ANGVA2U Info *12/2020 3rd July 2020 (for ANGVA members only)*

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1.0 Selected News / Articles

1.1 Azerbaijan

BP, Enagas to promote projects to reduce emissions

2nd July 2020. By Leman Zeynalova – Trend:

BAKU, Azerbaijan

Spanish Enagas and BP Oil España have signed an agreement to promote projects to reduce emissions in Spain, Trend reports citing Enagas.

The agreement aims to support the development of projects in three lines of action: the promotion of infrastructure for liquefied natural gas (LNG) and compressed natural gas (CNG) in the field of sustainable transport; the production and encouragement of the consumption of renewable gases, and the promotion of entrepreneurship and innovation projects.

Enagás, through its subsidiary Scale Gas, will develop points of sale of liquefied natural gas (LNG) and compressed natural gas (CNG) in the network of bp service stations, thus promoting the use of a low-emission energy source as fuel in the automotive sector.

Another objective of the agreement will be to promote the use of renewable gas in the Spanish market, helping to reduce the carbon footprint and enhancing its role in the energy mix. To this end, bp will acquire the biomethane produced by Enagás' company, Bioengas, and will also collaborate in the creation of a national market for the purchase and sale of this product and in the identification of new consumption opportunities.

BP's strategic objective is to supply biomethane from its LNG and compressed gas plants, as well as the possibility of bp's refinery in Castellón being supplied through biogas, biomethane or hydrogen plants derived from biogas projects, in line with the strategy towards eco-friendly fuels.

This alliance includes the support and joint development of entrepreneurial and corporate venturing projects in the areas of open innovation, energy transition and sustainable mobility.

Source: *https://en.trend.az/business/energy/3263779.html*

1.2 The Czech Republic

New Skoda Octavia G-TEC Unveiled With 310-Mile Compressed Natural Gas Range

26th June 2020. By Sergiu Tudose.

Skoda has unveiled its latest compressed natural gas (CNG) model in the 2020 Octavia G-TEC, which boasts a gas-only range of 500 km (310 miles) in the WLTP cycle.

The new Octavia G-TEC is technically a hybrid, since it also utilizes a 9-liter gasoline tank, aside from the three CNG tanks installed in the underbody, which store a total of 17.33 kg (38.2 lbs) of natural gas. Skoda will launch the new model across Europe this autumn.

Power comes from a 1.5-liter TSI unit that provides an output of 130 PS (128 HP), and an economy of 3.4 to 3.6 kg (7.5 to 7.9 lbs) per 100 km (96 miles) in the WLTP cycle in CNG mode, as well as 4.6 liters per 100 km (51 mpg) in gasoline mode.

Using just the gasoline in its 9 liter tank, the Octavia G-TEC can actually cover another 190 km (118 miles), for a total range of roughly 700 km (435 miles). Also, switching between CNG and gasoline mode happens automatically, without the driver having to do anything.

The only times in which the Octavia G-TEC accesses its gasoline fuel supply is when the engine is started after the natural gas has been topped up, or when the outside temperature is below -10 degrees Celsius (14 F). It will also do it when the gas tanks are so empty that the pressure drops below 11 bar.

In terms of practicality, if you opt for an Octavia G-TEC hatchback, you'll be left with 455 liters (16 cu.ft) of trunk volume, whereas the Estate model will still give you a capacity of 495 liters (17.5 cu.ft), despite the CNG tanks.

Source: *https://www.carscoops.com/2020/06/new-skoda-octavia-g-tec-unveiled-with-310-mile-compressed-natural-gas-range/*

1.3 Canada

Canada's first natural gas-electric hybrid to be demonstraated

17th June 2020. By James Menzies.

@JamesMenzies

AYR, Ont. – Hiller Truck Tech has taken delivery of the first natural gas-electric hybrid Class 8 tractor, which it plans to demonstrate June 18-19.

The 2015 Freightliner Cascadia has a 12L Cummins natural gas engine, coupled with a retrofit Hyliion electric axle. The combination, according to Hiller Truck Tech owner Dave Hiller, overcomes the weight restrictions that have thus far limited adoption of the Cummins ISX 12G natural gas engine in Canada.

