ANGVA2U Info aims to share information, data, and news related to low carbon, carbon neutral, and zero carbon fuels towards Net Zero Emissions target and limiting earth temperature rise to 1.5 ^{0}C by the year 2100. These information, news, and insights, are shared in good faith, without any guarantee of accuracies. ANGVA members are advised to use these information, news, and insights, prudently and at their own risks.

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1.0 Introduction

This newsletter aims to keep members abreast with the latest news on NGVs, Renewable Natural Gas (RNG) / Biomethane, Renewable Fuels, and other related news. Members can contact ANGVA Secretariat if they have any comments related to this newsletter.

2.0 Natural Gas – Low Carbon Fuel

2.1 Malaysia

2.1.1 End of the road for NGV vehicles from July 2025

4th November 2024. By Amalia Azmi

All natural gas vehicles (NGVs) will no longer be allowed on the road or be registered effective July 1 next year, Transport Minister Anthony Loke said. - NSTP/ASYRAF HAMZAH

KUALA LUMPUR: All natural gas vehicles (NGVs) will no longer be allowed on the road or be registered effective July 1 next year, Transport Minister Anthony Loke said.

This decision, he said, was made by the cabinet on Oct 2 after taking into consideration the safety of NGVs and other road users.

Loke said the supply of NGVs across the country will be phased out beginning Oct 1, and by the second quarter of 2025, there will be no retail supply of NGVs available in the market.

"All dual-fuel vehicle registration information will be automatically changed to use petrol only, to prevent revenue leakage to the government.

"This is also to ensure the owner of the vehicle involved is charged to the motor vehicle licence fee according to the rate set to the class of vehicles powered by petrol," he said at a press conference on the direction of NGV vehicles here today.

Loke said records showed that modifications and installations of NGV vehicles were made between 1995 and 2014 and many of these vehicles were nearing the end of their NGV tank lifespan and require replacement.

"NGV tanks have a safe usage period of around 15 years and if not replaced, they become unsafe to use and may fail to function at any time, posing risks of injury, death and significant property damage," he said.

Loke said some users had modified their vehicles using cooking gas cylinders (LPG), which is extremely dangerous and has previously resulted in accidents and explosions. He said LPG cylinders operate at about 7 bar (100 pounds per square inch), whereas NGV tanks can withstand pressures of up to 220 bar (3,200 psi).

He said replacing these components can be costly, exceeding RM7,000 per vehicle and NGV replacement parts, particularly tanks, are either unavailable or very difficult to obtain in the local market.

"From observations and feedback received, some vehicle owners have used parts from previously used tanks or unapproved modifications, including using LPG tanks. Such issues ultimately pose safety risks, injuries or fatalities to all users or owners of the affected vehicles," he said.

Loke said there were two categories of vehicles affected by this ban: petrol-powered vehicles modified for dual-fuel use and imported vehicles specifically designed to operate solely on NGV (mono-fuel).

He said according to Road Transport Department records over the past three years, there are approximately 44,383 active NGV vehicles registered.

This includes 9,509 taxis and rental cars, 32,137 private vehicles, 2,150 buses and lorries and 587 machinery units.

He said the number of NGV-powered vehicles was quite small, at just 0.2 per cent of the total registered motor vehicles in Malaysia, excluding motorcycles.
Source: *https://www.nst.com.my/news/nation/2024/11/1129388/end-road-ngv-vehicles-july-2025*

2.1.2 Ready to transition away from NGVs

5th November 2024. By FAZLEENA AZIZ. • NATION

A helping hand: A transport ministry staff member holding the brochure on the transition assistance programme. — IZZRAFIQ ALIAS/The Star

PETALING JAYA: Stakeholders say that the use of all natural gas vehicles (NGVs) has already been phased out over the past five years for both commercial and private vehicles due to the limited availability of filling stations.

As a result, the impending ban on NGVs is not expected to have a significant impact, especially on taxis, which have also ceased using them, according to Datuk Mohamad Ashfar Ali, president of the Pan Malaysian Bus Operators Association.

“As far as I’m concerned, very few public service vehicles are still using gas, with most users being private-owned vehicles. Some of the main reasons for this decline include rising tank costs due to increased metal prices and the limited availability of NGV gas – only PETRONAS supplies it, while other oil companies do not.

“As a result, there have been long queues, with wait times of 20 to 30 minutes to fill up, which takes up a lot of time on a daily basis. This situation is now similar to the current experience with electric vehicle (EV) charging stations,” said Mohamad Ashafar.

With the ban in place, Steven Chong, president of the Peninsular Malaysia Tour Bus Operators’ Association, said that it is timely for the government to consider reducing the prices of electric vehicles (EVs) as they remain unaffordable for the general public.

“I believe they offered some schemes for taxis when they bought their vehicles. So we will have to wait and see what happens with this move,” said Chong.

