

## **ANGVA2U Info** 17/2020 24<sup>th</sup> September 2020 (for ANGVA members only)

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### **1.0 Selected News / Articles**

#### **1.1 Europe**

#### **Volvo Trucks sees increased in gas as an alternative to diesel for heavy-duty truck operations in Europe**

22<sup>nd</sup> September 2020.

*Hauliers and transport buyers are increasingly interested in reducing their CO2 emissions and costs through the use of refrigerated liquefied gas as a fuel*

Hauliers and transport buyers are increasingly interested in reducing their CO2 emissions and costs through the use of refrigerated liquefied gas as a fuel. For this reason, the new Volvo FH and Volvo FM trucks will have engines that run on liquefied natural gas and biogas, which offer the same high performance as diesel engines. Using biogas makes it possible to achieve carbon-neutral transport and reduce CO2 emissions by up to 100%.

The EU Green Deal clearly indicates the direction the transport industry needs to take towards a cleaner future, which means that there must be an end date for fossil fuels. As a result, hauliers and transport buyers are increasingly looking for alternatives to diesel.

“Today, LNG-fuelled trucks are the most commercially viable alternative to ordinary diesel for heavy long-haul operations. This fuel is available in sufficiently large quantities and at a competitive price. Using more gas trucks creates favourable conditions for making a transition to a larger share of liquefied biogas over time,” says Lars Mårtensson, Director of Environment and Innovation at Volvo Trucks.

Volvo Trucks’ driveline for liquefied biogas and natural gas has an energy-efficiency comparable to that of its diesel-powered counterparts, but produces significantly lower CO2 emissions. Using liquefied biogas, also known as Bio-LNG, reduces net emissions by up to 100 percent from tank to wheel (TTW), while using natural gas cuts emissions by around 20 percent (TTW) compared with ordinary European standard diesel.

#### **Reducing diesel dependency requires strong investment**

The production of fossil-free biogas requires a greater number of production plants for anaerobic digestion of waste with the possibility of cooling the gas into liquid form. Various studies have calculated that just over 20% of diesel in Europe could be replaced by renewable gas in the form of Bio-LNG by 2030. The number of liquefied gas filling stations is constantly increasing, and is already an alternative to diesel on many routes. However, the number of filling stations needs to continue expanding in pace with a corresponding growth in the number of gas-powered trucks.

“By investing in LNG trucks, we are showing that Bio-LNG is an important alternative to reduce dependency on fossil diesel. However, to speed up the transition to climate-neutral transport, it is necessary to continue investing in liquefied gas filling stations and carrying out measures to make it easier for hauliers to invest heavy in heavy gas-powered vehicles,” Lars Mårtensson points out.

### **Need for a mix of fuels going forward**

Because no individual energy carrier is capable of meeting all the challenges related to climate change, different types of fuels and drivelines will continue to co-exist for the foreseeable future.

“Embracing new technology will be the key to achieving climate neutrality. The share of LNG trucks will gradually increase in Europe. But gas trucks won’t be able to meet all transport challenges. Electromobility will play an important role locally, as well as regionally going forward, and the development of batteries and charging infrastructure will be important factors in its expansion,” explains Lars Mårtensson.

Electromobility using hydrogen fuel cells has potential to reduce the need for batteries in long-haul transport in the longer term.

“Although promising developments have been made in hydrogen fuel cell technology, there are still practical and financial obstacles to overcome before it can provide significant climate benefits in heavy-duty transport,” says Lars Mårtensson.

Despite all the technical advances in electromobility, ongoing improvement of the efficiency of combustion engines will continue to play a key role in reducing climate impact for many years to come.

“A lot can already be done to reduce climate impact with today’s engines. For instance, both new and older diesel trucks from Volvo can run on HVO, a biofuel producing very low net CO2 emissions. The challenge is that the availability of biofuels continues to be so limited,” Lars Mårtensson concludes.

*Source: <https://www.automotiveworld.com/news-releases/volvo-trucks-sees-increased-interest-in-gas-as-an-alternative-to-diesel-for-heavy-duty-truck-operations-in-europe/>*

## **1.2 Korea**

### **KOGAS aims to reduce fine dust with LNG truck**

22<sup>nd</sup> September. By Baek Byung-yeul



*A truck powered by liquefied natural gas (LNG) provided by KOGAS. / Courtesy of KOGAS*

The Korea Gas Corporation (KOGAS) is stepping up its efforts to promote its liquefied natural gas (LNG)-fueled truck, which will be an eco-friendly and economically feasible alternative to diesel-powered trucks, the corporation said Tuesday.

The state-run gas corporation's strategy comes from its CEO and President Chae Hee-bong who said the corporation will develop a new business model focused on green energy.

