Newsletter IEA Bioenergy Task 37: 11/2024

RNG in shipping & road transport

Topics:

With the new FH Aero, Volvo continues to focus on natural gas

While European regulations advocate zero tailpipe emissions, manufacturers continue to promote the energy mix in the truck sector. After Iveco and Scania, it's Volvo Trucks' turn to confirm its commitment to the energy mix with the presentation of the new FH Aero and its gas version. Presented as the "ideal long-haul truck", the new FH Aero offers a wide range of energy solutions. In addition to its diesel and electric versions, the Swedish manufacturer's new truck also features a gas engine. While the full specifications of the new model have not yet been revealed, we do know that it will be available in three power levels: 420, 460 and 500 hp. In terms of fuel tanks, the manufacturer offers three configurations: 155 kg (375 l), 205 kg (495 l) and 225 kg (545 l). Maximum range is given as 1000 km on a full tank.
More (in French)

DHL Germany signs a major order with Iveco

In Germany, the DHL Group has placed an order for 178 new Iveco S-Way CNG vehicles. Intended for the Post & Parcel division, they will be used mainly for inter-hub transport of parcel centers and urban deliveries. Among the vehicles ordered, 161 Iveco S-Way CNG trucks equipped with a body will be used to cover short distances and one-day tours. Equipped with a standard 4x2 chassis, a total loading of 19 t and powered by a 9-liter, 340 hp CNG engine, these vehicles carry 160 kilos of compressed gas at 200 bar. This ensures a comfortable range of 670 km on a single fill-up. The remaining 17 vehicles will be equipped with a swap body. Used for inter-hub transport, they will feature a standard 6x2 chassis with a steered trailing axle. More powerful, they will be powered by a 13-liter 460 hp engine and will be able to carry up to 240 kg

of CNG. This will extend the range to 1,000 km on a single fill-up. Once delivered, these 178 vehicles will bring DHL's German fleet to over 450 CNG trucks.
More (in French)

Top

New registrations of RE passenger cars in Germany

According to DENA monitoring, 1.38 million (around 50 %) of the new passenger cars registered in 2023, were powered by alternative fuels, including vehicles with batteries, fuel cell, hybrid (including plug-in hybrid), gas (LNG and CNG) and hydrogen. This means that 4.9% (+ 64,265) more cars with alternative drive systems were newly registered in 2023 than in the same period of the previous year. Overall, the RES market share of passenger cars in the new car market fell slightly from 49.6% (2022) to 48.5%. Gas-powered cars (LPG and CNG) again had a very low market share of 0.51%. A comparison with the same period of the previous year (0.64%) shows that the importance of this type of drive is declining. However, CNG driven cars receive no financial support.
More (in German)

Bio-CNG-fueled fleets in California achieving carbon-free footprint today

Renewable natural gas (RNG) accounted for 97% of all on-road fuel used in natural gas vehicles in California in 2023. According to data from the California Air Resources Board (CARB) the annual average carbon intensity score of bio-CNG in that mix was -126.42 gCO2e/MJ. In fact, bio-CNG holds the lowest average carbon intensity of any clean fuel option on California's roadways today and is the only fuel producing a negative carbon intensity fleet outcome in the California Low Carbon Fuel Standard (LCFS) Program, which includes ethanol, biodiesel, renewable diesel, bioCNG, bio-LNG, electricity, alternative jet fuel, and hydrogen. Even more, while RNG made up just 5.1% of all on-road alternative fuels dispensed by volume, it generated 19.2% of all carbon dioxide equivalent (CO2e) emission reductions of on-road alternative fuels reported under the California LCFS in 2023.
More

Top

Clean Energy Fuels signs 15 new local contracts for fueling stations

The company has been working to grow its network of fueling stations spread across Arizona, Arkansas, California, Colorado, the District of Columbia, New Jersey, New York and Washington in tandem with its renewable natural gas production portfolio during the first quarter of this year to serve fleets around the country. The biogas company expects to service about 1,000 vehicles through the deals. By the end of the first quarter, Clean Energy Fuels reported owning, operating or supplying 579 fueling stations in the U.S. and 24 in Canada.
More