"To continue supporting the green initiative, it is essential to lower the prices of electric vehicles (EVs) and ensure there are enough charging stations available. While this (NGV) ban may impact costs for several months, I believe that things will eventually stabilise, so I don't anticipate a significant long-term effect from the ban," he added.

Kamarudin Hussain, president of Gabungan Teksi Malaysia, praised Loke's bold decision, describing it as more dignified than PETRONAS' previous action of quietly halting NGV fuel sales.

He noted that this action left many of their members impacted, forcing them to remove the NGV system from their taxis without any compensation.

"For the past six to seven years, we have been aware of PETRONAS' intention to stop selling NGV fuel.

"We understand that they cannot continue due to significant losses and the safety concerns associated with the spare parts for their pumps.

"The minister's announcement reflects the true state of NGV fuel sales lifespan in this country for service and transport use.

"We are confident that our fuel costs will remain manageable with the subsidies that will be implemented later," said Kamarudin, also expressing appreciation for the RM3,000 fuel voucher.

Source: *https://www.thestar.com.my/news/nation/2024/11/05/ready-to-transition-away-from-ngvs?__sta=vhg.uosvzluuovxfjfa0evyydd%7CIFFTHJQ&__stm_medium=email&__stm_source=smartech*

Commentary

Banning NGVs because of safety is unfounded as those expired NGV tanks / cylinders and other unsafe situations such as the use of LPG cooking cylinders, use of low quality components and spare parts, and unapproved modifications were in clear violations of the Malaysian Standard (MS1096) and the Malaysian Road Transport Rules and Regulations on the conversions and usage of CNG / NGV in motor vehicles in the country. (Note: In Malaysia NGV is referred to as the fuel i.e. Natural Gas for Vehicles which is technically Compressed Natural Gas (CNG). NGV is also used interchangeably as referring to Natural Gas Vehicle).

When NGV was first introduced in Malaysia, Malaysian standards (based on international standards) were established and authorities like Road Transport Department (for control of NGV vehicles), Department of Occupational Safety and Health (for control of CNG cylinders), Ministry of Domestic Trade and Consumer Affairs (for control of retailing of NGV and consumer protection), Ministry of Human Resources (for training and certification of licensed Installers), and other related government departments and ministries were roped in to establish their related rules and regulations to ensure the safety of the NGV industry in the country. NGVs become unsafe because of lack of enforcement of the standards, rules and regulations by the Authorities concern.

According to the record that the Asia Pacific Natural Gas Vehicles Association (ANGVA) has, since NGV was first introduced commercially in Malaysia in 1991 till now, there were 9 incidents related to NGV vehicles (from 2001 to 2019) and 1 NGV station explosion (in 2016). There were two incidents of usage of LPG cooking cylinder in NGV vehicle in 2008. Both were

illegal conversions. In one of this incident, a passenger of the converted van was killed when the driver filled his van for the first time with CNG at the NGV refueling station. This was the only known fatality directly related to the use of NGV vehicles in Malaysia. There were two incidents of NGV vehicle CNG cylinder explosions that resulted in minor injuries. As for the NGV Refueling station explosion in 2016, the maintenance technician was killed while working in the CNG compressor and CNG storage cascade bay due to explosion from massive leakage of natural gas from the piping system.

In term of number of NGV vehicles, it was 950 vehicles in 1991, peaked at 74,211 in 2014 and after that declined to 44,383 in 2024. For NGV refueling stations, it started with 7 stations in 1991, peaked at 179 in 2014, declined to 99 in 2016 and to less than 60 in 2024.

It can be seen that over the 33 years usage of NGV in Malaysia since 1991, the safety record of NGVs in Malaysia is exemplary despite the non-enforcement of the required periodic inspections and replacement of expired CNG cylinders. This safety record could be because safety requirement was put in place right from Day 1 of the commercialization of NGV, from the planning stage, project implementation stage, and the control imposed on the importation of the conversion kits and cylinders, the requirement for certified installers and licensed workshops for the conversions of vehicles, briefing and training of government authority including emergency response departments, and educating and creating awareness to the users and public.

However, CNG cylinders safety risk becomes higher and critical as no periodic inspections were conducted and as the years passed by the expiry dates approaches and expired cylinders were not replaced.

ANGVA has been monitoring NGV markets in the Asia Pacific region and worldwide and had seen many safety incidents and violations, mostly due to illegal modifications, use of wrong or substandard components, ignorance of the risks that come with the usage of NGV/CNG (and LNG), and lack of enforcement by authorities. Some NGV markets had stagnant, some had declined, and some had been abandoned, but mainly due to economic reasons and change of government energy policies.

