ASIA PACIFIC NATURAL GAS VEHCLES ASSOCIATION (ANGVA)
Together we propagate and support the efficient utilization of low to net zero carbon fuels
for cleaner air and better life in the Asia Pacific Region

ANGVA2U Info *14/2021. 09 September 2021 (for ANGVA members only)*

ANGVA2U Info aims to share information, data, and news related to low and net zero carbon fuels with ANGVA members. However, these information, data, and news are collected and shared in good faith, without any guarantee of accuracies. Members are advised to use these information and data prudently and at their own risks.

++

1.0 Selected News / Articles

1.1 Tanzania

Tanzania: 10bn/ - to Supply Natural Gas to Mtwara, Lindi Residents

27th August 2021. Tanzania Daily News (Dar es Sallam). By Anne Robi in Mtwara./

MTWARA and Lindi residents may now broadly smile following the government decision to set aside 10.74bn/- to connect and supply clean and safe natural gas to the two regions.

Minister for Energy Dr Medard Kalemani has said the funds would also be used to connect and supply the natural gas for industrial, public and private institutions as well as for car use in the regions.

The minister announced the good news here yesterday when inaugurating the second phase of connecting the natural gas to 300 residents in Mtwara region.

Dr Kalemani commended Tanzania Petroleum Development Corporation (TPDC) for embarking on the plan, urging the Corporation to ensure all the residents in need of the natural power are connected.

He also asked the state-run Corporation and the Gas Company Tanzania Limited (GASCO) to build a Compressed Natural Gas (CNG) filling station in Mtwara to serve vehicles for Mtwara residents.

"I call upon the Managing Director of TPDC to build a CNG station here in Mtwara to serve motorists whose cars support the use of gas," he said, noting that it was not conceivable for the station to be stationed in Dar and Coast regions, leaving the gas region without CNG station.

Meanwhile, Dr Kalemani said the government was committed to ensure the natural gas was also supplied to other regions in the country.

He said the government's plan which is already underway will lead to the connection and supply of the gas to Morogoro, Tanga, Dodoma, Mwanza, Arusha and other regions in the country.

He also said the government also plans to connect and supply the natural gas to villages by copying and pasting an ongoing rural electrification programme, an initiative that has proved to be successful.

TPDC Director General Dr James Mataragio said over 900m/- would be spent in the second phase of connecting the gas to 300 customers in the Mtwara region. In the first phase implemented in 2020, the Corporation spent 3.2bn/ to connect and supply clean and safe natural gas to 125 customers in the region.

The DG assured the public that the natural gas would be supplied to all residents in need in Mtwara, Lindi and other regions.

According to Dr Kalemani, the government plan is to spend 18.8 out of 547.54 trillion cubic of natural gas reserves in electricity, 1.3 trillion cubic feet for residential use and 1.1trillion cubic to power vehicles.

Source: *https://allafrica.com/stories/202108270665.html*

1.2 United States of America

Fleet finds success with natural gas assets

8th September 2021.

Matheson Postal Services operates 95 near-zero emissions vehicles, running more than 16.4 million miles annually. The fleet has ordered another 40 CNG trucks because of its positive economic and environmental results.

According to the California Natural Gas Vehicle Partnership (CNGVP), real-world fleets are increasingly turning to near-zero-emissions (NZE) natural gas vehicles (NGVs) and carbon-negative renewable natural gas (RNG) to make true sustainability progress. NZE NGVs are available now delivering critical and cost-effective emissions reductions throughout California, where heavy-duty diesel trucks are the state's largest single combined source of smog-forming NOx (oxides of nitrogen) and toxic diesel particulate matter (DPM), and one of the largest, and growing sources of climate-altering greenhouse gases (GHG) emissions.

"Today, fleets across California and the nation are investing in commercially available and proven natural gas vehicles, choosing sustainable technology that meets their wide-ranging and intensive operational needs while keeping an eye on future opportunities to incorporate electric trucks when they are available and make sense from a cost and performance perspective," said Ashley Remillard, vice president of legal and government affairs at Hexagon Agility and vice chair of CNGVP.

