

# Wärtsilä Biogas Solutions

Enabling sustainable societies with smart technology - forming the future of biogas.



Wärtsilä Biogas Solutions is the result of combining the biogas upgrading solutions from Wärtsilä Puregas with the capabilities of Wärtsilä's biogas liquefaction. We are now capable of offering customers a full service covering the entire scope of biogas applications.

Wärtsilä's Puregas CA technology enables biogas to be upgraded to biomethane, while the liquefaction process turns this into bioLNG. Wärtsilä Biogas Solutions can provide turnkey solutions incorporating both the upgrading and liquefaction process to generate renewable fuels for transport applications, and for feeding the natural gas grid. The world's largest bioLNG plant, located in Skogn, Norway, was delivered under a turnkey contract by Wärtsilä. Wärtsilä also offers full lifecycle support through comprehensive service contracts.

## MAXIMISING YIELDS AND REVENUES

The unique Puregas CA biogas upgrading process recovers more than 99.9 percent of the available methane contained in raw biogas, thereby maximising both biomethane yields and customer revenue. Wärtsilä liquefaction technology has been specially developed to overcome typical small scale LNG project challenges by using principles such as modularisation, standardisation, simplicity, and flexibility, which enables very competitive capital and operational costs for LNG plants with capacities of up to 300,000 TPA.

The key advantages of the Wärtsilä Biogas Solutions offering include:

- Highly tolerant of variations in the raw gas composition resulting from changes in the feedstock
- Lowest power consumption
- Low operating costs (OPEX) to maximise lifecycle returns
- Single contact point for complete turnkey solutions
- Short delivery time
- Lowest methane slip <0.1% (no other technology has a lower methane slip without an RTO)
- Robust components and a proven solution with high availability
- Track-record of successful installations
- Lifecycle service support availability
- Fully automated control
- Compact design
- Simple and easy control interface



Virtual gas pipeline



Biomethane trailer filling



## ENVIRONMENTAL SUSTAINABILITY

### MEETING THE NEEDS FOR RENEWABLE FUELS

The market for biogas solutions is growing in response to the need to combat climate change by restricting the use of fossil fuels. The product offering from Wärtsilä Biogas Solutions enables the use of renewable fuels, and utilises the existing infrastructures in place for LNG and natural gas. End-users requiring biomethane for grid injection, for bioLNG, and for bioCNG applications can maximise their value streams through our integrated upgrading and liquefaction processes.

The market for advanced biofuel continues to grow in line with environmental regulatory stipulations. The European Union, under its RED II directive, has directed that by 2030, member states must require fuel suppliers to supply a minimum of 14 percent of fuel consumption in road and

rail transportation from renewable sources. Additionally, in both Europe and the USA, efforts are being made to decarbonise the natural gas grid, which further expands the market for biogas applications.

Wärtsilä is fully committed to delivering efficient and cost-effective solutions that enhance environmental sustainability. Wärtsilä Biogas Solutions is actively engaged in delivering on this commitment.

Wärtsilä Biogas Solutions supports our company's vision for a 100 percent renewables future. The energy sector is undergoing a transformation towards the integration of increasing levels of power from renewable sources, and Wärtsilä's development activities are focused on providing flexible solutions that speed and enable this transformation.



[www.wartsila.com](http://www.wartsila.com)

[gasinfo@wartsila.com](mailto:gasinfo@wartsila.com)

WÄRTSILÄ® is a registered trademark. Copyright © 2019 Wärtsilä Corporation. Specifications are subject to change without prior notice.