2.2 Nigeria

2.2.1 Presidency Allays CNG Safety Fears Amid Malaysia Phase-Out Plans

7th November 2024. By Donatus Anichukwueze.

It stated that Malaysia had an unsuccessful transition away from costly, dirtier petrol and diesel unlike India, China, Iran and Egypt.

CNG-powered vehicles.

The Presidency has insisted that the Compressed Natural Gas (CNG) is a safer and more affordable alternative to petrol.

The Special Adviser to President Bola Tinubu on Information and Strategy, Bayo Onanuga, posted on his X handle on Thursday to allay fears among Nigerians following a report that the Malaysian government is planning to phase out natural gas-powered vehicles by July 2025.

In his post, Onanuga clarified that "the Malaysian issue speaks more to the safety of LPG, NOT safety of CNG."

According to the presidential spokesperson, Malaysia's transition away from costly, dirtier petrol and diesel was unsuccessful, unlike that of India, China, Iran, and Egypt.

He said that the Asian country did not build tank manufacturing capacity for the 15 years of its failed transition, adding that Nigeria is already developing that in year one.

The statement reads, "Some clarification on Malaysia's plan to phase out CNG-powered vehicles: The Malaysian issue speaks more to the safety of LPG than the safety of CNG.

"In the original report, government transport minister Anthony Loke said: 'There are also some car owners who have modified their vehicles using liquefied petroleum gas (LPG) cylinders, which are very dangerous.'

"The report also spoke about the safety of 15-year-old CNG cylinders. NGV covers both CNG and LPG. In its transition, Nigeria has adopted CNG ONLY, not both, because of LPG's valid safety and cost concerns.

"Malaysia basically had an unsuccessful transition away from costly and dirtier petrol and diesel.

"Conversion of 45,000 vehicles in 15 years (less than 0.2%) is not enviable unlike India, China, Iran and Egypt.

"The end of 15 year CNG tank cycle means they need to replace tanks, and it was easier/cheaper to scrap their program and continue with their petrol than to do so if they had not built tank manufacturing capacity, which Nigeria is already developing in year one."

The Federal Government has been encouraging Nigerians to convert their vehicles from petrol to CNG, but Nigerians have been left to deal with fears coming from reports of explosions of CNG-powered vehicles, among other negative reports.

In an October event, President Bola Tinubu emphasised the urgent need for Nigeria to use its vast natural gas resources in the transportation sector.

He stated that CNG transportation is an economic necessity for Nigeria, signalling a significant shift in the country's approach to public transportation and energy use.

"Utilising natural gas to power Nigeria's transportation industry is the next way to go," he had stated.

Source: *https://www.channelstv.com/2024/11/07/presidency-allays-cng-safety-fears-amid-malaysia-phase-out-plans/*

2.2.2 Over 100,000 vehicles converted to CNG – PCNGi

6th November 2024. By Johnbosco Agbakwuru

…Says $200m already invested in value chain, conversion Centres now over 140 nationwide

The Presidential CNG Initiative (PCNGi) announced on Wednesday that more than 100,000 vehicles have been converted from petrol to Compressed Natural Gas (CNG) since the initiative's launch last year.

This initiative, introduced by the administration of President Bola Tinubu, aims to reduce the country's dependence on expensive fuel while promoting cost-effective alternatives like CNG.

In a statement released by the Project Director/CEO of PCNGi, Engr. Michael Oluwagbemi, it was revealed that over $200 million has been invested in the CNG value chain, with 140 conversion centres now operating across the country.

The statement also addressed what PCNGi described as a "toxic debate" against the initiative in the media.

"To date, over 100,000 vehicles have been converted from petrol to CNG/bi-fuel-powered, and more conversion centres are being established across the country. Additionally, investors are ramping up the development and deployment of CNG infrastructure, with over $200 million already invested across the value chain, creating thousands of new jobs and economic opportunities," the statement read.

PCNGi expressed concern over the misinformation surrounding the initiative, particularly regarding the choice of petrol over CNG, a move that could save Nigeria $3 billion while adding $2 billion in revenue to the national purse in the next few years.

The initiative's leaders also addressed concerns about the ease of conversion. "We see this as an opportunity rather than a challenge. The number of conversion centres has increased from seven in 2023 to more than 140 nationwide. More than 2,000 Nigerians have already been employed in these centres, with more jobs expected as CNG adoption grows."

Private sector investments of over 2 billion Naira have already gone into the establishment of these centres, with projections of an additional 6 to 10 billion Naira needed to set up to 1,000 centres in total.

Clarifying recent incidents, PCNGi stated that the explosion in Edo State was caused by substandard, uncertified, and poorly fabricated CNG cylinders during a refueling attempt, not during the conversion process. The organization emphasized that CNG is safe, cleaner, and more sustainable than other fuels, being less explosive than petrol and diesel.