Immediately upon taking delivery of the tractor, Hiller said it was put to the test grossing 124,000 lbs pulling a load of corn. He's confident the combination will be a good fit for fleets wanting a low-GHG engine capable of pulling heavier payloads.

Some big-name fleets, including Groupe Robert, C.A.T., Loblaw, Challenger, The Beer Store, municipalities and others are expected to attend the two-day demonstration, Hiller said. Afterwards, Hiller Truck Tech will rent out the truck so that fleets can test it in their own operating environments.

(Photo: Hiller Truck Tech)

Hiller is located at the Flying J Truck Stop in Ayr, Ont., at Exit 268 off the 401. Keeping all Covid-related precautions in mind, visitors will have the opportunity to take the truck for a test drive and to learn more about the technology. The demos will run from 9 a.m. till 6 p.m. both days.

The Hyliion axle can be factory-installed or retrofit, with some additional wiring and electronics work required at a plant in Austin, Texas. Dana is part-owner of the e-axle company. The first batch of natural gas-electric hybrids were delivered to a grocery delivery company in New York, Hiller said, adding the company has placed a second order for more units.

The ISX 12G produces just 400 hp, but propulsion assistance provided by the Hyliion e-axle makes it compatible for heavier payloads required in Canada. But Cummins has thus far refused to budge on increasing warranty coverage for gross weights in excess of 80,000 lbs. Hiller said talks are in progress to discuss this issue.

“We are talking to them now, saying this is an electric assist system. There’s also some aftermarket warranty we can purchase,” Hiller said. “This is all new to Cummins, and they are still stating ‘No, this is supposed to be an 80,000-lb truck (engine).’”

Hiller is optimistic the combination could be a good alternative for fleets, such as Robert, which were reliant on the now-discontinued 15L Westport LNG engines. Hiller acknowledged there will be a 10-20% fuel economy penalty compared to diesel, but added natural gas is less expensive, helping to offset higher operating costs. There is also a growing network of renewable natural gas supply stations available to help fleets significantly lower their GHG emissions.

Source: *https://www.trucknews.com/sustainability/canadas-first-natural-gas-electric-hybrid-to-be-demonstrated/1003141822/#:~:text=Canada's%20first%20natural%20gas%2Delectric%20hybrid%20to%20be%20demonstrated,-by%20James%20Menzies&text=AYR%2C%20Ont.,to%20demonstrate%20June%2018%2D19.&text=Hiller%20is%20located%20at%20the,Exit%20268%20off%20the%20401.*

1.4 Denmark

Shell secures biogas supply as part low-carbon shift

1st July 2020. Reuters.

The gas will be supplied to Europe's pipeline network from July 1. The size and financial details of the contract were not disclosed

COPENHAGEN: Royal Dutch Shell said on Tuesday it has agreed to buy renewable gas, known as biomethane, from Denmark's Nature Energy, in what the smaller company termed the largest deal of its kind.

The gas will be supplied to Europe's pipeline network from July 1. The size and financial details of the contract were not disclosed.

In April, Shell laid out the oil and gas sector's most extensive strategy yet to reduce greenhouse gas emissions to net zero by 2050.

Biogas, produced from methanisation of agricultural and other biological waste, could play a key role in Europe's ambitions to become a low-carbon society.

"Biomethane has an important role to play in the energy transition," said Jonathan McCloy, head of gas at Shell Energy Europe.

"This purchase is an important part of our work to provide a range of lower-carbon energy choices for our customers across Europe."

Denmark and Germany are pioneers in the nascent biomethane industry, which still depends on government support and has yet to see the breakthroughs in technology and scale seen in wind and solar power.

Biogas competes in Europe with cheaper natural gas imports from countries like Russia and Algeria.

Depending on continued political support, biogas has the potential to supply Denmark's entire gas consumption by 2035, up from one-fifth now, according to Nature Energy Chief Executive Ole Hvelplund.

