

A WÄRTSILÄ COMPANY

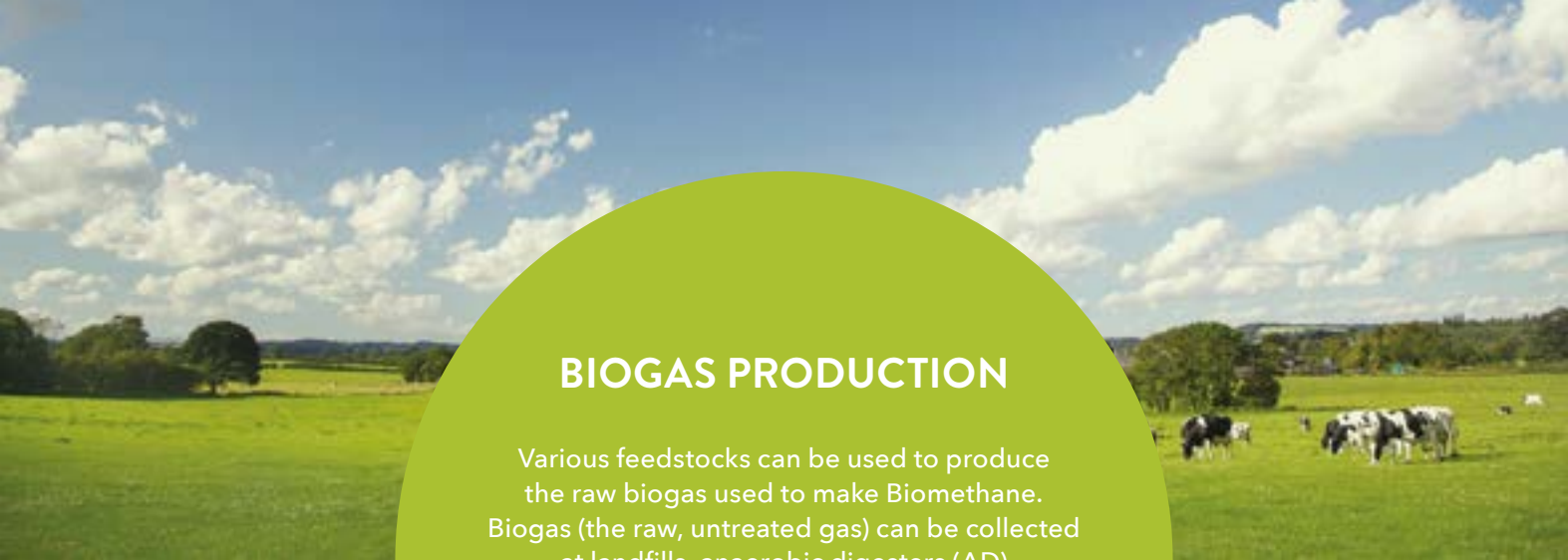
PUREGAS 
SOLUTIONS

RENEWABLE NATURAL GAS

FULLY INTEGRATED SOLUTIONS FOR BIOGAS UPGRADING



FUELLING
OUR FUTURE



BIOGAS PRODUCTION

Various feedstocks can be used to produce the raw biogas used to make Biomethane. Biogas (the raw, untreated gas) can be collected at landfills, anaerobic digesters (AD) at wastewater treatment plants, commercial food waste facilities, distilleries, and agricultural sites. The raw biogas is collected, conditioned, and upgraded to meet natural gas pipeline quality specifications, i.e. biomethane or RNG.



FULLY INTEGRATED SOLUTIONS FOR BIOGAS UPGRADING

WITH OVER 20 YEARS OF EXPERIENCE PUREGAS MANUFACTURES AND SUPPLIES BIOGAS UPGRADING SOLUTIONS. THE UNIQUE CAPURE UPGRADING PROCESS RECOVERS OVER 99.9% OF THE AVAILABLE METHANE FROM THE RAW BIOGAS, MAXIMISING RENEWABLE NATURAL GAS (RNG) YIELDS AND REVENUES WITH EXCEPTIONALLY LOW OPERATIONAL COSTS. PUREGAS PROVIDES FULLY INTEGRATED SOLUTIONS FOR BIOGAS UPGRADING AND HAVE OVER 30 PLANTS ALREADY OPERATING.

The CApure process recovers over 99.9% of the biomethane present in the raw biogas by separating the CO₂ from the biogas through a process of chemical adsorption. The selective organic solvents used in this process are so efficient that the end product can contain more than 99% methane.

Puregas Solutions deliver several options to maximise the revenue from biogas, ranging from upgrading to biomethane (Renewable Natural Gas) for grid injection, virtual gas pipelines, compression for bioCNG, through to liquefaction for bioLNG and associated fuelling infrastructure.

MAXIMIZING THE POTENTIAL FROM BIOGAS

GRID INJECTION

Biomethane which is classified as Renewable Natural Gas is that which is certified to meet pipeline quality. Despite the fact that there are no uniform international standards, propane and odorants can be added prior to injection to ensure compliance with local regulations.

BIOMETHANE AS A TRANSPORTATION FUEL

Puregas provides complete solutions to produce Biomethane as a low-carbon CNG alternative.

Biomethane can easily be compressed and used as a vehicle fuel. It has 70% less carbon impact than petrol or diesel, and most importantly zero particulate emissions. Switching to Biomethane is easy, requiring no additional capital investment for CNG or LNG ready fleets.



VIRTUAL GAS NETWORKS

In 2017, the latest ground breaking project from Puregas Solutions involved up to 2,000 Nm³/h of biogas from the anaerobic digestion of food waste upgraded to biomethane and further compressed to 250Bar. The Compressed Biomethane (CBM) is then fed into trailers capable of carrying up to 6,000m³ for transportation to remotely located Combined Heat and Power (CHP) plants. Here the electricity and heat generated is used to efficiently supply local homes and business.

For the first time, Biomethane is now playing an important role in providing flexible, cost effective, renewable energy to off grid customers tackling fuel poverty.

bioLNG

Puregas Solutions offer economic, small scale, turnkey biogas upgrading and liquefaction plants for the local production of bioLNG for transportation or vehicle fuelling.

Rather than liquefying natural gas from the grid, there is a strong economic and environmental argument for the use of biomethane, or to use a blend of natural gas and biomethane for the LNG production. The portion of renewable natural gas can be adjusted to make the blended product most competitive while still reducing carbon impact.

Four standard plants are available to produce six, ten, seventeen and twenty-five tons of bioLNG per day.



GREEN CO₂

Additional revenue can be generated by capturing the CO₂ from the biogas. Our system purifies, dehumidifies, and liquefies the CO₂. The resulting pure CO₂ can be used for industrial or food and beverage applications.



SERVICE & SUPPORT

Working in partnership with Wärtsilä, we offer local manufacturing, service, and support. Comprehensive service and optimisation programs. Remote monitoring and 24 hour support available. Experience and expertise at your service.

OUR GLOBAL NETWORK

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