The statement also highlighted the ongoing expansion of CNG infrastructure, including the construction of 75 new daughter stations across the country. Investments in mother stations have reached over $175 million, with 65 new licenses issued in the past year.

In response to claims that conversion kits were unsuitable for older vehicles, PCNGi referenced successful adoption of CNG in countries like Egypt, India, and Iran, where old vehicles perform more efficiently on CNG than petrol.

PCNGi also defended the government's leadership in the initiative, noting that the conversion program began with government institutions like the Nigerian Army and the Nigeria Police, with plans to expand to other MDAs, including the Federal Road Maintenance Agency.
Source: *https://www.vanguardngr.com/2024/11/over-100000-vehicles-converted-to-cng-pcngi/*

Commentary

NGV in Malaysia refers to natural gas for vehicles (as a CNG fuel) and also natural gas vehicles (as a CNG vehicle). There is no Autogas / LPG vehicles in operation in Malaysia. The use of LPG as fuel for vehicles was terminated when NGV was introduced commercially in the country. There was no Autogas / LPG vehicles in operation in Malaysia since around 1993.

Most CNG cylinders are designed and manufactured to the ISO 11439 standard (or United Nations Regulations R110 – which refers to ISO11439 in the Annex). The latest is ISO 11439:2013 second edition. ISO 11439 cylinders can be manufactured for a life of 15 to 20 years. The expiry date is stamped / labeled on the cylinders. As 20 years cylinders will cost more, most manufacturers will produced 15 years life cylinders.

Under ISO 11439, CNG cylinder is design to burst at 2.25 of the service pressure. For 3000 psig (200 bar) service pressure, the CNG cylinder should burst (not exploded) at 6750 psig (450 bar). In operation it is not easy to reach 6750 psig unless there is a fire. Majority of CNG failure / explosion were due to corrosion / rust / damages incurred during operations. There were also cases of manufacturing defects.

ISO 11439 cylinders have to undergo periodic inspections as per manufacturer's recommendation and national regulations requirement on the period and type of inspection tests. There is no need for Hydrostatic Test of the cylinders in ISO 11439, however some countries regulators do require Hydrostatic Test during the periodic inspection.

CNG cylinder, service pressure of 3000 psig (200 bar) is the most high risk component of the CNG vehicle system, thus there must be strict enforcement of safety requirement for this component. CNG cylinder management system must be put in place.

2.3 Tanzania

Gazprom initiates pilot project to supply CNG fueling trucks to Tanzania

7th November 2024.

MOSCOW. Nov 7 (Interfax) - Gazprom presented a pilot project to supply two compressed natural gas fueling trucks to Tanzania at African Energy Week 2024 in Cape Town, the Russian gas giant said.

The trucks, which are intended to fuel various vehicles with CNG and transport it, will make it possible to increase the number of daily fuelings on Tanzania's natural gas vehicle (NGV) market, the company said, adding that the number of local automobile owners choosing natural gas is rapidly growing.

The CNG trucks can also be used for autonomous gasification of industrial and household consumers, Gazprom said.

Tanzania, which has a population of 67 million, increased natural gas production by 9.3% to 2.33 billion cubic meters in 2023, Eni statistics showed.

"Countries of the Global South in general and the African continent in particular will be the new point of growth in natural gas consumption. Growing populations and urbanization dictate

the need to ensure access to a reliable and environmentally clean source of energy, which natural gas certainly is. Gazprom's experience in developing the domestic gas market, our competencies, technology and equipment might be sought after to solve African countries' energy supply challenges," Gazprom department head Dmitry Khandogi, who gave a presentation on the "Gazprom Group in Africa," was quoted as saying in the press release.

Russia's Energy Ministry reported that Deputy Energy Minister Roman Marshavin also took part in the forum. He said at a roundtable that promising areas for cooperation include the oil and gas sector, renewable energy, modernization and construction of network infrastructure and digital technologies in the fuel and energy sector.

"Considering the pressing problem of modernizing networks in Africa, which often leads to outages and significant energy losses, I would like to stress that Russian companies have a lot of experience in increasing energy security and efficiency," the ministry quoted Marshavin as saying.

Another promising area for bilateral cooperation is training workers for the energy sector, Marshavin said, adding that Russia is prepared to share its experience training professionals for the oil, gas and mining sectors, as well as in the area of energy sector digitalization.
Source: *https://interfax.com/newsroom/top-stories/107475/*

2.4 Africa

6 countries championing CNG transition in Africa

7th November 2024. By SOLOMON EKANEM

Africa's transportation sector is shifting from fossil fuels to cleaner alternatives, with a rise in CNG and LPG vehicles on the roads, offering a cleaner alternative to gasoline and diesel

6 countries championing CNG transition in Africa

African nations are adopting CNG as a strategy to transition away from fossil fuels.

