



ANGVA2U Info 10/2023. 3rd November 2023 (for ANGVA members only)

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1.0 Selected News / Articles

1.1 India

From November 1, only CNG, electric buses allowed in Delhi-NCR region

27th October 2023. By Kumar Kunal. Published by: Aditi Sharma



Delhi's air quality was recorded in the 'poor' category for the fourth consecutive day on Thursday | Photo: X/@Min_KGahlot

The order will be applicable on all government and private buses. The Haryana, Rajasthan and Uttar Pradesh governments have been informed about the order issued by the State Transport Authority for compliance.

From November 1, only Compressed Natural Gas-run (CNG), electric and BS-VI diesel buses will be allowed to operate in the Delhi-National Capital Region (NCR), announced the State Transport Authority (STA) on Thursday.

The order will be applicable on all government and private buses. The Haryana, Rajasthan and Uttar Pradesh governments have been informed about the order issued by the STA for compliance.

The decision has been taken in accordance with instructions from the Commission of Air Quality Management (CAQM) to reduce air pollution.

Delhi's air quality was recorded in the 'poor' category for the fourth consecutive day on Thursday and any improvement is unlikely soon, according to monitoring agencies.

The city's 24-hour average Air Quality Index (AQI) stood at 256 at 4 pm, worsening from 243 on Wednesday and 220 on Tuesday.

On October 21, the Centre-led panel for air quality management implemented the 11-point action plan in the National Capital Region (NCR), as outlined in Stage-II of the Graded Response Action Plan (GRAP).

Delhi's Environment Minister, Gopal Rai, said that the government has identified eight additional pollution hotspots, in addition to the existing 13 in the national capital. Special teams will be deployed to these areas to scrutinize and address pollution sources, he assured.

Meanwhile, an analysis conducted by the Delhi Pollution Control Committee recently revealed that the capital faces its peak pollution period from November 1 to November 15, coinciding with increased stubble burning incidents in Punjab and Haryana.

Source: <https://www.indiatoday.in/cities/delhi/story/november-cng-electric-diesel-buses-allowed-delhi-ncr-pollution-2454215-2023-10-27>

1.2 Thailand

Transport operators give Thai govt 7 days to cut NGV prices

2nd November 2023.



BANGKOK: A group of private and public transport operators are demanding that the government reduce the price of NGV (natural gas for vehicles).

The protesters have given the government a seven-day deadline to make a decision, warning that they cannot operate their businesses with the current gas prices.

The private-public transporters, including van, minibus, bus, and pickup truck taxi operators in the Bangkok metropolitan area and neighbouring provinces like Chonburi, gathered their vehicles near the Ministry of Energy.

They sought a meeting with Deputy Prime Minister Pirapan Salirathavibhaga, who is also the Minister of Energy, to voice their concerns regarding the soaring prices of NGV used in public transportation.

An estimated 100 public transport vehicles have joined the protest. The adviser to the Minister of Energy received the protesters' demands and pledged to convey them to Peeraphan for his consideration.

The group's demands include:

- NGV price be fixed at 13 baht per kilogram
- Extend the duration of discounted cards for an additional two years
- Urge the removal of quantity restrictions for refilling NGV gas, aligning with the current situation.
- Introduction of discounted fuel cards for diesel fuel used by the private-public passenger transport group.

The group has demanded a definitive response in seven days. If their demands were not met, they intended to return and take more stringent action, including suspending all public transportation services in the entire Bangkok area and potentially launching a long-term strike.

- *The Nation/ANN*

Source: <https://www.thestar.com.my/aseanplus/aseanplus-news/2023/11/02/transport-operators-give-thai-govt-7-days-to-cut-ngv-prices>

1.3 Nigeria

FG Plans to Launch One Million CNG Vehicles by 2027

1st November 2023. By Economic Confidential.



President Bola Ahmed Tinubu

The Federal Government has revealed plans to introduce one million Compressed Natural Gas (CNG) powered vehicles by 2027. The announcement was made by the Special Assistant to the President on Special Duties and Domestic Affairs, Toyin Subaru, during a stakeholders' meeting held on Sunday at the Bank of Industry headquarters in Abuja.

