuel, and avoid exposure to fluctuations in diesel fuel prices.

Landfill RNG has also been used to power transit buses. For instance, the city of Hamilton in Ontario, Canada is working to build a green transit fleet with buses powered by RNG derived from landfills. This not only helps reduce carbon emissions but also promotes cleaner air in urban environments. Major businesses including Amazon, UPS and Walmart have also begun to add RNG-powered vehicles to their delivery fleets.

RNG production can result in attractive business models for landfill operators. Not all landfills can accommodate a landfill gas collection system. According to the U.S. Environmental Protection Agency, slightly less than half of the 2,600 U.S. landfills accepting municipal waste could economically collect landfill gas. Of these, about half are currently producing RNG. This means that growing landfill RNG production still has a great deal of potential. As more landfills start harnessing the technology to produce RNG, this could stimulate local economies by creating jobs and reducing waste management costs.

CUMMINS' L9N AND X15N NATURAL GAS ENGINES: REDUCED EMISSIONS AND COST SAVINGS

Cummins is at the forefront of decarbonizing the commercial transportation sector with its natural gas engines. The L9N and X15N are designed to leverage the potential of RNG. Utilizing RNG from landfills, these engines can achieve carbon negative emissions and help cut fuel costs.

The Cummins L9N engine can help fleets dramatically reduce smog-forming nitrogen oxides (NOx) emissions by 90 percent – much lower than the EPA standard. It’s a great choice for buses and refuse trucks, delivering both reliable torque and horsepower while lowering emissions.

The Cummins X15N offers powerful performance, efficiency and low emissions, making it an ideal fit for heavy-duty applications. In fact, Walmart is now incorporating the X15N in RNG-powered semi-trucks into its regional haul fleet at distribution centers. The X15N is designed to meet stringent EPA and California Air Resources Board (CARB) 2024 regulations while delivering impressive cost savings. Its optimized fuel system and reduced maintenance requirements can lower total cost of ownership. When compared to its predecessor, the ISX12N, the X15N offers significant design improvements. This makes the X15N a more appropriate choice for heavy-duty applications.

CAPITALIZE ON FINANCIAL INCENTIVES FOR RNG FUEL ADOPTION

Through a series of financial incentives and government programs, fleets can capitalize on the benefits of RNG. One of the most substantial incentives comes from the Inflation Reduction Act (IRA) of 2022. The IRA provides significant tax benefits aimed at encouraging the use of cleaner energy sources, including RNG. Most notable is the multi-year extension of the Alternative Fuel Tax Credit (AFTC). This provision allows a $0.50 per gallon tax credit for natural gas used as transportation fuel, reducing operational costs for fleets converting to RNG.

The IRA is helping businesses invest in alternative fuel refueling equipment with an increased fueling infrastructure credit of $100,000 per qualifying piece. This encourages businesses to deploy RNG-powered vehicles by reducing the cost of RNG refueling infrastructure, ensuring a smoother/easier transition to RNG.

These incentives make RNG a practical and cost-effective solution for decarbonizing commercial vehicle fleets. They align economic benefits with environmental responsibility, making it easier to switch to RNG for fleets.

Cummins, with our range of natural gas engines designed for RNG, stands ready to support your business in making this transition. Contact your local Cummins sales office today to learn about partnering with us on RNG technology.

Source: *https://www.cummins.com/news/2023/06/20/how-landfills-are-decarbonizing-commercial-transportation*

1.7 France

TotalEnergies to supply sustainable biomethane to Saint-Gobain

21st June 2023. By Bella Weetch, Editorial Assistant. Hydrocarbon Engineering.

TotalEnergies has signed a 100 GW biomethane purchase agreement with Saint-Gobain France for a three-year period, starting in 2024.

The biomethane will be produced by TotalEnergies at its BioBéarn biomethane plant, which came onstream at the beginning of the year, and whose production is certified sustainable by ISCC under the highest sustainability criteria of the EU RED II Directive. TotalEnergies is one of the very first producers to obtain this certification in France.

By acquiring the Guarantees of Origin, and thanks to their sustainable certification, Saint-Gobain will be able to attest, within the framework of the EU Emissions Trading Scheme, to the decarbonisation of its energy consumption in France. This contract is also an example of a purely commercial sale, i.e., non-subsidised, of biomethane.

“With this contract, TotalEnergies is supporting Saint-Gobain in its efforts to reduce greenhouse gas emissions in France, in line with TotalEnergies' ambition to help its customers decarbonise their activities. It is also a first step towards the emergence in Europe of a merchant biomethane market, allowing the development of production without public subsidies," said Stéphane Michel, President Gas, Renewables & Power at TotalEnergies. "This contract is also in line with our ambition to actively participate in the development of biogas in France, and more widely in the world.”

