



Technology Collaboration Programme
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Newsletter IEA Bioenergy Task 37: 02/2022

Market penetration of RNG HDV and buses

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Lidl invests in biogas trucks throughout Europe

Just about everywhere in Europe, Lidl is choosing gas to ensure its deliveries. In Finland, the first experiments took place in 2018. From today, deployments are intensified. In partnership with the carrier Harri Mikkola, the Finnish branch of Lidl is delivering its stores with trucks running on bioLNG. In Switzerland, following the introduction of a first fleet of LNG trucks, Lidl Switzerland was first using compressed natural gas (CNG) trucks to supply its stores. Currently, CNG is replaced by biomethane thanks to a partnership with the Weinfelden waste water treatment plant. In Switzerland, Lidl already uses alternative fuels for about half of its goods transport. With the aim of supplying all its stores without fossil fuels by 2030, Lidl has also started to use synthetic natural gas as part of a "Power to Gas" program supported by the Swiss research institute Empa.

[More](#) (in French)

Six Finnish cities using biogas vehicles to transport sludge, biowaste

The six cities in the outer zone of the Uusimaa region – Hanko, Hyvinkää, Lohja, Loviisa, Porvoo and Raasepori – will transport the sludge and waste collected by waste management company Rosk'n Roll Oy Ab to the Gasum biogas plant network, where it will be used as raw material. In total, around 30,000 tons of sewage sludge and biowaste will be used annually to help achieve an annual CO₂ emission reduction of up to 7,000 tons, equivalent to the emissions of 3,000 cars. Fueled by Gasum's renewable liquefied biogas (LBG), the trucks will help the cities to achieve their climate goals and reduce their carbon footprint. The switch to biogas will cut vehicle CO₂ emissions by up to 226 tonnes every year –

equivalent to the emissions of 100 cars. Gasum's expanding gas filling station network opens up opportunities for companies to switch to gas in their logistics. The company currently has around 100 gas filling stations in the Nordic countries, with around 30 of these serving heavy-duty vehicles.

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DHL, EDEKA and Shell confirm interest in bio-GNL

For one year, the supermarket cooperative EDEKA Minden-Hannover will use three IVECO S-WAY trucks fueled with bio-GNL supplied by Shell. EDEKA Minden-Hannover already operates some 40 trucks running on natural gas. Bio-GNL is gradually becoming more widespread. Already offered by some filling station operators, this green alternative to fossil LNG is gaining momentum in Germany. In Holland, DHL Freight and Shell have joined forces in a pilot program to be launched in June 2021, confirming the benefits of the solution. In the first five months of use, the renewable version of LNG has reduced CO2 emissions by 87 tonnes, equivalent to the emissions of a diesel truck over almost 90,000 kilometers.

[More \(in French\)](#)

Carrefour with Europe's largest biogas fleet

The major French retailer Carrefour is going full throttle in logistics and plans to deploy a total of 1200 biogas trucks by the end of 2022. French logistics and freight transport specialist Jacky Perrenot already began using the first CNG-powered trucks in 2012 together with commercial vehicle manufacturer Iveco and with its customer Carrefour. The company is also one of the pioneers in the field of biogas use. Today, the biogas fleet already comprises several hundred vehicles, which supply Carrefour stores throughout France in an almost CO2-neutral manner. The 600th biogas vehicle, an Iveco S-Way powered by CNG with biogas in the tank, recently entered service. With 600 CNG vehicles, Jacky Perrenot now has the largest European fleet of trucks with alternative propulsion. The switch to these biogas vehicles is facilitated by their range, operating costs, refueling times and driving comfort, as they are equivalent to diesel vehicles in these respects. The share of biogas trucks in Perrenot's fleet continues to increase and is expected to reach around 24 percent by the end of 2025 and as much as 30 percent by the end of 2030.