"In a speech commemorating KOGAS' 37th anniversary in August, Chae announced the company will generate profit from the green energy business taking advantage of the corporation's capability to produce and supply natural gas," a KOGAS official said.

KOGAS said using more eco-friendly LNG-powered trucks instead of diesel-powered ones will reduce fine dust emissions.

"According to the environment ministry's research, LNG-powered trucks emit 19 percent less carbon dioxide, 96 percent less nitrogen oxide and 100 percent less fine dust compared with diesel-powered trucks," KOGAS said.



*KOGAS officials pose with an LNG truck in this photo provided by the state-run corporation, Sept. 22. / Courtesy of KOGAS*

It added LNG trucks can be an economically viable alternative to diesel trucks. "The research found that LNG trucks, while more expensive than diesel trucks, are more economical than

the latter when including gas and maintenance costs," KOGAS added.

The corporation has been actively promoting the superiority of LNG-powered trucks as it believes they can work as "mediators" between traditional diesel trucks and future fuel cell-powered and electric vehicles.

To encourage more organizations to use LNG-powered trucks, KOGAS plans to build LNG stations at ports, cargo terminals and expressway rest areas that see high volumes of truck activity.

KOGAS is currently test-running LNG-powered trucks in cooperation with state-run organizations. "Along with six organizations including the Busan Port Authority, we are conducting the test operation of LNG-fueled trucks. In August 2019, we signed an agreement with the six to test LNG-powered inter-terminal transport." the KOGAS official said.

The corporation has been working on improving air quality for over a decade. To reduce fine dust, KOGAS has been paying subsidies to bus companies when they change their aging diesel-fueled buses to compressed natural gas (CNG)-fueled buses.

"We have stepped up our efforts to promote natural gas-powered vehicles since the 2000s in order to improve ground-level air quality," the KOGAS official said. "By promoting various kinds of eco-friendly vehicles, we will secure a future growth engine and take the lead in eco-friendly energy."

**Source:** [http://www.koreatimes.co.kr/www/tech/2020/09/515\\_296477.html](http://www.koreatimes.co.kr/www/tech/2020/09/515_296477.html)

### 1.3 Iran

#### Daily CNG expenditure places at 25 mcm

21<sup>st</sup> September 2020.



(MENAFN) An official with the National Iranian Oil Refining and Distribution Company (NIORDC) stated that Daily consumption of compressed natural gas (CNG) has arrived at 25 million cubic meters (mcm) in Iran.

IRNA accounted Mohammad-Hossein Baqeri the director of CNG plan of the NIORDC, as well put the everyday capability of the country's CNG positions at 40-45 mcm.

Baqeri additional stated that six suppliers were elected for changing 1.46 million public vehicles interested in dual-fuel\* cars at the first place, and the suppliers were presumed to provide 186 places to do the occupation.

Iran's CNG expenditure placed at 19 mcm per day previous to the completion of the fuel sharing plan.

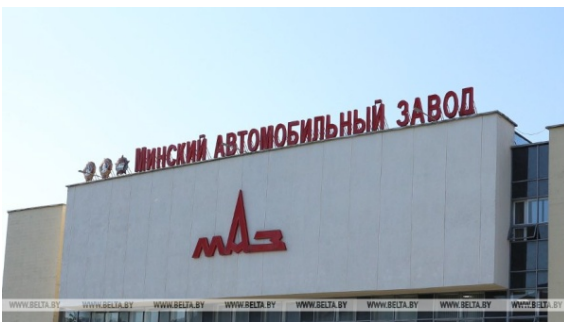
*Source:* <https://menafn.com/1100829158/Daily-CNG-expenditure-places-at-25-mcm>

\* ANGVA Note: dual-fuel means bi-fuel CNG- gasoline cars.

### 1.4 Republic of Belarus

#### MAZ nearly done testing new buses powered by natural gas

21<sup>st</sup> September 2020.



MINSK, 21 September (BelTA) – The Belarusian automobile engineering company MAZ is about to finish testing prototypes of new low-floor urban buses MAZ-103946 and MAZ-203946, BelTA has learned.

MAZ has already made such vehicles using German engines. The new buses use engines made by Weichai.

MAZ had to switch to Chinese engines because the previous partner – the German company Mercedes-Benz – is shutting down the production of engines that use compressed gas in order to start assembling electric motors and increase the production of electric vehicles by 10%, MAZ Chief Designer for Buses Yuri Syrokvash explained.

The buses MAZ-103946 and MAZ-203946 can carry virtually 100 passengers each. They have 22 and 24 vandal-proof passenger seats respectively, tinted glass with sliding windows, an ERA GLONASS-powered emergency call system, a multiplex system for controlling electric equipment, and other options.