"The signing of this contract opens up promising prospects for biomethane players to develop infrastructures on the French territory. This first for Saint-Gobain in France demonstrates the intention to diversify the sourcing of decarbonised energy, supporting the development and viability of new local energy networks. This decarbonised energy supply is also part of Saint-Gobain's commitment to reduce its carbon dioxide (CO2) emissions by 33% (from Scopes 1 and 2) by 2030 compared with 2017, and to reach carbon neutrality by 2050", said Thierry Fournier, General Director of Saint-Gobain France.

Source: *https://www.hydrocarbonengineering.com/the-environment/21062023/totalenergies-to-supply-sustainable-biomethane-to-saint-gobain/*

1.8 Japan

Japan: First trial of low-carbon LBM derived from biomass completed

21st June 2023. By Fatima Bahtić

Seven Japanese companies have completed the trial using liquefied bio-methane (LBM) derived from cattle manure as a marine fuel on the domestic liquefied natural gas (LNG) fueled vessel Ise Mirai in Ise Bay.

MOL

Teaming up on the project were shipping heavyweight Mitsui O.S.K. Lines, Air Water Inc., Techno Chubu Company, Kyoudou Kaiun Co., MOL Coastal Shipping, Cenergy Co., and IHI Power Systems Co.

The trial was conducted based on the memorandum of understanding (MoU) signed between MOL and Air Water in February 2023, with the cooperation of other parties involved, including Japanese shipper JERA.

In the trial, Air Water supplied LBM produced from cattle manure in the Tokachi region of Hokkaido as part of a technology development and demonstration project adopted by Japan's Ministry of the Environment. The trial confirmed that LBM can be transported through the existing domestic LNG supply chain. Additionally, truck-to-ship bunkering of LBM can be completed using existing LNG tank trucks.

Furthermore, LBM can be used by existing vessel (Ise Mirai) as marine fuel, according to the partners.

The vessel Ise Mirai was jointly built by MOL Coastal Shipping, Techno Chubu, and Kyoudou Kaiun, and was delivered in December 2020. It is the first LNG-fueled ocean cargo vessel in Japan.

It was built with support from Japan's Ministry of the Environment and the Ministry of Land, Infrastructure, Transport and Tourism under the Model Project for Reducing CO2 Emissions from Ships through the Use of Alternative Fuels aimed at demonstrating the technology to optimize combustion efficiency in LNG-fueled gas engines and supply systems. The goal was to reduce CO2 emissions from ships.

LBM is made with bio-methane generated from dairy-owned biogas plants, liquefied at about -160°C, separating and refining its main component, methane. Methane can be compressed to 1/600th of its volume when liquefied, enabling it to be transported on a large scale. It is also a carbon-neutral domestic energy source because it is made from cattle manure.

According to MOL, LNG fuel is expected to reduce carbon dioxide (CO2) emissions by about 25% compared to conventional fuel oil, but further reduction of CO2 emissions can be expected through the partial use of LBM, a carbon-neutral energy source.

In addition, because the main component of both LBM and LNG is methane, the existing LNG supply chains can be used, so LBM can be an effective solution to achieve low-carbon and decarbonized ship operations.

Source: *https://www.offshore-energy.biz/japan-first-trial-of-low-carbon-lbm-derived-from-biomass-completed/?utm_source=lngworldnews&utm_medium=email&utm_campaign=newsletter_2023-06-22*

1.9 Malaysia

Malaysian green hydrogen projects make progress

14th June 2023. By Akansha Victor

Two green hydrogen projects in Malaysia's Sarawak state have moved past the stage of feasibility studies and are due to start operations by 2027, according to Sarawak's premier Abang Johari.

Feasibility studies have been completed for H2ornbill and H2biscus, the two projects in the Bintulu area. The projects are expected to proceed to the front end-engineering design (FEED) stage within the next few months, Johari said at the at the International Energy Week (IEW) conference in Kuching.

Final investment decisions for H2biscus are expected in the first quarter of 2024 and for H2ornbill in the second quarter of 2025, putting the projects on track for start of commercial operations in 2027, Johari said.

Sarawak Economic Development (SEDC) has developed both projects in collaboration with a consortium of multinational companies.

South Korea's Samsung Engineering is the lead developer for H2biscus, with Lotte Chemicals and Posco also involved, besides SEDC. The partners expect the project to produce some 200,000 t/yr of green hydrogen from hydroelectric power. Of this, some 7,000 t/yr will be used domestically while the remainder shipped to South Korea as ammonia.

The H2ornbill project involves Japanese firms Eneos and Sumitomo, besides SEDC. The developers also target green hydrogen production from hydroelectric power and aim to ship the output to Japan using methylcyclohexane (MCH) as a carrier.

Malaysia is looking to develop a "hydrogen economy and technology roadmap", prime minister Anwar Ibrahim said earlier this month. The country's green hydrogen industry could be worth $3.1bn by 2030, around 2pc of the forecast $189bn global market, Ibrahim said.

Source: *https://www.argusmedia.com/en/news/2459258-malaysian-green-hydrogen-projects-make-progress*

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