Scania: almost 40% of sales on CNG/RNG

Over the 12 months just ended (July 2023-June 2024), the share of gas driven engines was 32.7%. Rigids dominate sales at 80%, compared with 20% for tractors. In one year, a total of 1,185 B100, 839 CNG or RNG and 418 hybrid or electric vehicles were registered. From January to June, 2024, CNG's share of Scania's sales mix was 36%. By 2030, Scania aims to have half its sales made up of electric vehicles, while the other half will be made up of vehicles using biodiesel, biogas, synthetic diesel (HVO), etc. Gas therefore has an important role to play in this mix.
Two years ago, CNG's market share was 25-26%; it is now 32% and should stabilize at these levels. We have recently launched two new gas-fueled engines that promise to reduce fuel consumption by 5% or more.
More (in French)

Top

Share of LBG on the rise at German filling stations

The share of liquefied biomethane in liquefied natural gas (LNG) sales at German filling stations has increased significantly over the past two and a half years. While the share was at most 1% in 2022, it has consistently remained above 50% every month since the beginning of this year. In June it was even more than 70%. These figures make it clear that mobility fueled by Bio-LNG is available today to achieve climate goals in the transport sector. Currently, more than 30,000 tons of LNG are filled at German filling stations every quarter. A comprehensive network has been set up at more than 150 locations. The fact that biomethane's share of LNG sales has increased rapidly is also due to the increasing expansion of liquefaction capacities. In mid-April, Shell put Germany's largest Bio-LNG production plant into operation.

The Rhineland plant can produce up to 100,000 tons per year, which can be used to fuel 4,000 to 5,000 trucks.
More

Natura launches fleet of biomethane trailers

Brazilian cosmetics company Natura has launched the first fleet of trailers powered by biomethane gas, replacing 35% of its heavy freight operation. This move will consolidate the collection and delivery of raw materials, inputs and finished products from Natura and Avon, involving suppliers, factories, hubs, distribution centers and third parties in the state of São Paulo. By substituting the current diesel vehicles with 20 new green fuel ones, Natura aims to decrease carbon emissions by 82%.
More

Promotion of biogas for Norway's HDV

Gasum, a leading Nordic energy company, and the Norwegian Road Transport Association have officially entered into a strategic cooperation agreement aimed at advancing the role of biogas in Norway's green energy landscape. The collaboration seeks to position biogas as a prominent solution in the ongoing green transition, with a focus on replacing fossil diesel. Gasum said it will actively share insights on biogas as a sustainable transport fuel. The collaboration involves advocating for improved biogas framework conditions in Norway, engaging with truck suppliers, and participating in events to promote biogas as a green solution. As of today in Norway, approximately 2,600 trucks use biogas on the roads, with 600 trucks running on liquefied biogas.
More

In Finland, Gasum switches its stations to 100% RNG

Not only in France or Sweden are CNG station operators making a massive switch to 100% biogas! In Finland, Gasum has just officially switched over its entire network from 30 August. In its press release, Gasum states that it has found that almost all its customers prefer biogas, which is competitively priced compared with natural gas. As the availability of biogas has improved, the option of natural gas as a back-up alternative is no longer necessary'. The change will be completed during summer. Gasum's strategic objective is to rapidly increase the supply of renewable gas in the Nordic markets, thereby enabling low-emission transport by land and sea. Gasum currently operates 45 CNG stations in Finland, 17 of which distribute liquefied natural gas. A 46th station is already planned for Rauma, in the south-west of the country. It is due to open in autumn.
More (in French)

Top

Hapag-Lloyd takes largest ship-to-ship LBM delivery

Titan Clean Fuels and STX Group announce having successfully concluded a ship-to-ship bunkering of 2,200 metric tons of liquefied biomethane (LBM) to a Hapag-Lloyd container vessel in the port of Rotterdam, Netherlands. This transaction marks Hapag-Lloyd's entry into using liquid RNG as sustainable shipping fuel, representing the largest ship-to-ship bunkering operation known till date. STX Group and Titan Clean Fuels have collaborated to liquify, store and deliver mass-balanced biomethane in Zeebrugge in Belgium under ISSC certification fully recognized under the European Union´s Renewable Energy Directive known as RED II. This pioneering deal demonstrates that bunkering large quantities of liquefied biomethane is possible and scalable. However, there is still more progress required regarding the necessary infrastructure and the regulatory framework.
More