MAZ started testing the durability and reliability of the new buses in July and intends to finish testing them in October.

No critical faults have been detected so far. Once the tests are over, the company will have to certify the buses and will start selling them to customers such as transport companies in Russia and Ukraine. No concrete orders have been received yet. MAZ hopes it will receive orders for the new products soon.

*Source:* <https://eng.belta.by/economics/view/maz-nearly-done-testing-new-buses-powered-by-natural-gas-133649-2020/>

## 1.5 United Kingdom

### Government proposes tax on gas suppliers to fund green gas production plants

23<sup>rd</sup> September 2020.

*It expects the effect on consumer bills to be ‘relatively minor’, estimated to peak at around £6.90 on an annual gas bill*



*Image: Shutterstock*

The government has proposed a new levy to be placed on gas suppliers across the UK to fund the construction of green gas – or biomethane – production plants.

Green gas is produced from environmentally-friendly organic waste products and using more of this gas from renewable sources to power boilers in homes or in industrial processes in factories will help reduce emissions from the gas grid while supporting the UK’s 2050 net zero goal.

The Green Gas Levy, initially announced in the March 2020 Budget, will apply to gas suppliers in England, Scotland and Wales and is estimated to prevent as much as 21.6 million tonnes of carbon emissions from entering the atmosphere – the equivalent of planting 71 million trees.

It will support the injection of renewable biomethane into the gas grid through the new Green Gas Support Scheme, proposals of which were set out in the April 2020 consultation.

The government expects the effect on consumer bills to be “relatively minor”, estimated to peak at around £6.90 on an annual gas bill.

It is committing to ensure the impact of bills is “as low as possible”, with plans to implement a robust control framework that includes an annual budget cap to ensure impacts on bills do not rise unexpectedly.

Both the Green Gas Levy and the Green Gas Support Scheme are expected to be launched in autumn 2021, with the first levy collected intended for April 2022.

Energy Minister Kwasi Kwarteng said: “Reaching net zero means reducing emissions across our entire energy system, including the way we heat our homes and businesses.

“This new funding will support an ambitious scheme to decarbonise the gas grid that will prevent millions of tonnes of carbon dioxide from entering the atmosphere – another step towards reaching net zero by 2050 at minimal cost to UK billpayers.”

The government is seeking views on the policy options for the new levy until 2nd November 2020.

Charlotte Morton, Chief Executive of the Anaerobic Digestion and Bioresources Association (ADBA) added: “Fully deployed, the biomethane industry could deliver a 6% reduction in the UK’s greenhouse gas emissions by 2030 and provide heating for 6.4 million homes, creating tens of thousands of jobs and boosting energy and food production security. As biomethane is already compatible with our current gas grid, it is also a particularly cost-effective way to decarbonise the UK’s heating infrastructure.

“We welcome this consultation and the commitment shown by BEIS to integrate biomethane into the government’s net zero strategy. With the right policy support, there is much more this industry could contribute to the green economy and to achieving the UK’s 5th Carbon Budget, over the next decade, but this represents a significant step in the right direction.”

[Source: https://www.energylivenews.com/2020/09/23/government-proposes-tax-on-gas-suppliers-to-fund-green-gas-production-plants/](https://www.energylivenews.com/2020/09/23/government-proposes-tax-on-gas-suppliers-to-fund-green-gas-production-plants/)

## 1.6 United States of America

### Everything Points to More Natural Gas, Even for Jurisdictions That Try to Avoid It

22<sup>nd</sup> September 2020.



**Contributor: Mark Le Dain.**

*VP Strategy at energy tech firm Validere. I cover energy & markets*

California recently extended the life of multiple gas plants to provide power to the state. This is an example of the role natural gas will play even in jurisdictions that have historically tried to avoid it. Global energy use is increasing under all projections and over the next two decades is estimated to increase 34% under IEA scenarios; developed countries are not reducing energy use regardless of policy goals and many developing countries deserve the same quality of life. An increasing amount of this power is coming from renewables which are cleaner but not as reliable. This results in fossil fuels being used to supplement the power demand and natural gas has the lowest GHG emissions of these options. Whether you think it is part of a clean global energy mix or whether you believe its phase-out is essential, it will increasingly be consumed by believers and skeptics alike.

Electricity generation in many developed markets comes from natural gas, coal, nuclear, hydro, wind and solar. In 2019, the U.S.’s generation mix was 38% natural gas, 23% coal, 20% nuclear and 17% renewables as per the IEA (there is a small remaining “other” component so that you don’t immediately discount my writing and math). These power

sources all have different pros and cons, including environmental. The main difference is that some are intermittent (primarily wind and solar due to weather) while others are capable of providing a steady baseload or ramping up at a moment's notice to meet peak demand.