As part of this initiative, Subaru disclosed that 11,500 CNG-powered buses are expected to be deployed this week. This move aims to address transportation challenges exacerbated by recent subsidy removal, providing a viable solution to the public.

The Federal Government assured that the introduction of CNG buses will significantly lower the price of CNG to N230 per kg, making it an affordable and eco-friendly option for the citizens.

Subaru emphasized that the integration of CNG-powered mass transit buses will enable Nigerians to save up to two-thirds of their transportation costs. Furthermore, he highlighted the initiative's role in promoting CNG as a sustainable alternative to traditional petrol-based vehicles. He said, "Now, with this CNG plan, we don't even have to import what we need to operate our vehicles. "It is called CNG and we have the gas here in Nigeria. So, the idea is just to take the gas to distribute it across Nigeria via different truck stations.

"Most gas is not CNG enabled yet and what we are doing is to help them convert their cars so you can use petrol and CNG at the same time.

"We are going to develop an app that will enable you to locate where a CNG station is located. We should be able to buy gas for our cars at N230 per KG as against the cost of petrol which is N680 per litre. This should help every Nigerian save about two-thirds of their transport cost," he said.

Source: <https://economicconfidential.com/2023/11/fg-launch-cng-vehicles/>

1.4 Spain

Sedigas bets on CNG for sustainable mobility

23rd September 2023. By Daniel Atori

The Spanish Gas Association (Sedigas) launched an information campaign that advocates promoting the transition of vehicles towards the use of compressed natural gas (CNG) as an alternative for sustainable mobility. "This initiative aims to contribute to the decarbonization of transportation and move towards a future of 100% renewable mobility, using CNG as a bridge to energy sources such as biomethane (Bio-CNG)," sources from the association pointed out in a note of press.

From Sedigas they recalled that "CNG is one of the most sustainable and proven fuels on the market, with decades of experience in natural gas applications in heating, air conditioning, hot water and cooking systems. In addition, its safety makes it ideal for use in vehicle fleets. CNG is part of the natural gas vehicles (NGV) family, and has become a choice that more and more companies with their own fleets and professionals in sectors such as transportation, urban mobility and construction are betting on. Without going any further, at the end of 2022 there were close to 35,000 vehicles powered by CNG in Spain, a figure that continues to grow."

"The majority of existing fleets can already be adapted for the use of natural gas. If they meet the technical requirements, it would only be necessary to add one or more CNG tanks, install a new fuel injection system and add an electronic kit to manage the fuel. The process is very

simple, it is carried out in a short time and it becomes profitable very quickly,” stated sources from Sedigas.

Source: <https://www.gnvmagazine.com/en/sedigas-bets-on-cng-for-sustainable-mobility/>

1.5 Thailand

Bangchak Group opens Thailand’s first LNG refueling station

13th October 2023.

Bangchak Group is taking a lead in the clean fuel business for transportation, by opening the first-ever liquefied natural gas refueling station in Thailand.

October 4, 2023. Bangchak Group is taking a lead in the clean fuel business for transportation, by opening the first-ever liquefied natural gas (LNG) refueling station in Thailand. This promotes the use of LNG as a clean fuel that helps reduce carbon dioxide emissions, equivalent of the Euro 6 standard, providing businesses with a cost-effective, safe, and environmentally friendly fuel option.

Chaiwat Kovavisarach, Group Chief Executive Officer and President of Bangchak Corporation Public Company Limited, stated: “Today marks the official beginning of another business venture within Bangchak Group. We are delighted to be an operator of the LNG refueling station with the first license in Thailand from the Department of Energy Business. The station which is capable of accommodating approximately 100 customer vehicles per day is operated by BTSG Company Limited (BTSG), a joint venture between Bangchak Corporation and Thai Special Gas (TSG).”