The Nigerian government has set a target of converting one million vehicles to CNG by 2025

Africa's transportation sector is shifting from fossil fuels to cleaner alternatives, with a rise in CNG and LPG vehicles on the roads, offering a cleaner alternative to gasoline and diesel.

- Africa CNG and LPG Vehicle Market currently valued at USD 1.28 billion
- Some African nations pioneering the adoption of CNG as a strategy to transition away from fossil fuels
- Government support and policy initiatives are key drivers of the African CNG vehicle market

Investing in Compressed Natural Gas (CNG) has proven to be a highly profitable venture, with the Africa CNG and LPG Vehicle Market experiencing remarkable growth.

Currently valued at USD 1.28 billion (as of 2024), the market is projected to reach USD 1.9 billion by 2029, with a Compound Annual Growth Rate (CAGR) of 6.78% during the forecast period (2024-2029), according to Mordor Intelligence.

Although the adoption of CNG and LPG vehicles in Africa is still in its early stages, some African nations are pioneering the adoption of CNG as a strategy to transition away from fossil fuels.

The market size differs across the continent, with certain regions witnessing more rapid growth due to favorable regulatory environments and infrastructure development, setting the stage for a promising future

According to data from Mordor Intelligence and Ventures Africa, the following countries have implemented policies to support the seamless adoption of CNG in their regions;

1. Egypt has emerged as a leader in the region in the manufacturing, distribution, and servicing of CNG and LPG vehicles. Egypt's government is investing in CNG infrastructure, aiming to convert 2,600 vehicles/month, with incentives and financing options to boost adoption

2. The Nigerian government has set a target of converting one million vehicles to CNG by 2025, starting with 11,500 CNG buses and 55,000 conversion kits. The government has also set in motion, plans to set up 50 EV charging stations by 2025 in major cities like Lagos, Abuja, and Port Harcourt.

3. Morocco has an ambitious energy strategy which aims to achieve 52% of its energy mix from renewable sources by 2030. The Moroccan government has initiated plans to convert 10,000 taxis to CNG by 2025 through government grants and private partnerships.

4. South Africa, a leader in electric vehicle adoption, is also witnessing a significant increase in CNG usage, particularly in public transportation. Notably, Johannesburg's Metrobus fleet has incorporated over 150 CNG-powered buses, aligning with the country's goals to minimize carbon emissions and reduce fuel expenses.

5. The Kenyan government has set up initiatives to convert public service vehicles to CNG, tackling urban air pollution. The government has also launched pilot projects to convert public service vehicles (PSVs) to CNG, aiming to reduce urban air pollution.

6. The government of Tanzania is constructing a CNG mother station valued at about Sh 14 billion. This central station will supply gas to various smaller stations across the country, particularly in areas lacking access to gas.

Government support and policy initiatives are key drivers of the African CNG vehicle market, offering financial incentives and regulatory frameworks to boost adoption across the continent.
Source: *https://africa.businessinsider.com/local/markets/6-countries-championing-cng-transition-in-africa/c9jz2tp*

2.5 India

CNG cars power ahead; from budget to premium, demand accelerates

7th November 2024. BY G BALACHANDAR. Chennai

Rapid expansion of CNG refuelling infra, launch of more CNG variants by automakers, higher production capacity as chip shortages ease, and attractive total cost of ownership (TCO) that CNG vehicles offer are reasons for higher buyer interest

In H1, Maruti's top-performing CNG models included Ertiga, WagonR Dzire and Breeza.

The Indian passenger vehicle market is witnessing a robust rise in demand for CNG (compressed natural gas)-powered models, with CNG options now making inroads into high-end car segments too. Industry representatives attribute the double-digit growth in CNG car and utility vehicle (UV) sales to several key factors: the rapid expansion of CNG refuelling infrastructure, the launch of more CNG variants by automakers, increased production capacity as semiconductor shortages ease, and the attractive total cost of ownership (TCO) that CNG vehicles offer. Together, these factors make CNG an increasingly appealing choice for car buyers across segments.

Maruti Suzuki, a leader in the CNG market, reports a significant shift among customers in premium segments, such as SUVs, who are now opting for CNG variants. The company's CNG variants of models like the Brezza and Ertiga are experiencing high demand as a result.

Following the recent introduction of its S-CNG powertrain in the fourth-generation Swift, Maruti Suzuki now offers the widest lineup of S-CNG vehicles in the industry, spanning 14 models. The company's total CNG sales reached 2.95 lakh units in the first half of this fiscal year, up from 2.31 lakh units over the same period last year, marking a 27% increase.