Real-world impact

One example, highlighted during the press conference at ACT Expo, is Matheson Postal Services, a subsidiary of Matheson Trucking Inc., which has moved mail coast-to-coast for the U.S. Postal Service since 1964. Matheson operates 95 NZE trucks on its contracted mail routes, hauling 78,000-pound loads through diverse terrains, running more than 16.4 million miles annually. Each of Matheson's heavy-duty NZE natural gas big rigs runs an average of 185,000 miles per year, or 715 miles per day, which provides significant reductions in diesel use, DPM, and GHG emissions.

"Matheson has continued making investments in NZE NGVs because they are reliable and provide the power, range, and performance we need to perform under the rigorous demands of long-haul trucking, pulling heavy loads under challenging conditions and terrains, all while reducing our carbon footprint," said Mark Matheson, president and CEO of Matheson Trucking, Inc. "No other technology commercially available today, or even promised for

tomorrow, can deliver the environmental results we are achieving while also meeting our operational requirements."

Because of its positive economic and environmental results, Matheson has placed an order for another 40 NZE CNG trucks, including Kenworth's CNG-fueled T680 tractors and CNG T680 sleeper-cab tractors, featuring Hexagon Agility's ProCab 175 and dual ProRail 40 fuel systems, which provide over 265 diesel gallon equivalent of CNG and well over 1,000-mile range. These trucks are scheduled to be delivered in late 2021 and early 2022.

"There is measurable, impactful, and consistent progress being made with today's technology and fuel. NZE NGVs are the closest direct replacement for diesel trucks in terms of their ability to quickly refuel via an established network of infrastructure, and in terms of their power and range for both regional and long-haul routes," said Tom Swenson, business development manager at Cummins and chair of the CNGVP. "Most importantly, NGVs enable fleets to compete on a cost-per-mile basis with diesel engines."

Looking ahead

According to the CNGVP, investment in NZE NGVs is even more effective as fleets utilize carbon-negative RNG. In Q1 2021, data from the California Air Resources Board's (CARB) Low Carbon Fuel Standard (LCFS) program revealed that the average annual carbon intensity of compressed natural gas from renewable feedstocks ("bio-CNG") was -16.57gCO2e/MJ, the lowest average of any currently available vehicle fuel—including renewable electricity. This means that fleet vehicles fueled by RNG in California are helping to remove more greenhouse gas emissions from the atmosphere than any other alternative fuel available, and ultimately help to eliminate the climate impact of these heavy-duty vehicles.

"While the amount of emission reductions needed to attain clean air standards is daunting, it would be irresponsible for our agency to effectively throw up our hands and not explore all options for reducing emissions now," Wayne Nastri, South Coast Air Quality Management District (AQMD) executive officer, recently noted in a public letter. "NZE technology has been commercially demonstrated and is available today, has sufficient fueling infrastructure that is largely funded by the private sector and is at least 90% cleaner than new diesel trucks on NOx and 100% cleaner on cancer-causing diesel particulate matter. When fueled by renewable natural gas, these vehicles are far more cost-effective than ZE trucks, allowing limited incentive funds to stretch further."

Source: *https://www.fleetowner.com/emissions-efficiency/press-release/21174664/fleet-proves-success-of-natural-gas-assets*

1.3 India

Appreciate Coal India's initiative to replace diesel with LNG in heavy mining machinery: Rawmatt Industries

8th September 2021. ANI.

Rawmatt Industries is one of the leading providers of environmentally efficient fuel sources in India

New Delhi [India], September 8 (ANI/SRV Media): Coal India Limited (CIL), one of India's largest coal producers plan to retrofit its diesel-run heavy mining equipments like dumpers with LNG kits in a bid to significantly reduce carbon emission and save around INR 500 crore annually. CIL fulfils the needs of more than 80 per cent of the country's coal requirements. Through this green push, under its pilot project CIL is retrofitting two 100-tonne dumpers with LNG kits to study the efficiency and outcome on the performance parameters of the heavy machinery used for transportation of coal in mines.