“A plan is in place to expand the number of LNG refueling stations to major cities across all four regions of Thailand and collaborate with business partners in the transportation sector to jointly establish these refueling stations. The primary goal is to ensure convenient and extensive coverage, as well as promoting the widespread usage and adoption of clean fuels. The expansion will meet the growing demand for LNG in the transportation sector, making clean energy accessible in every region of the country and catering to the industrial sector’s demand as well,” he added.

The company aims to develop and provide LNG-related services by capitalizing the strength of Bangchak’s extensive network of over 2,200 service stations nationwide and leveraging TSG’s three-decade-long expertise in industrial and specialty gases, using international quality and safety standards. BTSG has set the target to become a leader in integrated LNG services to meet the demands of customers across the country.

Source: <https://www.gnvmagazine.com/en/bangchak-group-opens-thailands-first-lng-refueling-station/>

1.6 India

Biogas Could Help India Replace Natural Gas And Achieve Decarbonization Goals: Think Tank

26th October 2023. By Binitha Jacob @BinithaJ



AFP

Biogas is poised to play an important role in India's renewable energy portfolio and could help the country replace natural gas, reduce its dependence on fossil fuels and ensure energy security.

By replacing natural gas with biogas and biomethane and gradually increasing their consumption to 20%, India can cut its liquefied natural gas (LNG) import bills by \$29 billion between the fiscal years 2025 and 2030, according to a report from the think tank Institute for Energy Economics and Financial Analysis (IEEFA).

The Indian government, which aims to reach reaching net-zero emissions by 2070, has a renewed interest in biofuels and biogas and has introduced several policy changes to accelerate growth and investments in the sector.

A multi-pronged approach to increase the use of biogas could help India solve issues like waste management, reduce greenhouse gas emissions and increase renewable energy production, IEEFA said in a statement to International Business Times.

Moreover, compressed biogas (CBG) can directly replace compressed natural gas (CNG), it added.

"Biogas can substitute natural gas or other fossil fuels with high emissions. Removing carbon dioxide and other impurities like hydrogen sulfide can also upgrade its methane content to 90%, making it equivalent to natural gas in calorific value," said Purva Jain, the report's author and an energy analyst at IEEFA.

"This upgraded biogas, also known as biomethane, is a pipeline-ready gas and can be injected into the gas grids as a non-fossil gas," she added. "By undertaking the right production processes and plugging methane leakages in the production, upgradation and supply stages, biogas can offer India a cleaner alternative to its dependence on imported natural gas."

Biogas still has not gained enough prominence in India despite its benefits, and one of the reasons for this is the lack of incentives, the IEEFA report said. Obtaining clearances and permissions for setting up projects is also a complicated process in India, thus hindering biogas from reaching its full potential.

India's government recently began providing support and financial assistance to players in the sector.

"The government is showing clear intent to develop the biogas sector but it needs to do more. It needs to encourage increased investments and private participation in the sector. It can increase the market viability of CBG and biogas slurry, ensure increased financial access for developing biogas plants and encourage feedstock mapping to ensure the availability of inputs," Jain said.

A key point to be considered regarding biofuels is the possibility of indirect land use changes. If increased use of biofuels involves the conversion of land, such as forests and wetlands, into agricultural land, it could cause land use changes that risk negating the greenhouse gas savings from the biofuels. This is because grasslands and forests typically absorb high levels of carbon dioxide; hence, converting them into agricultural land could increase levels of atmospheric carbon dioxide.

At the G20 summit in September, India launched a global biofuel alliance, touting it as one of its top priorities. India, along with the U.S. and Brazil — the world's biggest and second-biggest biofuels producers, respectively — will work on the development of a global biofuels alliance, Indians' Ministry of Petroleum and Natural Gas said. Singapore, Argentina, South Africa and the United Arab Emirates (UAE) are also among the alliance's 19 member countries.

"This alliance will be aimed at facilitating cooperation and intensifying the use of sustainable biofuels, including in the transportation sector," the ministry said in a statement. "It will place emphasis on strengthening markets, facilitating global biofuels trade, development of concrete policy lesson-sharing and provision of technical support for national biofuels programs worldwide."