Nature Energy plans to produce 170 million cubic metres of gas from its ten plants this year, a tiny fraction of Europe's total consumption.

Source: *https://energy.economictimes.indiatimes.com/news/oil-and-gas/shell-secures-biogas-supply-as-part-low-carbon-shift/76721274*

1.5 Italy

BTS Biogas and ENGIE Partner to Deliver Sustainable Energy Solutions in Italy

1st July 2020. Wednesday. By Adnan Bajic

BTS Biogas, a sister company of Bioenergy DevCo and market leader in the biogas sector, and ENGIE, the world's largest independent energy producer, have signed a Memorandum of Understanding (MoU) under which the two companies will share expertise and resources to expand decarbonization efforts starting in in Italy and expanding throughout Europe.

"Entering into this partnership with ENGIE provides us with incredible opportunities to leverage our technology and expertise on decarbonization projects," said Franco Lusuriello, CEO of BTS Biogas. "Anaerobic digestion is experiencing a renaissance, with increased interest throughout Europe, Asia and now North America – but our heart and our home is and will always be Italian. Through this deal we can help ensure that Italy meets its zero-carbon goals, invests in sustainable projects that encourage economic recovery and contributes to the global fight against climate change."

The agreement will create a shared project pipeline for the two companies, allowing both to maximize their considerable experience in developing, constructing and managing facilities that create renewable natural gas from organic waste. By limiting the amount of waste sent to landfills and incinerators, these anaerobic digestion projects significantly reduce of air pollution and greenhouse gas emissions.

"This is a valuable partnership" agrees Damien Terouanne, CEO of ENGIE Italia - "ENGIE aims to be the leader of the zero-carbon transition and is committed to the realization of numerous projects for the production of sustainable energy. In BTS Biogas we have found profound technological competence for the construction of advanced biomethane production plants with numerous environmental and economic advantages. In the current historical context progress in the field of environmental and social sustainability means pushing and supporting economic recovery."

BTS Biogas has a 20-year track record of developing anaerobic digestion projects and has built and operated more than 200 facilities around the globe. In 2019, BTS Biogas has joined Bioenergy DevCo, a developer of anaerobic digestion facilities in the United States. Most recently, BTS' technologies and expertise have been deployed in North America through deals with major food companies and natural gas utilities.

The projects developed through this partnership are expected to have significant positive economic impacts on their local communities, creating new jobs and encouraging additional investment in sustainable waste and energy solutions. Projects are expected to begin construction within the next year.
Source: *https://www.renewableenergymagazine.com/biogas/bts-biogas-and-engie-partner-to-deliver-20200701*

1.6 India

India exploring global funds for compressed biogas projects: oil minister

23rd June 2020. Reuters

India plans to invest $24 billion to produce 15 million tonnes of compressed biogas from 5,000 plants by 2023, and wants bio-manure, a byproduct, to contribute to the growth of organic farming

CHENNAI: India is exploring global funds and prioritising lending for compressed biogas (CBG) projects, Oil Minister Dharmendra Pradhan said on Tuesday, as the country looks to reduce its crude imports and increase its use of cleaner fuels.

"We are also exploring global funds to fund CBG projects," Pradhan said at the inauguration of a biogas plant in the southern state of Tamil Nadu.

India plans to invest $24 billion to produce 15 million tonnes of compressed biogas from 5,000 plants by 2023, and wants bio-manure, a byproduct, to contribute to the growth of organic farming.

"A new package for medium and small scale enterprises shall also assist to fund CBG plants across India," Pradhan said on Tuesday.

In the north, India wants to build biogas plants where crop stubble can be used a feedstock in a bid to halt the choking crop-burning pollution that blights the country every winter.

A major source of the smog that engulfs vast swathes of northern India, including the capital New Delhi, is the burning of straw and stubble of the previous rice crop to prepare for new planting in October and November.