[More \(in German, French or Italian\)](#)

First biomethane hybrid tractor for the fields

The Auga Group, one of Europe's largest organic food producers, has unveiled the world's first hybrid tractor powered by biogas and electricity. From field to table, the Lithuania-based Auga Group aims to reduce climate pollution. The Auga M1, the world's first hybrid tractor powered by biogas and electricity, aims to produce food without harming nature. Today, agriculture is responsible for almost a quarter of the world's CO2 emissions. A large proportion of these emissions are due to the use of fossil fuels in agricultural machinery. Until now, the only option here has really been New Holland's T6 Methane Power, a tractor with a 179-hp CNG drive that is virtually CO2-neutral thanks to biogas in the tank. The Auga M1 operates with a hybrid biogas-electric drive. A biogas-fueled internal combustion engine provides the motive power for the electric motors that drive the wheels. Auga Group's patented design allows the tractor to use larger biogas cylinders. A pack of six cylinders that can also be quickly replaced for long-term use. During normal operation, when high power is not required, the tractor stores the generated energy reserves in batteries. In this way, the system gets by with a relatively small but efficient combustion engine and can still call up enormous power peaks when needed. The novel hybrid solution is said to allow the tractor to stand in the field for up to 12 hours and do the work of a diesel engine with up to 400 hp.

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CNG trucks: Amazon places a mega order with Iveco

Like other retail giants, Amazon has no choice but to move away from all diesel. And it is towards the gas solution that the online retailer has chosen to move through an order of 1,064 CNG trucks, Iveco S-

Way. These will be used by Amazon's various transport partners throughout Europe. Amazon has already received a first batch of 216 vehicles. The next 848 are expected to be delivered by mid-2022. All vehicles will be equipped with the Iveco Driver Pal, a "driving companion" that includes the Alexa function developed by Amazon. Equipped with FPT Industrial's Cursor 13 engine, with a driving range of up to 620 kilometers on a single tank.

[More \(in French\)](#)

With RNG reaching the climate target

Migros Basel, a regional organisation of Switzerland's largest retailer, is opening its own biogas filling station and will be even more sustainable in the future. The planned fleet renewal by 2030 will take the retailer a big step towards CO₂-neutral transport. The goal is to reduce the CO₂ emissions of Migros trucks by 80 percent by 2030. With a tool based on a specific algorithm developed together with the research station EMPA they calculate for every route, differences in altitude and weight of the transported good the well-to-wheel CO₂-emission. Based on the result they choose the best available vehicle. In addition to optimising the transport they will buy 5 hydrogen and 12 RNG driven trucks for longer distance transport, while for the distribution within cities a fleet of 12 electric LDVs is planned. The software will be acquired by the Dutch company HERE Technologies, according to a press release. HERE is a joint subsidiary of the German car manufacturers Audi, BMW and Daimler. Here wants to make the Swiss development available worldwide. For this purpose, the software will be included in the company's offer under the name CO₂ Insights. Here customers can test and evaluate the software free of charge until the end of March.

[More \(in German\)](#)

34 MAN hybrid buses for Bologna

The 34 MAN Lion's City methane hybrid buses are the first and only to combine natural gas or biogas and self-produced electricity, and Tper is the first Italian transport company to have chosen this more environmentally friendly solution. An increasingly ecological and accessible public service: these are the assumptions on which the important supply of units for the metropolitan area of Bologna is based. In fact, new vehicles will gradually replace older ones on the city's urban and suburban lines. The new vehicles optimize the positive effects of fueling methane with hybrid technology, guaranteed by MAN's Efficient Hybrid module, an electricity generation and storage system. During the braking of the bus it acts as an energy generator taking advantage of the mechanical energy produced. In the start-up phase, the electricity obtained is transformed back into kinetic energy. The current produced is accumulated electrostatically, that is, without chemical processes, in energy capacitors defined as UltraCap, lighter and more compact than normal batteries, with a longer life and capable of supplying large amounts of electricity very quickly. This technology enables intelligent energy distribution, combining the gas engine with the electric drive power, significantly reducing fuel consumption, noise and already very low emissions.