[Source: https://www.ibtimes.com/biogas-could-help-india-replace-natural-gas-achieve-decarbonization-goals-think-tank-3716557](https://www.ibtimes.com/biogas-could-help-india-replace-natural-gas-achieve-decarbonization-goals-think-tank-3716557)

1.7 Japan

Suzuki President Bats For Renewable Energy – Cow Dung From 10 Cows Enough To Fuel A Car For A Day

31st October 2023. By Irwin Mills



In a growing era of environmental consciousness, automobile industries worldwide are revisiting their approaches to green mobility. Suzuki Motor Corporation, a global automotive giant, has emphasised this paradigm shift. Through a recent statement by their President and Representative Director, Toshihiro Suzuki, the firm

highlights the formidable challenges towards achieving carbon neutrality that cannot be met solely through electric vehicles (EVs).

Instead, Suzuki suggests a blossoming alternative: the development and utilisation of region-specific clean mobility solutions, such as compressed biomethane gas (CBG), biomass, and other alternative fuel-based vehicles.

Regional Approach To Clean Mobility

Toshihiro Suzuki has noted keen interest in India due to its massive potential in generating renewable energy through biomass. This prospect is significantly amplified by the fact that India houses the world's largest cattle population, a figure that reached a massive 308 million in 2022. These cattle can provide a daily power source for vehicles using cow dung, transforming waste into renewable energy. Thus, India, with its bountiful cattle population, offers a tremendous advantage for sustainable energy production.

This utilisation of biogas from cows' waste not only makes great use of an otherwise neglected resource but also actively participates in reducing carbon emissions. As such, the production of biogas through unique regional resources, like cattle, promises a desirable solution to the global plight for carbon neutrality.

Maruti Suzuki: Stepping Towards Carbon Negative

Further highlighting Suzuki's dedication to green mobility, Maruti Suzuki, a subsidiary of Suzuki Motor Corporation, demonstrates considerable progress towards cleaner fuels. Presently, nearly a quarter of Maruti Suzuki's sales come from vehicles powered by compressed natural gas (CNG), a significant shift from traditional gasoline or diesel fuels towards cleaner alternatives. Moreover, Maruti Suzuki is diligently working towards introducing vehicles powered by compressed biogas. These vehicles promise to be carbon-

negative, meaning they sequester more carbon dioxide from the environment than they emit, contributing positively to the fight against climate change.

To demonstrate its commitment towards clean mobility, Suzuki unveiled a compressed biomethane gas-powered WagonR small car at the Japan Mobility Show. This demonstration underscores Suzuki's determination to tackle unique regional energy and environmental challenges by tailoring their vehicle innovation and solutions accordingly.

In conclusion, Suzuki's recent focus on sustainable energy and clean mobility solutions represents a continuous shift in the automobile industry. The company's tailored country-specific approach exemplifies how by tapping into regional resources and needs, we can devise innovative solutions to address the pressing issue of carbon neutrality.

This pioneering shift by such a renowned player underlines the increasingly important role of renewable energy resources such as biogas and biomethane in steering automotive industries towards a greener future.

Source: <https://www.drivespark.com/four-wheelers/2023/cow-dung-from-10-cows-enough-to-fuel-a-car-for-a-day-040293.html>

1.8 Vietnam

PV Gas inaugurates Vietnam's Thi Vai LNG terminal

30th October 2023. By Aida Čučuk

PetroVietnam Gas Corporation (PV Gas) has held an inauguration ceremony at the Cai Mep Industrial Park, Phu My Town, Ba Ria-Vung Tau, Vietnam, for the Thi Vai LNG terminal.



Courtesy of PV Gas

According to PV GAS, the Thi Vai LNG terminal officially being put into operation is the ultimate result of the company's efforts on the green energy journey towards sustainable development.

With Vietnam's first LNG import infrastructure in place, PV Gas said the company will have more control over the gas supply to meet the energy needs of existing power plants and households, contributing to ensuring national energy security and reducing environmental pollution in line with the government's commitment at COP26 and the global shift towards green energy.