Over the years, the exponential growth of industrial sectors has subsequently led to increase in the demand for energy and rise in carbon-based emission. In a recent announcement, the Ministry of Power has recognised the power demand and depleting stock of coal available with power plants; thereby ordering the power plants to import coal for blending purpose to ensure uninterrupted supply of coal.

With the continued rise in the demand for energy, Rawmatt Industries one of the leading providers of environmentally efficient fuel sources has welcomed CIL's move to adopt LNG for its mining operations. The company has been the pioneer in India's L-CNG movement and has been working on developing retro-fitment technologies suited for alternative fuel. It has successfully installed a private Liquefied Natural Gas (LNG) storage and dispensing facility and LCNG dispensing facilities in Nagpur, with the main purpose of reducing air pollution. In the recent months, Rawmatt Industries has worked closely with the Nagpur Municipal Corporation (NMC) to convert hundreds of city transit buses and several cars to CNG; to bring down vehicular emission and adopt green vehicles.

Kaustubh Gupta, CEO, Rawmatt Industries is the son of Padmesh Gupta of Gupta Coal. He said, "The retrofitting of diesel vehicles with LNG kits or CNG kits points towards the shift in adoption of greener vehicles to lower carbon emission. We, at Rawmatt Industries are working with various stakeholders across channels and investing in research and development of technology that enables efficiency and output through alternative fuels."

Backed by a strong technical team, the company has actively been involved in the retro-fitment of in-use diesel vehicles and convert them into CNG-driven ones. Rawmatt Industries is also planning to expand its conversion centres and LNG centres across the country. It is invested in developing a greener fuel ecosystem; by setting up CNG stations at various strategic locations to meet the demands of the local automobile sector of the country.

Rawmatt Industries is committed to increasing the consumption of green energy which is environmentally sustainable. It plans to ensure that the nation's air is free of fuel related pollutants. Rawmatt Industries thus, has a vision to make way for a cleaner environment and also to strengthen India's CNG program.

To know more, visit:http://rawmatt.in/

Source: *https://www.aninews.in/news/business/appreciate-coal-indias-initiative-to-replace-diesel-with-lng-in-heavy-mining-machinery-rawmatt-industries20210908174728/*

1.4 South Africa

DNG launches LNG fuel trial in South Africa

8th September 2021. By Ed Reed

DNG Energy will work with Imperial Logistics to examine the use of LNG as a diesel alternative in South Africa.

DNG Energy

DNG Energy will work with Imperial Logistics to examine the use of LNG as a diesel alternative in South Africa.

The pilot project will run for six months. DNG said it would design, manufacture and supply the LNG dispensing and storage equipment. The results from the work would demonstrate, the company said, that LNG was a credible alternative fuel for South Africa.

DNG is also working on an LNG import scheme at Coega and participated in the recent emergency bid round for power.

Working with Imperial, DNG CEO Aldworth Mbalati said, will help towards the company goal of offering "a cleaner energy source that enables our customers to be more competitive, while contributing towards significantly reducing their environmental footprint. Imperial's operations in South Africa and across the African continent offer a tangible platform to show how LNG can optimise trade for companies and reduce costs."

There is an LNG boom, Mbalati said. Customers in a range of sectors are turning to LNG "to reduce their cost of energy use and carbon tax. We look forward to the outcomes of the pilot and contributing towards the body of knowledge in this space."

Transition talk

Imperial's CEO Mohammed Akoojee noted the importance of ESG practices. Working with DNG, he said, "is an exciting step in Imperial's journey towards gaining important insights that position us at the forefront of alternative energy fleets.

"Not only does it demonstrate our commitment to a just transition to a low carbon economy, but it also enables us to provide our sustainability-conscious clients and principals with substantially greener supply chain solutions."

According to Imperial's 2020 ESG report, the group consumed 200.4 million litres of fuel. Of which 112.7mn litres went into its logistics business.

