

Go circular and beyond!

Upgraded biogas, (biomethane), has the same characteristics as natural gas. The difference is the origin.

Biomethane is part of a circular value chain from waste to valuable energy products.

The circular biogas (biomethane) model protects the climate and secures biodiversity as well as creating job opportunities and helping to maintain energy security. Biomethane is a versatile fuel that can be used for heating, power production, energy storage and transport in both gas and liquid form.

Going beyond circular, into carbon negative solutions is a reality when the captured carbon dioxide is utilised as feed stock for production of e-fuels (synthetic natural gas – SNG) in aCCU process or the carbon dioxide is used for food or industrial purposes (CCUS) or stored in the underground (CCS).

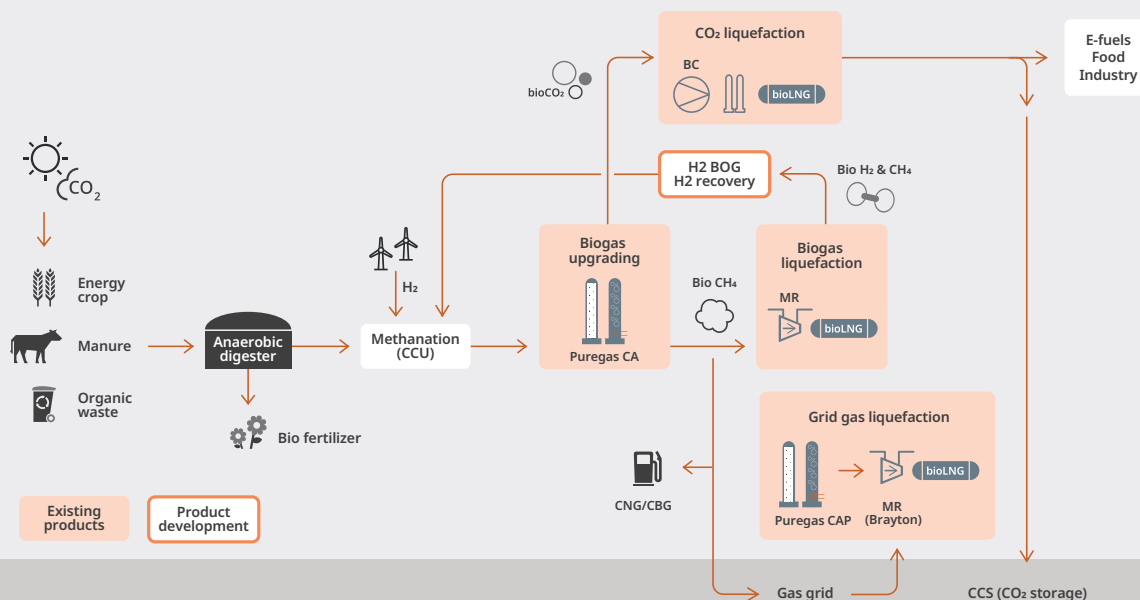
Fuelling our future

Both natural gas and biomethane release carbon dioxide when combusted. Even though natural gas is the cleanest of the fossil fuels it adds carbon dioxide to the atmosphere, thus contributing to climate change.

Carbon dioxide from biomethane is part of a circular loop and when released is absorbed by the growth of new biological feedstocks.

The atmosphere's greenhouse gases can even be reduced when feedstocks like manure are used for producing biomethane instead of being left untreated.

Biomethane and natural gas have the same chemical and technical characteristics. As such, biomethane can be injected to the natural gas grid and if liquified bioLNG can be mixed with LNG. Sharing the existing infrastructure with natural gas offers a safe, cost efficient and fast path towards the decarbonization of the gas system.



Life cycle solutions to convert waste to high value

Gas Solutions offers plants for upgrading biogas to biomethane, liquefaction of biomethane and the recovery and liquefaction of carbon dioxide. Our proven technologies provide clients with the lowest operational costs supported by first-class project execution. Wärtsilä has served the biogas industry for over 20 years and have more than 50 references worldwide.

Plant profitability

An investment in biogas upgrading and/or liquefaction is a long-term commitment. Solutions that decarbonise the transport fuel sector at a low cost are key for profitability. Wärtsilä offers effective Lifecycle cost solutions characterised by:

- Robust and proven process performance
- Lowest operational costs
- Steady output of high-quality biofuels

Gas Solutions turnkey plants operate with proven high uptime and performance year after year. Processes have been continuously fine-tuned and improved based on real operational data and experience.

Minimal disturbance at site

Gas Solutions fabricates all process modules for its biogas upgrading in their own facilities in Kalmar, Sweden. Standard components are utilised as far as possible and for critical parts, Gas Solutions have a close cooperation with our selected suppliers.

To secure delivery quality and minimise installation time at site all process modules undergo Factory Acceptance Testing (FAT) before shipment to site.

About Wärtsilä

Wärtsilä Gas Solutions, is a market leader with innovative systems and lifecycle solutions for the gas value chain. One of our main focus areas are the biogas solutions, beside our already strong presence in handling of gas in the maritime industry (storage, fuel, transfer and BOG management), gas to power and liquefaction. Our biogas business has facilities and personnel in Denmark, Sweden, Norway, Finland, Germany, UK and USA. We help our customers on their journey towards a sustainable future through a focus on lifecycle performance, innovation and digitalisation.



Wärtsilä Biogas solutions