Top

Maersk released a series of studies on biogas for shipping

Successful decarbonization of the shipping industry will depend on the maturation and adoption of a range of alternative maritime fuels. To support this goal, this series of reports presents a deep dive into the potential of biogas as a source of biofuels for shipping. Biogas, generated by anaerobic digestion of biogenic waste, is a mixture of methane (CH_4) and carbon dioxide (CO_2) that can be easily converted into various biofuels. In this series of publications, we explore details of the production of two specific biofuels from biogas: liquified bio-methane (LBM) and bio-methanol**.**
Each report in the series focuses on a different aspect of these fuel pathways to build a detailed picture of how biofuels from biogas can contribute to sustainable decarbonization of shipping**.** The reports can either be read individually as deep dives into a specific topic, or together as a comprehensive

investigation into biofuels from biogas.
More

Decarbonizing shipping: SEA-LNG Whitepaper

The shipping industry recognizes that it must decarbonize the fuels it uses to support global efforts to combat climate change. Time is of the essence and action is needed today. Currently, the majority of ships (>95%) use heavy fuel oils (HFO), diesel (as Marine Gas Oil or Marine Diesel Oil) onboard, or Very Low Sulphur Fuel Oil (VLSFO). Various renewable fuels have been proposed as possible replacements to support climate neutrality by 2050, however, rapidly scaling their deployment can face significant technical and economic challenges. LNG is today developing as the principle alternative marine fuel, with wide availability through existing and expanding global bunkering infrastructure and proven vessel technologies. It starts decarbonising shipping today and provides a competitive pathway to a net zero greenhouse gas (GHG) emission future using liquefied biomethane and liquefied e-methane.
More

Baleària adds the world's second fast ferry with dual LNG engines

Baleària adds the world's second fast ferry with dual LNG engines to the Barcelona-Mallorca-Menorca route. The incorporation of the catamaran, with capacity for 1,200 passengers and 425 vehicles, allows Baleària to increase the number of high-speed seats by 50% and double the number of vehicles, while reducing its carbon footprint, since natural gas reduces CO2 and nitrogen oxide emissions and completely eliminates sulfur and particulate emissions. The company has invested 126 million euros in this ship.
More

Top

Maersk commits to Bio-LNG and methanol in large order

Maersk is backing liquefied biomethane (Bio-LNG) and green methanol after ordering up to 60 vessels as part of a multifuel future. While green methanol is likely to become the most competitive and scalable pathway to decarbonization in the short term, Maersk also foresees a multifuel future for the industry which includes liquified bio-methane. Once the vessels have been delivered, around 25% of the Maersk fleet will be equipped with dual-fuel engines
More

Gasum powers Equinor's platform supply vessel with Bio-LNG

Gasum is collaborating with Equinor on a series of liquefied biomethane (Bio-LNG) bunkering operations in the Port of Dusavik, Stavanger. Gasum is bunkering ISCC-EU certified mass balanced Bio-LNG to Equinor's chartered platform supply vessel Island Crusader.
The first Bio-LNG delivery was successfully carried out mid-July. Gasum will continue to supply Island Crusader with 2–3 truckloads of Bio-LNG approximately every other week. Each truckload contains about 22 tons of Bio-LNG. The Island Crusader also features battery hybrid technology, which further improves its environmental performance.
More

Maersk Changes Its Tune on LNG

Shipping giant A.P. Moller-Maersk A/S is in the process of securing 50-60 vessels as part of its fleet renewal program, including ships that will be able to run on liquefied natural gas, a fuel the company has criticized in the past. The shipping industry is under pressure to decarbonize but still largely relies on oil-derived fuel. Maersk has begun the process of securing offtake agreements for liquefied biomethane — bio-LNG — to ensure that the new dual-fuel gas vessels provide emissions reductions in this decade, according to the company's statement. Between 2026 and 2030, an expected 800,000 TEU of capacity will enter Maersk's fleet, replacing other vessels. These ships will be dual fuel.
More

Top