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In Brittany, RNG is launched on the farm

Farmers and partners of SARL Morel Energies, located in La Chapelle Janson, Nicolas and Florent Morel inaugurated their first RNG station and the first RNG tractor in Brittany in September. The forerunners of biogas production, Nicolas and Florent Morel continue to be involved locally in the development of green gas. Valorizing every year some 18,000 tons of manure, slurry, and agricultural crop residues, the Morel brothers produce nearly 10 million kWh of green gas each year. Some of this energy will now be used to power a RNG station installed directly on the farm. Inaugurated recently in the presence of the various partners of the project, this RNG station was provided by Prodeval. It will allow the daily refueling of two commercial vehicles, the Volkswagen Caddy TGI, but above all the first gas tractor in Brittany, a T6 Methane Power supplied by New Holland. Offering the same performance as an equivalent diesel tractor, it considerably reduces CO₂ emissions (-80%), fine particles (-95%) and NO_x (-50%). It is also more economical, with a fuel cost 20% lower than that of diesel.

The Morel brothers' initiative is far from being the only one in Brittany to develop RNG. Brittany's energy unions have joined forces to plan the deployment of 19 additional stations by 2022. These will complete a regional network of 10 stations. The agricultural world has also taken up the subject. By 2025, the French Association of Methane Farmers (AAMF) plans to install 500 RNG stations throughout France

[More](#) (in French)

King of the Netherlands opens country's first bio-LNG plant

Willem-Alexander, King of the Netherlands, officially opened the country's first bio-LNG plant in October 2021. The plant was developed by Nordsol, Shell and Renewi, built on Renewi's site in Amsterdam Westpoort and will produce an estimated 3.4 kilotons of bio-LNG annually. This is enough for 13 million kilometres of driving - preventing approximately 14.3 kilotons of fossil CO₂ from entering the atmosphere. The three companies each have their own part in the production of bio-LNG. The recycler Renewi processes the waste and converts it into biogas in its fermenters. Nordsol's new bio-LNG plant reprocesses the biogas into bio-LNG. Shell makes this available for its customers at LNG service stations in the Netherlands. Additionally, during production, CO₂ is removed from the biogas and liquefied for use in greenhouses

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First results from DHL Freight Bio-LNG pilot shows 85% CO₂ reduction

In Germany, DHL Freight, one of the leading providers of road freight services in Europe, started piloting a Bio-LNG solution with Shell on three hauler trucks in June 2021 to sustainably reduce CO₂ emissions in road freight transport for DHL's customer Grundfos. In the first five months, the volume of Bio-LNG lifted has reduced 87 tons of CO₂ eq. This corresponds to the emissions of over 89,900 km driven by a Diesel truck and represents 85% of CO₂ savings compared to a traditional diesel engine. Shell is scaling up the supply of Bio-LNG to offer further emission reductions up to carbon neutrality. As of early 2022, Shell will offer a blend of Bio-LNG to the entire network in the Netherlands, offering further carbon reduction to all customers. As of 2023 Shell plans to offer Bio-LNG produced in a new gas liquefaction plant at Shell's Energy and Chemicals Park Rheinland to the entire network in Germany.

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Chronopost to operate gas vehicles in 41 French cities

Chronopost has announced it is to run only zero- and low emissions vehicles in additional 24 cities in France, making it a total of 41. The 360 new electric vehicles, natural gas vehicles (NGVs) and cargo bikes are going to be added to the fleet of more than 700 existing such vehicles. According to the delivery company, it has accelerated its use of low emission transport from delivering 20% of its parcels this way, to a target of 50% by 2025. Among these vehicles will be NGV heavy goods vehicles for transporting goods between cities. According to Chronopost, from this month it will now operate 60 NGV road links, accounting for 36% of its HGV road links in the Paris region and covering 400,000km a year. By 2025 it aims to operate NGV HGVs on 50% of its road links nationally every year.

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