DNG will not be the first company to work on LNG consumption in South Africa. Renergen, which has a gas and helium project, has struck an LNG supply deal.

Using CNG and diesel, would allow a truck to run for 400 km, Renergen's CEO Stefano Marani has said. Switching to LNG increases a truck's range to up to 2,000 km.

Marani has suggested trucks could save 25% of fuel costs by switching to LNG, from diesel.

Source: *https://www.energyvoice.com/oilandgas/africa/lng-africa/348686/dng-lng-imperial-diesel/*

1.5 South Korea

(News Focus) S. Korean companies go big on future of hydrogen

8th September 2021. All News. By Kim Eun-jung. ejkim@yna.co.kr)

This photo, provided by Hyundai Motor Group, shows a rendering of a movable hydrogen charging station. On Sept. 7, 2021, the South Korean carmaker announced a vision to popularize hydrogen by 2040, under which it will apply fuel cell systems to all commercial vehicles by 2028. (PHOTO NOT FOR SALE) (Yonhap)

POSCO Chairman Choi Jeong-woo visits the company's exhibition booth at a H2 Mobility+Energy Show, a hydrogen industry fair that opened in Ilsan, north of Seoul, on Sept. 8, 2021, in this photo provided by the steelmaker. (PHOTO NOT FOR SALE) (Yonhap)

SEOUL, Sept. 8 (Yonhap) -- Major South Korean companies are betting big on hydrogen across sectors as they strive to shift from carbon-intensive businesses to a more sustainable model and capture new opportunities in the emerging energy sector.

Hydrogen can offer solutions in fields ranging from transport to energy storage as an alternative to fossil fuels and is an important pillar of the government's plan to reach net zero emissions by 2050 and develop renewable energy industries.

To embrace the global energy transition, Korean companies in the auto, chemical and steel industries have announced hydrogen business road maps to boost demand and foster new growth drivers.

Five conglomerates, including Hyundai Motor Group, SK, POSCO, Hanwha and Hyosung, have vowed to invest over 43 trillion won (US$37.1 billion) by 2030 to establish comprehensive hydrogen value chain ranging from production, transport, storage and uses.

To join forces, heads of 10 conglomerates, including Hyundai Motor, SK, POSCO, Lotte and Hanwha, on Wednesday launched Korea H2 Business Summit, which is the Korean version of the Hydrogen Council -- a global coalition of CEOs committed to expediting the energy transition with hydrogen.

Hyundai Motor Group, the world's fifth-largest automotive group, has committed 11.1 trillion won for its hydrogen business based on its expertise in developing the fuel cell system for vehicles and has been increasing investment as part of its electrification push.

Its flagship unit Hyundai Motor Co. said it will apply the hydrogen fuel-cell system to all of its commercial vehicle models by 2028 and increase its fuel cell electric vehicle (FCEV) lineup to three, up from the sole model Nexo SUV.

An FCEV is an eco-friendly vehicle that only emits water vapor as it converts stored hydrogen into electricity, which turns the vehicle's motor.

The automaker aims to apply the hydrogen fuel-cell systems in a broad range of areas, including other mobility solutions, such as trains, ships and urban air mobility (UAM), as well as homes, buildings and plants.

"The goal is to make hydrogen readily usable for everyone, everything and everywhere," Chairman Chung Euisun said during the Hydrogen Wave conference Tuesday. "We aim to help foster a worldwide hydrogen society by 2040."

SK Group, the nation's third-largest conglomerate, has announced plans to invest 18.5 trillion won in hydrogen to complete a hydrogen value chain utilizing its energy infrastructure.

SK Holdings, the group's holding firm, set an annual hydrogen production target of 280,000 tons by 2025 to supply it to petrol stations and fuel cell power plants.

"SK will utilize the group's infrastructure to mass produce hydrogen and secure a comprehensive value chain ranging from production, logistics and distribution," SK said in a statement. "The company will also target the global hydrogen market by investing in companies with hydrogen technologies and forging partnerships with other industry players."

