

ANGVA2U Info *13/2019 14th November 2019. (for ANGVA members only)*

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1.0 ANGVA 2019, 25th – 27th November 2019, The Tribrata, Jakarta, Indonesia

In less than 2 weeks, Jakarta, Indonesia will be the focal point for a global meet-up involving stakeholders from the NGVs, Biogas and Electricity for transport and industry sectors.



The 8th Asia Pacific Natural Gas Vehicles Association International Biennial Conference & Exhibition (ANGVA 2019), taking place on 25-27th November 2019 at the The Tribrata Convention, Jakarta, Indonesia, will features 3 concurrent and relevant events taking place in one location addressing clean

and sustainable transport and renewable energies. The other two events are: The 8th Biogas Asia Pacific Forum & Exhibition and the Electric Vehicles Indonesia Forum & Exhibition.

More information and registration to these events can be viewed at www.angva2019.com for the NGV event and www.icesn.com for the Biogas and the EV events.

2.0 Selected News / Articles

2.1 Sweden

Gasum opens its fifth LNG-fueling station in Sweden

12th November 2019



zoomImage courtesy of Gasum

The Nordic energy company Gasum said that its gas filling station network continues to expand as it opened the fifth station in Sweden.

The new station opened in Karlstad, offering liquefied natural gas (LNG) and liquefied biogas (LBG) for heavy-duty vehicles (HDVs).

The new station responds to increasing market demand for low-emission fuels, Gasum said in its statement, adding that it plans to grow the Nordic gas filling station network to 50 stations by the early 2020s.

The growing demand has been partly driven by the emission reduction standards of the European Union.

The new regulation presented by the EU in early 2019 states that greenhouse gas emissions from HDVs need to be reduced by 30 percent by 2030. Gas plays a significant role especially in HDV segment in achieving future emission reduction targets in EU.

Developing the infrastructure and gas filling station network across the Nordics is a joint effort of Gasum and its partners. The new gas filling stations are targeted to the long-haul transport segment where energy consumption is also the highest.

All of the new stations will be located in high-traffic areas, enabling a significant increase in the use of LNG and LBG in heavy-duty transport, Gasum said.

Värmland's first gas filling station located in Karlstad is part of Gasum's plan to guarantee HDVs a filling station network spread across Sweden.

Mejeritransport, a logistics company based in Värmland, has a fleet of about 35 trucks and a keen interest in alternative fuels. Mejeritransport is one of Arla Food's logistics contractors in Sweden, Gasum said.

Source: https://www.lngworldnews.com/gasum-opens-its-fifth-lng-fueling-station-in-sweden/?utm_source=emark&utm_medium=email&utm_campaign=daily-update-lng-world-news-2019-11-13&uid=46966

2.2 India

Petronet commissions India's first LNG bus and Dahej LNG fueling station

13th November 2019



Dahej LNG terminal – Illustration purposes only (Image courtesy of Petronet LNG)

India's Petronet LNG, the country's largest liquefied natural gas importer, said it has taken steps to develop India's adoption of liquefied natural gas as fuel.

The company said in a brief statement through its social media channels that it has commissioned the country's first commercial AC bus running on liquefied natural gas. Additionally, the company said it has commissioned the first liquefied natural gas fueling station at the Dahej LNG terminal.

"We have installed LNG dispensing stations both at Dahej and Kochi terminals and procured buses to run on LNG as fuel at both locations," the company said in its statement.

The LNG dispensing station and buses at the Kochi LNG terminal are under the final stages of commissioning and shall be commissioned soon.

Petronet LNG added that it further plans to build pan India LNG dispensing infrastructure to cater M&HCV fleet for long haul transport to promote LNG as fuel.

Source: https://www.lngworldnews.com/petronet-commissions-indias-first-lng-bus-and-dahej-lng-fueling-station/?utm_source=emark&utm_medium=email&utm_campaign=daily-update-lng-world-news-2019-11-14&uid=46966

2.3 Finland / Sweden

Truck fleet owners in Finland and Sweden bet on biogas

by PetrolPlaza Correspondent Pablo Plaza. 11th November 2019

In both countries, large-fleet owners see biogas as a more viable option than hybrid or electricity solutions.



© Gasum

A recent survey analyzed how environmental issues are viewed by Finnish and Swedish heavy-duty vehicle (HDV) fleet owners. According to the results, customers' environmental expectations have increased in both Finland and

Sweden, and 82% of fleet owners in both countries agree that an environment-focused mindset is a permanent phenomenon and not a passing trend.

The Nordic energy company Gasum commissioned Value Clinic to conduct a survey on how Finnish and Swedish heavy-duty vehicle (HDV) fleet owners view environmental issues, as well as on their thoughts on the various fuel solutions. According to the results, 60% of fleet owners that have more than 16 HDVs see biogas as a viable fuel option in Finland in the near future, and 33% of Swedish large-fleet owners agree.