To note, the Thi Vai facility is estimated to offer a capacity of one million tons of LNG/year in phase 1, with an expected increase to three million tons in phase 2.

In July 2023, the Maran Gas Achilles vessel, carrying the first LNG shipment to Vietnam, entered the Thi Vai LNG terminal, marking the first, and according to PV Gas, the most important event in the green energy transformation roadmap of the company.

With a volume of nearly 70,000 tons of LNG imported from Bontang port, Indonesia, the vessel, sailing under Greek flag, docked at PV Gas wharf to supply the entire amount of LNG for the trial run and official operation of Thi Vai LNG warehouse. Shell International Energy Group has been selected by PV Gas as the supplier for the shipment.

In May 2023, the Ministry of Industry and Trade of Vietnam certified that PV Gas is eligible to be an LNG importer and exporter, making the company the first in the country to be recognized as such.

PV Gas is a member of the Vietnam Oil and Gas Group (PVN), with the main activities such as storing, transporting, importing and distributing gas products, including natural gas (NG), liquefied petroleum gas (LPG), compressed natural gas (CNG) and liquefied natural gas (LNG).

Source: <https://www.offshore-energy.biz/pv-gas-inaugurates-vietnams-thi-vai-lng-terminal/>

1.9 China

Hydrogen FCVs put into use in Qingpu Industrial Zone

31st October 2023. By Hu Min Editor: Cao Qian



The hydrogen-powered shuttle bus marks a new era in green transportation in Qingpu.

The first batch of hydrogen fuel cell vehicles hit the streets of Shanghai Qingpu Industrial Zone last month, heralding the arrival of the district's hydrogen energy application scenario.

The hydrogen energy sector is a strategically growing industry in the country, and hydrogen fuel cell vehicles are one of the field's major applications. In total, nine hydrogen-powered cell vehicles were put into service on seven shuttle bus routes in the industrial zone.

"It's my first ride, and I'm excited," a passenger surnamed Chen remarked. "I do relevant work related to hydrogen energy, and I feel my efforts are worth it."

The green vehicles were manufactured by King Long United Automotive Industry (Suzhou) Co Ltd, and the hydrogen fuel battery system was supplied by an enterprise in the industrial zone.

Hydrogen FCVs appear to be ordinary vehicles, despite the fact that they are outfitted with fuel cell engines and five hydrogen storage tanks capable of storing 35 kilos of hydrogen. It can support about 450 kilometers of a running bus.

Hydrogen will be discharged as water vapor, resulting in zero pollution and zero emission. Furthermore, hydrogenation only takes 10 minutes or less each time.

"We will guarantee the operation of these vehicles and promote the application of hydrogen FCVs in the transportation field, thus injecting a 'new green impetus' into the development of Qingpu," said Sun Feng, board chairman of Shanghai Jingshen Bus Co Ltd, the zone's shuttle bus operator.

In recent years, the Shanghai Qingpu Industrial Zone has introduced 21 companies in the hydrogen industry and established a green ecological chain extending from hydrogenation stations and core parts to hydrogen-powered onboard equipment and automobiles.

Source: <https://www.shine.cn/feature/district/2310316078/>

1.10 Malaysia

The first integrated BESS charging station launched in Malaysia

27th October 2023.

The Government of Malaysia has launched the first battery energy storage system (BESS) integrated electric vehicle (EV) charging station located along the North-South Expressway. The 300 kWh system will be paired with an on-site solar photovoltaic (PV) system to add to the local power production and alleviate grid strain.

Norway-based Pixii has supplied the battery system to the project. The system is operated by EV Connection (Jom Charge) in partnership with Gentari, a subsidiary of Petronas. Pixii has sold energy storage systems for an additional seven fast-charging stations to be operated under the Jom Charge-Gentari network. The BESS works through a PixiiBox, an advanced power electronics module that transfers energy from the grid to batteries and back to the grid when needed.