"CNG models have been performing exceptionally well for us, with October achieving our highest-ever monthly retail of around 71,000 CNG vehicles. Last year, one in every four vehicles sold was CNG, whereas this year, that figure has risen to one in three. CNG now contributes approximately 34% to our total sales, up from 25-26% last year. If these trends persist, we could potentially reach the 6-lakh-unit mark by the end of this fiscal year," said Partho Banerjee, Senior Executive Officer, Marketing & Sales at Maruti Suzuki India Ltd, told BusinessLine.

Hyundai Motor India, the country's second-largest carmaker, also achieved record CNG sales of approximately 8,300 units in October, with CNG accounting for 15% of its domestic sales, up from 13% in September. Hyundai recently introduced CNG versions of its entry-level SUV Exter and the compact car Grand i10 NIOS, powered by its proprietary Hy-CNG Duo technology.

Tata Motors's Nexon sees healthy numbers

Tata Motors, too, has broadened its CNG portfolio, with the recent launch of a CNG variant for its flagship SUV, the Nexon, which has seen a strong market response. Toyota Kirloskar Motor (TKM) has also expanded its offerings with the E-CNG variant of the Rumion MPV, claiming a fuel efficiency of 26.11 km/kg.

French automaker Renault is similarly preparing to enter the CNG space with a variant of its Triber MPV, aiming to attract customers in the fleet market.

More than 1.6 lakh units sold

According to data from Vahan, over 6.1 lakh CNG cars and utility vehicles have been sold so far this year, a significant increase from around 5.3 lakh units in 2023.

The surge in CNG vehicle sales is being driven by multiple factors. “Supply chain constraints that affected production have now eased, allowing production to keep pace with demand. Additionally, CNG, being a cleaner alternative to conventional fuels, resonates with environmentally conscious consumers,” said Banerjee.

Expanded CNG infra

Beyond the strong TCO advantage, the rapid expansion of CNG infrastructure is playing a key role, with nearly 7,000 CNG stations now operational nationwide, thanks to partnerships with private city gas distributors and government support. Enhanced drivability, better mileage, and the expanding CNG network are making these vehicles an increasingly practical choice for a diverse range of consumers.

Thivahar Bethune P, Vice President of Marketing at AG&P Pratham, highlighted that his company has collaborated extensively with automakers and dealers, who have been instrumental in facilitating the shift to CNG. “With the various benefits of CNG and the improved refuelling infrastructure, customer response has been highly positive, further driving CNG vehicle sales,” he added.
Source: *https://www.thehindubusinessline.com/economy/cng-cars-power-ahead-from-budget-to-premium-demand-accelerates/article68840099.ece*

2.6 Vietnam

Nearly 30% of vehicles to be electric by 2030

4th November 2024.

The Ministry of Transport has set a target that 30% of cars and 22% of motorbikes will be powered by electricity by 2030.

An electric bus in HCM City. By 2030, the Ministry of Transport wants 623 Compressed Natural Gas on the roads of Hanoi and HCM City. (Photo: VNA)

The Ministry of Transport has set a target that 30% of cars and 22% of motorbikes will be powered by electricity by 2030.

This is one of the solutions to achieve the goal of reducing 5.9% of greenhouse gas emissions in the transport sector under a plan issued by the ministry recently.

Reviews will be carried out to amend the national technical standards for automobiles with updated regulations for electric vehicles (EVs).

The ministry will develop a circular regulating the classification of road vehicles, signs to identify vehicles using clean, green and environmentally – friendly energies, together with the issuance of standards for roadside rest stops, including regulations on charging stations.

Studies will also be carried out to develop the charging infrastructure system and integrate into the road transport infrastructure planning for 2021-30 period with a vision to 2050.

The ministry will also look at mechanisms for exchanging and offsetting carbon credits for projects which convert from fossil fuel vehicles to EVs.

Under the plan, the ministry also set a target that there will be 623 Compressed Natural Gas buses by 2030, 423 in Ho Chi Minh City and 200 in Hanoi.

In addition, 100% of road vehicles will use biofuel E5 by 2030./.
Source: *https://vietnam.vnanet.vn/english/print/nearly-30-of-vehicles-to-be-electric-by-2030-380332.html*

2.7 China

LNG-fueled heavy trucking grows in China

28th October 2024. By Art Aiello. Editor, Power Briefing

Blue Energy 5528 liquefied natural gas (LNG) trucks are parked at the manufacturing facility in Pune, India, October 11, 2024. (Photo: Reuters/Francis Mascarenhas)

Reuters reported recently that trucking fleets in China are embracing liquefied natural gas (LNG) as an alternative fuel, accelerating a decline in diesel demand to the world's biggest oil importer. According to the story, it is a trend India wants to emulate.

The rise of LNG trucks in China joins electric vehicle (EV) adoption there at a time of prolonged economic slowdown, Reuters said. This has dampened oil consumption growth, with crude imports down 2.8 percent so far this year, weakening global prices.