Source:*https://energy.economictimes.indiatimes.com/news/oil-and-gas/india-exploring-global-funds-for-compressed-biogas-projects-oil-minister/76528057*

1.7 United Nations

UN highlights urgent need to tackle impact of likely electric car battery production boom

28th June 2020. Agência Brasil/José Cruz

Demand for raw materials used in the production of electric car batteries is set to soar, prompting the UN trade body, UNCTAD, to call for the social and environmental impacts of the extraction of raw materials, which include human rights abuses, to be urgently addressed.

Electric cars are rapidly becoming more popular amongst consumers, and UNCTAD predicts that some 23 million will be sold over the coming decade: the market for rechargeable car batteries, currently estimated at $7 billion, is forecast to rise to $58 billion by 2024 .

The shift to electric mobility is in line with ongoing efforts to reduce the world's dependence on fossil fuels, and reduce harmful greenhouse gas emissions responsible for climate change, but a new report from UNCTAD, warns that the raw materials used in electric car batteries, are highly concentrated in a small number of countries, which raises a number of concerns.

Drilling down in DRC, Chile

For example, two-thirds of all cobalt production happens in the Democratic Republic of the Congo (DRC). According the UN Children's Fund (UNICEF), about 20 per cent of cobalt supplied from the DRC comes from artisanal mines, where human rights abuses have been reported, and up to 40,000 children work in extremely dangerous conditions in the mines for meagre income.

And in Chile, lithium mining uses nearly 65% of the water in the country's Salar de Atamaca region, one of the driest desert areas in the world, to pump out brines from drilled wells. This has forced local quinoa farmers and llama herders to migrate and abandon ancestral settlements. It has also contributed to environment degradation, landscape damage and soil contamination, groundwater depletion and pollution.

Electric cars at UN Headquarters, New York (file)

Climb the value chain

Noting that "the rise in demand for the strategic raw materials used to manufacture electric car batteries will open more trade opportunities for the countries that supply these materials", UNCTAD's director of international trade, Pamela Coke-Hamilton, emphasised the importance, for these countries, to "develop their capacity to move up the value chain".

In the DRC, this would mean building processing plants and refineries that would add value and, potentially, jobs within the country. However, for various reasons (including limited infrastructure, financing and a lack of appropriate policies), refining takes place in other countries, mainly Belgium, China, Finland, Norway and Zambia, which reap the economic benefit.

The report recommends that countries such as DRC provide "conducive environment to attract investment to establish new mines or expand existing ones".

Diversify and thrive

UNCTAD also recommends that the industry find ways to reduce its dependence on critical raw materials. For example, scientists are researching the possibility of using widely-available silicon, instead of graphite (80% of natural graphite reserves are in China, Brazil and Turkey).

If the industry manages to become less reliant on materials concentrated in a small number of countries, says UNCTAD, there is more chance that prices of batteries will drop, leading to greater take-up of electric cars, and a shift away from fossil-fuel powered transport.

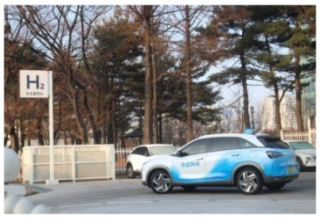
As for the environmental consequences of the batteries themselves, the report recommends the development of improved, more sustainable mining techniques, and the recycling of the raw materials used in spent Lithium-Ion batteries, a measure that would help deal with the expected increase in demand, and also create new business opportunities.

Source: *https://news.un.org/en/story/2020/06/1067272*

1.8 Korea

Korean Government Launches Hydrogen Economy Committee

2nd July 2020. By Michael Herh



To boost the hydrogen industry, the Korean government has decided to nurture 1,000 companies specializing in hydrogen by 2040. The government will also seek to boost the number of hydrogen cars to 850,000 and that to hydrogen chargers to 660 units within the next 10 years.

These plans were approved at the inaugural meeting of the hydrogen Economy Committee presided by Prime Minister Chung Sye-Kyun at the KINTEX in Ilsan near Seoul on July 1.

Chaired by the prime minister, the committee is a control tower that will establish the government's policies related to the growth of the hydrogen economy. It consists of experts from eight related ministries including the Ministry of Trade, Industry and Energy, and the private sector including related industries and academia.