The government plans to have 10,000 charging stations by 2025. Currently, there are just over 1,200 stations, and so, measures are being implemented to fast-track the approval of new stations.

Source: <https://southeastasiainfra.com/the-first-integrated-bess-charging-station-launched-in-malaysia/>

1.11 International

Electric grids could be the ‘weak link’ of clean energy transition, IEA warns

18th October 2023. By Robert Walton. Senior Reporter

A new report from the International Energy Agency urges grid developers and operators to look to digital solutions to enable grid flexibility through energy storage and demand response.



“We must invest in grids today or face gridlock tomorrow,” International Energy Agency Executive Director Fatih Birol said in a statement. trekandshoot via Getty Images

Dive Brief:

- Roughly 50 million miles of new or replacement power lines must be installed by 2040 if governments around the world are going to reach their climate and clean energy commitments, according to a report released Tuesday by the International Energy Agency.

- Without sufficient grid investment and regulatory support for clean energy solutions, “grids risk becoming the weak link of clean energy transitions,” IEA warns.
- The report, “Electricity Grids and Secure Energy Transitions,” concludes large-scale transmission development and increased system flexibility and digitization are required to keep the Paris climate accord goals in reach.

Dive Insight:

IEA’s report includes a scenario — the Grid Delay Case — examining the potential impacts of slower grid development, relative to nations’ announced commitments. Failing to deliver grid infrastructure “in a timely manner” leads to cumulative carbon dioxide emissions

between 2030 and 2050 almost 60 billion tons higher and the goals of the Paris climate agreement would be unachievable, according to the report.

The Paris agreement's primary goal is to hold global average temperature increases below 2 degrees Celsius above pre-industrial levels and to pursue efforts that would limit increases to 1.5 degrees Celsius.

"Delays in grid investment and reform would substantially increase global carbon dioxide emissions, slowing energy transitions and putting the 1.5°C goal out of reach ... with a 40% chance of [global long-term temperature rise] exceeding 2°C," according to the report.

The report recommends that governments back large-scale transmission projects to enable more renewable energy to reach consumers, and it urges grid developers and operators to look to digital solutions to enable grid flexibility through energy storage and demand response.

A draft U.S. Department of Energy report in February found the United States will likely need 47,300 GW-miles of new transmission by 2035 under a moderate load growth-high clean energy growth scenario.

There are at least 3,000 GW of renewable power projects waiting in grid connection queues globally, according to the IEA report. Electric grids "are becoming a bottleneck," it said.

"This report shows what's at stake and needs to be done. We must invest in grids today or face gridlock tomorrow," IEA Executive Director Fatih Birol said in a statement.

A scenario examining announced national climate pledges shows that by 2050 nearly half of the world's grid flexibility needs could be met by demand response and battery storage, according to the report. IEA measures flexibility needs as "the amount the rest of the system needs to adjust on an hourly basis to accommodate demand patterns and the variability of wind and solar output."

"With the growing use of electricity for air conditioners, heat pumps, EVs, electrolyzers and other potentially flexible sources of demand, there is potential for significant load shifting," the report notes.

Scott McGaraghan, chief revenue officer at AutoGrid, a developer of virtual power plants, said the U.S. grid will need to operate in new ways and leverage the benefits of distributed resources, to meet climate goals.

"This includes deploying grid-enhancing technologies and unlocking the potential of demand response and energy storage through digitalization," McGaraghan said.

The United States trails some countries, like Australia and Germany, in the development of a flexible grid, according to Luis D'Acosta, CEO of energy software company Uplight.

"Our state-by-state regulatory environment makes things more complex, and at times, slower-moving" than in other countries, D'Acosta said. "However, our potential is much greater because we have a larger population that equates to more potential [distributed energy resources], and we have a lot of land and different climates that lend themselves to a varied and powerful portfolio of demand flexibility solutions."

Source: <https://www.utilitydive.com/news/electric-grids-weak-link-clean-energy-transition-iea/696929/?elqTrackId=4900464bb5f742128be50c7758ebe7b8>

End