"I'm very happy that already today the large-fleet owners of Finland and Sweden see the benefits of LNG and LBG in road transport. If a company with 16 HDVs switched from conventional fuels to gas, this would mean significant reductions in greenhouse gas emissions as the annual emissions of one HDV are equal to those of 40–50 passenger cars. I strongly recommend that also small-fleet owners consider making the switch. This would be a great solution for hauling companies to stand out in a highly competitive logistics market," says Jukka Metsälä, Vice President, Traffic, Gasum.

According to the survey, fleet owners consider LNG and LBG's strengths to be the fuel cost savings, emission reductions and the constantly expanding filling station network.

The results also show that over half of all fleet owners in Finland and Sweden have witnessed an increase in environmental expectations from their customers over the last few years. In addition, nearly 60% of Finnish and 82% of Swedish respondents believe that some of their HDVs will be using a low-emission fuel in five years' time and are interested in introducing alternative fuels in their operations.

"Our observations align with the fleet owners'; there's increasing demand for environmentally friendly solutions in heavy transportation. It's also clear from the results that this will not change soon, as only 18% believe that caring about the environment is a temporary phenomenon," Jani Arala, Senior Manager, sales, Traffic, Gasum, points out.

Source: <https://www.petrolplaza.com/news/23452>

2.4 USA

DOE partnering with industry to create biomethane from hydrogen and CO2

Bioenergy International. Biogas. 7th November 2019



Crews work to install the first US Power-to-Gas (PtG) system at NREL in Golden, Colorado. Southern California Gas (SoCalGas) partnered with NREL on the project, which takes excess electricity and converts it to hydrogen that can be used, stored, or combined with carbon dioxide to produce renewable natural gas – RNG (photo courtesy Werner Slocum / NREL).

In partnership with the US Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy's (EERE) Bioenergy Technologies and Fuel Cell Technologies Offices (BETO), National Renewable Energy Laboratory (NREL) and utility Southern California Gas Co. (SoCalGas) are running a new pilot-scale bioreactor that uses a microorganism to biologically convert hydrogen (H₂), produced via electrolysis, and carbon dioxide (CO₂) into biomethane.

According to a statement, this "Power-to-Gas" (PtG) technology can be used to upgrade biogas to "pipeline quality" natural gas – called biomethane or renewable natural gas (RNG) – and distributed to users through existing natural gas distribution pipelines.

The microorganism, *Methanothermobacter thermautotrophicus*, was discovered in a hot spring in Iceland and was modified to become more efficient at producing methane from carbon dioxide. NREL's goal is to improve the economics of methane production by increasing the pressure in the bioconversion reactor.

The process is a way to recycle carbon dioxide in biomethane and to store the energy in low-cost renewable electricity as biomethane in the natural gas grid. This approach can also be a key stepping stone to synthetic liquid fuels in the future.

Source: <https://bioenergyinternational.com/biogas/34109>

2.5 Australia

World-first hydrogen project at Loy Yang

Gregor MactaggartNews. 7th November 2019.

The Latrobe Valley will be the scene for a world-first hydrogen project.



Key officials from the world-first hydrogen project posed for a photo as construction started at AGL Loy Yang today.

Construction of the pilot plant for the Hydrogen Energy Supply Chain located at AGL Loy Yang started today.

The innovative project, a joint venture between the federal, state and Japanese governments as well as a consortium of companies, will see brown coal from the Loy Yang mine converted into hydrogen.

As part of the process, the hydrogen will be transported by road to a liquefaction terminal at the Port of Hastings and then shipped to Japan for use in fuel cell electric vehicles and power generation.

Construction of the plant in the Latrobe Valley has started with local contractors employed to carry out foundation and civil works. The coal gasifying facility is due to be completed mid next year.

AGL Loy Yang general manager Nigel Browne said the project provided the opportunity for Australia to be at the forefront of the rapidly-expanding hydrogen industry.

"As we move into a low emissions future, we need to draw on the technical and natural strengths of our region and harness them to diversify the economy and create new sources of prosperity," Mr Browne said.

"We are proud to be working with our Japanese partners who are global leaders in exploring the use of hydrogen."

Pilot plant operations will begin mid-2020 and run for one year. The pilot project is the first step in creating a commercial hydrogen energy supply chain requiring the use of carbon capture and storage.

Source: <https://www.latrobevalleyexpress.com.au/story/6479997/world-first-hydrogen-project-at-loy-yang/>

2.6 France

AIR LIQUIDE AND SINOPEC SIGN AN MOU TO ACCELERATE THE DEPLOYMENT OF HYDROGEN MOBILITY SOLUTIONS IN CHINA

By Gerald Ondrey. 7th November 2019.

Air Liquide (Paris, France; www.airliquide.com) and Sinopec (China Petroleum & Chemical Corp.) have signed, in Beijing, in the presence of Emmanuel Macron, President of the French Republic, and Xi Jinping, President of the People's Republic of China, a memorandum of understanding (MoU) to contribute to the acceleration of the deployment of hydrogen mobility solutions in China.

The chairmen of Air Liquide and Sinopec agree to study the development of hydrogen mobility network and the enhancement of the regulatory framework intrinsic to the development of hydrogen energy in China, home to the world's largest mobility market. Under the agreement, Air Liquide will provide Sinopec with its hydrogen supply chain expertise, from production and storage to distribution, so as to provide competitive hydrogen supply solutions to the Chinese clean mobility markets.

