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## Press release

Randers, Denmark

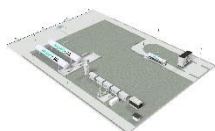
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Caption: Rendition of the finished plant at Frederikshavn Havn



Caption: Signing the contract. Bo Larsen (r), Ole Hvelplund (m), Mikkel Seedorff (l).

Pictures can be supplied in high resolution by request to: [jre@makeenenergy.com](mailto:jre@makeenenergy.com).

## As first-movers in Denmark, Nature Energy and MAKEEN Energy will produce liquefied biogas as a fuel for ferries and trucks

**Biogas producer Nature Energy has signed a contract with MAKEEN Energy to build Denmark's first liquid biogas (LBG) plant, enabling the production of a green and CO<sub>2</sub>-neutral fuel. The future plant will be located in Frederikshavn, from where it will be able to provide the Nordic shipping and transport sector with LBG. Projected future customers include the Samsøe Ferry company, which is expected to start using LBG when the plant is operational.**

Even though the Danish production of biogas is record-high, no production of liquid biogas has so far taken place in the country.

But that is about to change. Nature Energy and MAKEEN Energy have signed a contract to collaboratively build and run a so-called LBG-plant at the harbor area in Frederikshavn – a plant that will produce liquid biogas, which is usable as fuel for ships and trucks. Nature Energy is Denmark's biggest producer of biogas and MAKEEN Energy are specialists in development of equipment and projects concerning liquefied gases. Together, the companies have formed the joint-venture Nordic Liquefaction (NORDLIQ), which is behind the project.

*"The new plant will be the first of its kind in Denmark, when it is expected to be operational in mid-2023. It marks a whole new chapter in the green transition in Denmark, because now it will be possible for ships and trucks to run on a green fuel that has been produced on Danish soil.",* says CEO in Nature Energy, Ole Hvelplund.

CCO in MAKEEN Energy, Bo Larsen, is looking forward to making the NORDLIQ-project a reality, a project that will deliver the first liquid biogas in Denmark.

*"Liquefied biogas will become a crucial green fuel of the future, and because of that we're proud to be part of this project along with Nature Energy. We look forward to paving new ways and securing an effective and green transition of the transport sector,"* he says.

### Huge potentials for the heavy transports sector

While trucks that run on liquid gas are common in e.g. Germany, Norway and Sweden, they are still a rare sight in Denmark.

That is because it's currently not possible to fuel neither liquid natural gas nor liquid biogas on Danish gas stations, something that keeps the gas-fueled

trucks off the roads in Denmark. Hopefully this will change now, says Ole Hvelplund:

*"Liquified biogas is especially requested by the heavy transport industry, where there's a soaring demand for green alternatives to fossil fuels, which still dominate the roads today. That is why we're proud to be frontrunners with the construction of this plant, a plant that will benefit the whole transport sector."*

CEO at Frederikshavn Havn, Mikkel Seedorff Sørensen, is very happy that NORDLIQ will be located in Frederikshavn:

*"We're both happy and proud that NORDLIQ has chosen to locate their plant here in Frederikshavn. It underlines our strategic location at the sail route into the Baltic Sea and at the highway routes going north and south. This plant will strengthen Frederikshavn Harbours position as a green hub."*

Between 60.000 and 100.000 ships pass Frederikshavn Harbour every year, and one of the central buyers of the liquified gas will be Bunker One, who in collaboration with NORDLIQ will handle sales and marketing to the shipping industry.

*Peter Zachariassen, CEO in Bunker One, states: "We're extremely proud to get the possibility to offer the maritime sector a danish-produced product that we see a rapidly growing demand for - a demand that has never been higher."*

Today, Samsøe Rederi has a ferry running on fossil liquid natural gas, a fuel that is transported by trucks from Holland to Denmark. The company looks forward to the possibility of running on Danish liquid biogas in the future:

*"A more sustainable ferry industry is a crucial focus point for Samsø Rederi, and soon we're able to go one step further by sailing on Danish-produced, liquid biogas. It's very interesting to us, and we expect to transition to the fuel once the LBG-plant is operational," says Carsten Kruse, director of ferries in Samsø Rederi.*

The fuel company Q8 is already supplying liquid natural gas to Samsøe Rederi, and Head of Fleet at Q8, Gert Thomasen, sees a huge potential in Danish-produced liquid biogas, which, among other things, will be usable at the company's future gas station in Padborg, which as the first in Denmark will supply the heavy transport with liquid gas.

*"We would like to make it easier for our customers to get going with the green transition, and that's why it will be a big step forward on the road towards a more sustainable truck transport sector if we're able to supply Danish-produced liquid biogas. Liquid biogas is a very relevant alternative"*

*for the heavy transport sector, which is not easily electrified by tomorrow. At the same time, liquid biogas is also interesting for our maritime customers, who are looking for alternatives to traditional fossil fuels”, says Gert Thomasen from Q8.*

NORDLIQ expects to commence the construction of the LBG-plant later this year (2021) and to complete it by mid-2023.

**Fact box**

- Liquid biogas (LBG) is a climate neutral alternative to liquid natural gas (LNG), which is already used by parts of the transport sector. Neither liquid natural gas nor liquid biogas is produced in Denmark today.
- Liquid biogas is produced by cooling the gas down to -162 degrees Celsius, at which temperature the green gas condenses around 600 times, making it usable and cost-effective as a fuel-alternative for the transport sector.
- When the LBG-plant is operational in mid-2023, it will initially be capable of producing 20.000 tons of LBG every year. However, the plant can potentially be scaled to produce up to 120.000 tons of LBG every year at a later stage. For comparison, the Samsøe ferry alone currently uses between 3000-4000 tons of liquid natural gas every year.
- Nature Energy has created a joint venture with MAKEEN Energy called NORDLIQ. The company will be behind the construction of a biogas liquefaction plant in Frederikshavn, Denmark. The project consists of an investment of a three-digit million amount (in DKK), where Nature Energy supplies 2/3 and MAKEEN Energy 1/3.
- As liquid natural gas (LNG) and liquid biogas (LBG) are almost chemically identical, the new plant in Frederikshavn will be able to produce LNG as well, thereby securing the possibility to cater completely to the demands of future customers.
- NORDLIQ expects to commence the construction of the LBG-plant later this year (2021) and to complete it by mid-2023.