According to Reuters, sales of LNG-fueled trucks in China surged in the first half of 2024 to nearly 109,000 vehicles after a sharp decline in local LNG prices. These sales are more than twice those of the same period in 2023, according to information provider CVWorld. Government subsidies and tighter emissions standards in recent years have paved the way, Reuters said.

However, research consultancy Energy Aspects said rising local LNG prices and lower diesel prices in August ended a 20-month streak of year-on-year increases in LNG truck sales in China, which according to Reuters highlights the price-sensitivity of demand for the vehicles. Over the longer term, LNG-powered trucks may be displaced by electric trucks, Reuters said, especially in an EV market such as China, as battery technology improves and when battery swapping infrastructure is built.

Unlike in China, Reuters reported on transport ministry data that revealed India's adoption of LNG-powered trucks is at an earlier stage, with only 645 of the vehicles operating in the country. However, the government as saying it aims to convert about one-third of its heavy truck fleet — over 7 million vehicles — to LNG in five to seven years, Reuters said, which experts called ambitious.

"India will not have the same penetration rates as China, but improved infrastructure has reduced inefficiencies already, and Indian diesel demand growth may have peaked as a result," said Amrita Sen, founder of Energy Aspects, in the Reuters report.

While Reuters said the Chinese and Indian governments are providing policy support for LNG trucks to reduce pollution, companies are attracted to the fuel by cost savings. According to industry experts, LNG trucks will become economical in both countries when the fuel is at least 20 percent cheaper than diesel.

That's because of the current prices for such vehicles. Reuters cited global consultants ICF as saying a new LNG truck costs 40 percent more in India than its diesel counterpart, while Chinese research provider Horizon Insights said the vehicles are about 18 percent more expensive in China. The fuel savings could help operators recoup the higher up-front costs.

India also requires investments in fueling infrastructure. Reuters said that Mumbai-based GreenLine Mobility Solutions runs about 500 LNG-powered trucks and has ordered over 2,000 more.

"Where there is no network as of now, we are unable to pitch in," said Kaizad Palia, COO for GreenLine Mobility. "We will expand our operations with the expansion of fuel stations in the country."

Reuters cited a government official, speaking on the condition of anonymity, as saying India is supporting policies for more LNG trucking, aiming to have 66 LNG stations in a year compared with 20 now.
Source: *https://www.powerprogress.com/news/lng-fueled-heavy-trucking-grows-in-china/8039900.article*

3.0 Renewable Natural Gas (RNG) / Biomethane – Carbon Neutral Fuel

New Zealand
First renewable gas flows in New Zealand pipeline
7th November 2024.

First Renewables has confirmed production has begun at its biogas upgrade facility at the Ecogas Reporoa Organics Processing Facility in Broadlands, New Zealand.

James Irvine, general manager of Future Fuels at Clarus hailed this as a historic milestone for the country's gas pipeline infrastructure.

"We are thrilled to confirm that renewable gas is now flowing through a Firstgas pipeline for the first time, marking a pivotal moment not only for the gas industry but for New Zealand's journey towards a sustainable, low-carbon energy future," said Irvine.

Food scraps and other organic wastes are transformed into biogas at Ecogas' Reporoa facility. Ecogas contracted First Renewables to deliver an advanced biogas upgrade system where the biogas is transformed into biomethane, which is then injected into the Firstgas pipeline for residential and commercial gas users.

BioCO2 is also produced for Ecogas as part of this new system.

This will be supplied to a nearby glasshouse to enhance the growth of tomatoes in the near future.

"Our initial estimates show this facility alone can supply enough renewable gas to power up to 7,200 homes, while also reducing CO_2 emissions by 11,000 tonnes per year*, and because it's chemically identical to natural gas, there are no changes required for gas users or their appliances," explained Irvine.

"This is an exciting step forward for not only Ecogas and First Renewables but for Aotearoa as a whole." said Fraser Jonker, managing director of Ecogas.

"Our mission is to close the food and energy loop. By transforming a 'waste' product into a renewable gas, we are another step forward on this journey that ultimately supports environmental sustainability, energy security and economic development in Aotearoa New Zealand."
Source: *https://www.bioenergy-news.com/news/first-renewable-gas-flows-in-new-zealand-pipeline/*

4.0 Hydrogen – Zero carbon fuel

United States of America

Hydrogen likely to be replacement fuel for trucks

8th November 2024. By Don C. Brunell

Washington's agriculture is a $12.8 billion business with 33,000 farms—-and it runs on gas, diesel and natural gas. The hundreds of big rigs hauling crops and food products are not electric.

Even though new trucks have reduced CO2 and other pollutants, some politicians are hastily charging ahead to replace fossil-fueled trucks with unproven technology. According to 2021 Environmental Protection Agency data, transportation was responsible for 30% of greenhouse gases of which 80% comes from cars and trucks. A quarter of the CO2 comes from medium- and heavy-duty trucks.