SK E&S Co., the nation's largest private natural gas provider, plans to start supplying 30,000 tons of liquefied hydrogen annually to the Seoul metropolitan area in 2023, using resources from refinery SK Innovation Co.

SK E&S said it will also begin producing 250,000 tons of "blue" hydrogen per year in 2025 using its imported natural gas and develop "green" hydrogen technology in the long term.

There are currently three ways to make hydrogen. Grey hydrogen is produced when the element is stripped out of fossil fuels, such as coal, while blue hydrogen is produced from natural gas and produces less CO2. Green hydrogen is the cleanest variety as it uses renewable energy to produce hydrogen from water.

POSCO, the world's fifth-largest steelmaker by output, said it plans to use innovative technologies, such as Carbon Capture, Utilization and Storage (CCUS), and hydrogen-based steelmaking, to become a competitive low-carbon steel producer.

"We will renovate the steel making process by utilizing hydrogen, which doesn't emit CO2," POSCO Chairman Choi Jeong-woo during a H2 Mobility+Energy Show, a hydrogen industry fair held in Ilsan, north of Seoul.

POSCO said it will invest 10 trillion won by 2030 to expand its hydrogen business and establish supply chains, targeting 5 million tons of annual hydrogen production and 30 trillion won of sales by 2050.

The company currently produces 7,000 tons of hydrogen per year, mostly using natural gas and byproducts from its power plants.

Lotte Chemical Co., a major South Korean petrochemical company, said it will invest 4.4 trillion won in the hydrogen business by 2030 to cut its carbon emissions and foster the new growth driver.

As the first step, the petrochemical unit of Lotte Group plans to build a pilot plant to mass produce hydrogen storage tanks, a key part of FCEVs.

Lotte Chemical said it aims to generate 3 trillion won in annual sales and achieve 10 percent of its operating profits from the hydrogen business over the next decade.

The firm also said it will pump out about 600,000 tons of clean hydrogen using its eco-friendly production technology, setting a goal of taking up 30 percent of the domestic hydrogen market by 2030.

To further boost demand in various industrial areas, it plans to build new hydrogen fuel cell power plants and hydrogen fueling stations across the nation by 2030.
Source: *https://en.yna.co.kr/view/AEN20210908004400320*

1.6 Iceland

World's biggest plant for sucking carbon dioxide from the air starts operating in Iceland

9th September 2021.

It is hoped the high price of the tech will come down over time as it is seen as a key tool in efforts to limit global warming.

Image: The captured CO2 is mixed with water and pumped underground, where it slowly turns into rock

The world's largest plant for sucking carbon dioxide from the air and storing it underground has starting operating in Iceland.

It is expected to deal with up to 4,000 tonnes per year, equivalent to the annual emissions from about 790 cars.

Global emissions last year were 31.5 billion tonnes, according to the International Energy Agency.

Direct air capture is seen by scientists as vital to efforts to limit global warming.

Iceland's Orca plant - a reference to the Icelandic word for energy - is made up of eight large containers that use filters and fans to extract carbon dioxide.

The CO2 is then mixed with water and pumped underground, where it slowly turns into rock.

The system is powered renewably by a nearby geothermal plant.

Image: Filters and fans extract the carbon dioxide from the air - but the technology is expensive

Direct air capture is still a new and expensive technology, but it's hoped the price will fall as it becomes more widespread.

There are currently 15 plants globally, capturing more than 9,000 tonnes of carbon dioxide per year, according to the IEA.

Occidental, a US oil firm, is developing the largest facility, designed to pull one million tonnes per year from the air near its Texas oilfields.

Iceland's plant is a partnership between Swiss start-up Climeworks AG and Icelandic company Carbfix. Climeworks also offers a subscription allowing consumers to pay monthly for carbon removal.

Source: *https://news.sky.com/story/worlds-biggest-plant-for-sucking-carbon-dioxide-from-the-air-starts-operating-in-iceland-12402990*

End