The government will foster 500 hydrogen-related companies by 2030 and 1,000 by 2040 in order to sharpen the competitiveness of the hydrogen industry's ecosystem. For this purpose, the government will provide intensive support for companies engaged in five key areas – hydrogen mobility, fuel cells, liquid hydrogen, hydrogen charging stations, and water electrolysis. It will also make local governments and public institutions purchase products of these companies to participate in the hydrogen economy.

The government plans to expand the number of hydrogen cars and charging stations to 850,000 and 660, respectively, by 2030. It will expand the scope of hydrogen vehicles eligible for support to large cargo trucks and medium-and long-distance buses and increase subsidies for purchases. In addition, it plans to designate two of the five Phase 3 New Cities as hydrogen cities where apartments will use fuel cell electric power and hydrogen buses will carry passengers.

The government designated the Hydrogen Fusion Alliance Promotion Group as an organization in charge of the hydrogen industry, KOGAS as an organization dedicated to hydrogen distribution and Korea Gas Safety Corp. as a hydrogen safety agency. These agencies will foster professional personnel, establish standards, stabilize hydrogen prices and build a fair distribution systems and set up safety standards on hydrogen products and facilities.

Source: *http://www.businesskorea.co.kr/news/articleView.html?idxno=48415*

1.9 Global

JCB develops construction's first hydrogen-fuelled excavator

2nd July 2020. By Catherine Kennedy

JCB has developed the construction industry's first hydrogen-powered excavator as it continues to lead the sector on zero and low carbon technologies.

The 20t 220X excavator - powered by a hydrogen fuel cell - has been undergoing rigorous testing at JCB's quarry proving grounds for over 12 months. The development means the firm is the first construction equipment company to unveil a working prototype of a hydrogen-powered excavator.

JCB chairman Lord Bamford described the development as "very exciting". He added: "In the coming months, JCB will continue to develop and refine this technology with advanced testing of our prototype machine and we will continue to be at the forefront of technologies designed to build a zero carbon future."

Power for JCB's prototype excavator is generated by reacting hydrogen with oxygen in a fuel cell to create the energy needed to run electric motors. The only emission from the exhaust is water.

Last year JCB went into full production with the construction industry's first fully electric mini excavator, the 19C-1E. JCB has also extended electric technology to its innovative Teletruk telescopic forklift range with the launch of an electric model, the JCB 30-19E.

The firm has also been leading the way on clean diesel technology to meet Stage V EU emissions regulations and has almost eradicated the most harmful emissions from its latest range of diesel engines. Nitrous Oxide (NOx) is down 97%, soot particulates down by 98% and Carbon Dioxide (CO_2) emissions down by almost half.

Source: *https://www.newcivilengineer.com/latest/jcb-develops-constructions-first-hydrogen-fuelled-excavator-02-07-2020/*

1.10 Australia

ReCarbon, Utilitas Group to build biogas-to-hydrogen plants in Austarlia

19th June 2020.

Image credit: Utilitas biogas plant

California, US-based ReCarbon has partnered with Australian bioenergy developer Utilitas Group to build biogas-to-hydrogen plants across Australia. ReCarbon, developer of the patented Plasma Carbon Conversion Unit – a greenhouse gas utilisation technology – announced the execution of a memorandum of understanding with the Australian company on 10 June.

ReCarbon president and CEO Dr Jay Kim said: "We are pleased to collaborate with Utilitas to seek to establish production plants that will not only create a new supply of renewable hydrogen but simultaneously address greenhouse gas emissions from biomass."

"Utilitas has always pioneered our way forward in the bioenergy sector in the last decade," added Fiona Waterhouse, CEO of Brisbane-based Utilitas Group. "We see ReCarbon's technology and expertise as an innovation to empower this continuing journey to create new high-value opportunities for biogas."

Source: https://www.bioenergy-news.com/news/recarbon-utilitas-group-to-build-biogas-to-hydrogen-plants-in-australia/

End