Replacing diesel in long-haul trucks (Class 8) is expensive and a mammoth task. The Bureau of Transportation estimates there are 4.5 million big rigs in the U.S. They are the trucks and trailers we commonly see on our highways carrying cargo hundreds of miles and needing short refueling times—15 minutes compared to an hour.

Specifically, long-distance haulers need a network of hydrogen fueling stations (like today's truck stops) along with affordable trucks and fuel. Hub researchers' added challenge is 95% of the hydrogen used in commercial vehicles comes from high-temperature steamed methane where CO2 is released.

Green hydrogen, absent from CO2, uses lots of electricity to break water into hydrogen and oxygen (electrolysis), but it is expensive. In 2021, the International Energy Agency calculated green hydrogen production costs are more than three times more when compared to manufacturing methane-derived hydrogen.

Our state has an abundance of low-cost hydropower generated primarily by the Columbia and Snake rivers dams. Surplus electricity from renewable sources could be directed to electrolysis plants. For example, Douglas County Public Utility District is spending $20 million to build a renewable hydrogen production plant near Wenatchee. It uses surplus power from Wells Dam and was funded by a state grant.

Hydrogen- and battery-powered trucks are expensive to purchase even with the state's commercial vehicle tax credit covering up to $100,000 of the incremental cost for new alternative-fuel vehicles. Even with those taxpayer subsidies, those rigs could be beyond what struggling farm families can afford.

According to the International Council on Clean Transportation, the purchase price of a Class 8 hydrogen was $359,500, compared to $474,900 for a battery-operated and $143,500 for diesels.

Nikola Motors, a U.S. maker of hydrogen trucks, claims its vehicles get 12 to 15 miles per gallon, well above the average 6.4 mpg for a diesel truck. Two years ago, Nikola Motors announced it launched a roadmap for 700 fueling stations nationwide. European Union leaders are already investing heavily in hydrogen fuel research believing it is key to eliminating CO2 discharges from vehicles.

For example, one innovative technology is called pyrolysis. Hopefully, it will allow Europeans to pipe hydrogen as natural gas now travels long distances across the country and underwater. Hydrogen created by pyrolysis is an adaptation of an industrial process. It was designed to remove CO2 from the process by creating charred wood and organic matter.

Developing hydrogen into a commercially viable fuel takes money—lots of it. Europeans are relying on hydrogen fuel technologies to lead the way to substantial greenhouse gas reductions and a sizable chunk of the European Union's $13.3 billion climate initiative centers on hydrogen.

Hopefully, now that hydrogen technology is growing in acceptance, there will be greater attention to accelerating research and development, scaling up production, finding ways to reduce costs and it will be well-tested before it is mandated.

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Source: *https://www.bainbridgereview.com/opinion/hydrogen-likely-to-be-replacement-fuel-for-trucks/*

5.0 Electricity – Electric Vehicles (EVs)

France

Anmesty slams EV firms over rights measures in battery production

15th October 2024.

Alarming abuses in the extraction of energy transition minerals highlight the industry's poor response.

Mercedes-Benz received the lowest ratings for supply chains failing to meet rights standards for metals like cobalt and nickel, followed by Tesla. (Reuters pic)

PARIS: Major electric car makers are failing to show that they are protecting workers and communities from exploitation and environmental harm in producing metals for their batteries, Amnesty International said on Tuesday.

The global human rights organisation rated 13 major car makers on how transparent they were in showing whether their supply chains for metals such as cobalt and nickel met international rights standards.

The huge rise in demand for the metals needed to make electric vehicle batteries is putting immense pressures on mining-affected communities, said Amnesty's Secretary General, Agnes Callamard.

The human rights abuses tied to the extraction of energy transition minerals are alarming and pervasive and the industry's response is sorely lacking.

It called on car makers to tackle risks in their supply chains such as forced evictions, environmental pollution, disrupted access to water and abuse of Indigenous peoples' rights.

It said the sector had made progress since its first report on the issue in 2017 but much remained to be done.

German car maker Mercedes-Benz scored highest in the ratings, followed by US electric car specialist Tesla.

Chinese firm BYD along with Mitsubishi Motors and Hyundai scored lowest.

The commitments these companies report on are often vague and provide little evidence of meaningful action, said Callamard.

In September 2023 Amnesty accused multinational companies of evicting and intimidating residents near cobalt mines in the DRC.

It also documented human rights violations targeting Indigenous people linked to nickel extraction in the Philippines.

Callamard called on governments to strengthen regulation of companies' human rights efforts.
Source: *https://www.freemalaysiatoday.com/category/business/2024/10/15/anmesty-slams-ev-firms-over-rights-measures-in-battery-production/*

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