Sinopec is the largest refining, as well as the second largest chemical and fuel retailer company in the world with a network of more than 30,000 retail stations. Air Liquide and Sinopec already have a long-term partnership with three existing joint ventures supplying air gases to Sinopec facilities. Both companies also share a common vision on the role of hydrogen as part of the future energy mix.

A member of the Hydrogen Council since September 2018, Sinopec adheres to its vision that hydrogen is key to foster the energy transition. In view of the rapid development of the Hydrogen and Fuel Cell industry in China, Air Liquide and Sinopec are aligned on the need to develop a Hydrogen Energy infrastructure network.

“We are delighted to strengthen our long term partnership with Sinopec in order to accelerate the rollout of concrete solutions for the development of hydrogen energy infrastructure in China, says Benoît Potier, Air Liquide chairman and CEO. “This initiative represents an important milestone for hydrogen mobility in this major country, home to the largest automotive market in the world. This partnership also illustrates Air Liquide’s contribution to the challenge of the energy transition and clean mobility by offering alternative energy solution, in line with the Group’s Climate objectives.”

”Sinopec strives for a sustainable energy future for China and the world with our mission of ‘better energy for better living’, says DAI Houliang, chairman of Sinopec. “In the green and low carbon transition of China, we believe that hydrogen will play an important role and we are able to contribute to the hydrogen energy development in China, together with our distinguished partners like Air Liquide.”

Source: <https://www.chemengonline.com/air-liquide-and-sinopec-sign-an-mou-to-accelerate-the-deployment-of-hydrogen-mobility-solutions-in-china/>

2.7 Indonesia

Toyota Indonesia set to produce battery electric vehicles in Karawang

Reporter: Risbiani F. Fardah. Editor: Rahmad Nasution. ANTARA 2019. 28th October 2019.

It is a global trend. If we do not join it, we will not be able to export.



An ultra-compact battery electric vehicle (BEV) is displayed at the Tokyo Motor Show held from Oct 24 to Nov 4, 2019. The car will be produced and marketed in Japan in 2020. (photo: Antara/ Risbiani Fardaniah/ FA)

Tokyo (ANTARA) - PT Toyota Motor Manufacturing Indonesia (TMMIN) is ready to start battery electric vehicle (BEV) production

at its factory located in Karawang, West Java, though its type had yet to be made public.

"It is a global trend. If we do not join it, we will not be able to export," Warih Andang Tjahjono, the TMMIN president director, stated on Monday on the sidelines of the Tokyo Motor Show held in Odaiba, Japan, on Oct 24-Nov 4, 2019.

A change in the production line is required, based on several component changes, particularly for the powertrain.

"Some 60 percent must be changed, especially since its battery, powertrain also changes," he explained.

TMMIN Director of Administration, Corporation, and External Relations Bob Azam noted that his company will train its workers for the production of electric vehicles.

"Hence, special skills will be involved to produce electric vehicles since it is different from ICE (internal combustion engine) cars," he stated.

TMMIN will support the government's target for the share of electric vehicle output to reach 20 percent of Indonesia's total car production by 2025.

"We will participate in it," Bob Azam remarked without furnishing in detail the number.

Until now, Toyota Indonesia is attempting to produce hybrid vehicles in Indonesia, as a bridge for the production of full battery electric vehicles.

Hybrid vehicle is perceived as being better aligned toward the production of electric vehicles since its engine uses both battery and gasoline.

In the meantime, President Joko Widodo (Jokowi) stated in Aug this year that he had signed the long-awaited presidential regulation (Perpres) on electric vehicles. "We know that batteries constitute 60 percent of the key to producing electric cars, and we have the components to make them, (such as) cobalt and manganese, in our country," Jokowi said as quoted in a press statement from setkab.go.id.

"Hence, this country is a strategic place (for businesses) to start designing an affordable and competitive electric car industry," he stated.

Jokowi pointed to the fact that most electric cars currently available in the market were some 40 percent costlier than fossil-fueled cars.

Hence, he expressed hope that Indonesia's ubiquitous resources of materials required for making the batteries would aid in pushing down prices, thereby creating greater demand for EVs.

"In Jakarta, I think we can start with our buses and public transportation as well as taxis," he remarked.

The government issued Presidential Regulation No. 55 of 2019 on the Acceleration of Battery Electric Vehicle Program for Road Transportation that had come into effect since August 12, 2019.

Development of the domestic electric vehicle industry will be expedited in accordance with the regulation. Furthermore, it encourages incentives, charging station infrastructure development, and special electricity tariffs for battery charging, as well as environmental preservation.

Source: <https://en.antaranews.com/news/135436/toyota-indonesia-set-to-produce-battery-electric-vehicles-in-karawang>

3.0 End

Any comments and suggestions on the topics and information covered and to be covered in future are most welcome. Please send your comments and suggestions to Lee Giok Seng at email: leegs@angva.org