California's recent experiences offer a sober look at trade-offs. As the state increased its renewable capacity, it created a grid where a larger portion of the generation mix may not be available at certain times. To help with this rapid change California looked to import an increasing amount of electricity from neighbouring states. California now imports a third of its power from neighbours and it is a mix of gas, coal, wind, solar, and hydro in the North. Natural gas is providing a growing share of imports, because at the exact moment that California experiences intermittent renewable generation, neighbouring states are as well.

Without nuclear or a battery breakthrough, states that prioritize renewables will need to use natural gas to fill the gap, or nuclear or coal. California itself is now looking as if it will use more natural gas than expected, evidenced by the California Water Resources Control Board's recent decision to extend the life of four natural gas plants it had flagged for retirement due to environmental regulations around water use. The continuation of these plants is in response to the recent blackouts in an effort to provide more reliable power.

Diesel fired generators have also been deployed across many communities in North America to help support the reliability of local power grids. *"The use of natural gas fueled generators in place of diesel generators can provide immediate cost and GHG reduction benefits,"* says Curtis Philippon, Chief Executive Officer of Certarus, the nation's largest bulk compressed natural gas (CNG) provider. *"Natural gas is complementary to renewables and supports overall policy objectives of reducing GHG emissions."*

Renewables at scale require some sort of baseload power source and Texas is a great example of this. Texas, the number one state for installed wind power, complements its renewable share with significant gas generation. As other states talk about following this example, they often focus on the number of installed wind farms instead of the baseload natural gas that was required to achieve this.

At the same time that stakeholders in California were targeting natural gas for retirement, in many other states it was replacing coal with a cleaner-burning fuel. This trend actually saw coal plant retirements accelerate ahead of many estimates for regulated timelines. Cost competitiveness vs. coal was the driver for this decisive victory thanks to low cost natural gas from shale. Despite a pro-coal administration, American coal retirements actually reached a record this previous year thanks to natural gas, with 14 GW of capacity closing. The advantages of the competition-driven shift are clear as voluntary retirements are able to occur ahead of many regulated schedules that require timed phase outs and reimbursement.

Gas is actually causing coal generation to decline faster in the United States than in the European Union. In 2019, emissions from the United States fell by 2.9% as the IEA referenced that 45% cheaper gas prices drove the reduced emissions thanks to switching from coal to gas powered generation. China has begun to follow this playbook, committing to increase natural gas to 15% of its energy consumption by 2030 as growing power demands are driving a coal plant building boom. For countries with rapidly growing power demand like China and India, any cheaper natural gas they can import today is directly replacing coal. In an interconnected world all emissions decisions need to be thought of globally and the

distribution of cheap natural gas is a key lever to incentivize other countries to stop using coal.

Renewables usage is very difficult to transfer between countries with current power storage technology, while natural gas can be easily moved around the globe and therefore is a key tool to rapidly reduce global emissions.

Natural gas is cheap, reliable, transportable, and has the ability to replace higher emission fuel sources globally that are still being built today. In some jurisdictions it is being rapidly promoted and in others it is being persecuted but still taking more of the energy mix in both.

**Source:** <https://www.forbes.com/sites/markledain/2020/09/22/everything-points-to-more-natural-gas-even-for-jurisdictions-that-try-to-avoid-it/#9948e3575010>

## 1.7 Korea

### **Kogas helps spearhead hydrogen transition in Green New Deal drive**

20<sup>th</sup> September 2020. By Kim Byung-wook (kbw@heraldcorp.com)



*Kogas headquarters (Kogas)*

Korea Gas Corp. is taking a leading role in fostering the country's hydrogen industry, backing the government's Green New Deal initiative which aims to roll out 200,000 hydrogen vehicles and 450 hydrogen charging stations.

The state-run natural gas company said Sunday it will transition to an eco-friendly hydrogen firm from a conventional fossil fuel-based company, pledging to produce and introduce cheap hydrogen to the market by making timely investments and securing source technologies.

“Kogas will execute its hydrogen road map as planned to propel Korea's low-carbon and eco-friendly hydrogen era,” Kogas CEO Chae Hee-bong said on Aug. 18 in his speech celebrating the company's 37th anniversary.

On Tuesday, Kogas announced its partnership with the municipal government of Gwangju to establish a hydrogen production base that can cover South Jeolla Province by December 2022. Another hydrogen production base will be built in Changwon to cover South Gyeongsang Province.

In July, Kogas signed a memorandum with Hyundai Motor Group to build and operate integrated hydrogen charging stations that can accommodate eco-friendly vehicles that run on hydrogen, liquefied natural gas and electricity.

**Source:** <http://www.koreaherald.com/view.php?ud=20200920000065>

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