



**BTS**

# Corporate Brochure





## BTS Biogas, an Italian company with 25 years' experience in the field of anaerobic digestion, provides reliable high-performance technological solutions for the biogas and biomethane market.

BTS Biogas, a pioneer in the anaerobic digestion industry, with over 250 plants created worldwide, has established itself at a global scale in the development, planning, construction, and maintenance of biogas and biomethane plants.

In 2019, the company was acquired by Bioenergy Devco LLC, a US company specialised in the development of anaerobic digestion facilities, with an important portfolio of projects in a market that is rapidly expanding.

The union of the two companies has a strategic value since it amplifies market presence, favours the development of new projects and consolidates the value and know-how of the Group.

Today, BTS Biogas employs in Europe over 100 people, distributed between the headquarters in Affi (Verona), the office in Bruneck (Bolzano), and its companies in France, the UK. In 2021 the company has established a new branch in the USA.

## SYNERGY & ENERGY



**BTS Biogas**

**BTS DevCo**



**5 offices**

IT - FR - UK - US



**25+**

Years of experience



**250+**

Plants in the world



**150+**

Assisted plants



**25.000 smq**

Warehouse and  
Logistics hub  
Laboratory

**METAN**lab

**200 smq**

Laboratory



**170.000+**

Analyses carried out  
per year

Anaerobic digestion plants valorise livestock effluents, energy crops, agro-industrial by products, and OFMSW (Organic Fraction of Municipal Solid Waste) to produce biogas, from which biomethane, as well as electrical and thermal energy, are obtained. The output of the process is digestate, a high-quality organic fertiliser that closes the loop in the circular economy.

## EPC PROJECT

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The core business of BTS Biogas is providing EPC plants (Engineering, Procurement, and Construction), customised to meet client specifications, from project development through to construction.

## DEVELOPMENT OF PROJECTS

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Thanks to its multidisciplinary **team of specialists** (biologists, agronomists, engineers, experts on regulations and legal aspects) BTS Biogas is able to **develop plants** starting from the research and enhancement of biomass, from the engineering of plants to obtaining permits.

## ENGINEERING AND CONSTRUCTION

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Characterised by high degrees of **efficiency** and **innovation**, BTS Biogas plants are designed according to **specific project needs**. The type of biomass to be used together with the need for **flexibility** and **reliability** of the plants guide the work of our engineers.

Thanks to a wide range of **cutting-edge technologies** for the pre and post treatment of biomass, the valorisation of biogas and the use of digestate, **BTS Biogas is able to provide tailor-made technical solutions**, which maximize production and consequently **plant profitability**.



# AFTER SALES ACTIVITIES



## ASSISTANCE SERVICES

The 24 h - 7/7 assistance services cover all operational areas of the plant

With BTS Biogas, customers can rely on a single **qualified interlocutor** to manage all aspects of the maintenance of their plants: **BIOLOGY, TECHNOLOGY** and **AUTOMATION**.

BTS Biogas provides complete support to plant operations that includes performance monitoring as well as innovative solutions to improve yields,

**intervening both on plants of its own construction and other technologies.**

The daily goal of the company is to ensure a **high level of plant reliability**, minimize the idle time and ensure maximum return on investment.

## Flexible and customised maintenance contracts, based on customer requirements, from single interventions to full O&M (Operations & Maintenance) management.



### BIOLOGICAL SUPPORT

BTS Biogas offers a complete **biological assistance service**, supporting clients in the **monitoring and management** of the anaerobic digestion process.

To maximise plant efficiency our **biologist and agronomist** provide expert and innovative solutions to optimise feedstock, stabilise fermentation processes, and prevent any potential inhibitions.



### ELECTROMECHANICAL SUPPORT

**Experienced technicians**, with many years in the biogas sector, and a wide range of spare parts in stock, guarantee prompt intervention to resolve any **electromechanical issues** in plants, whether they use **BTS Biogas technology** or systems from other manufactures.



### AUTOMATION SUPPORT

BTS Biogas has an in-house **automation department** that offers remote support and management for all plant components, from individual technologies to overall process control.

Our **control centre** is linked to plants both in Italy and abroad, enabling real-time monitoring, alarm resolution, and prompt response to any anomalies reported by the operator.

## KEY POINTS

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## INNOVATIVE TECHNOLOGIES AND PATENTS

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The combination of technical and biological expertise, together with extensive experience in plant management, has **enabled BTS Biogas to develop specialised technical solutions, some of which are patented and have become part of our plant standards.** The most significant include:

- **Service Box:** a technology for mixer maintenance without emptying the tank or gas release
- **Plug&Produce:** a fully tested plant control centre housed in a container, ready for immediate installation
- **PhenolTech:** a pre-treatment for facilities running 100% on olive pomace (patent pending).

## SPARE PARTS WAREHOUSE AND LOGISTICS CENTRE

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The **operational headquarters** in Affi (VR) includes a **25,000 sqm logistics centre**, equipped with a vast spare parts warehouse, key assets for delivering the best possible support to our clients.

## METAN<sup>lab</sup> THE FIRST BIOGAS LABORATORY IN ITALY

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**200 sqm of laboratory space**, equipped with state-of-the-art technology to conduct all necessary analyses for managing anaerobic digestion and maximising yields. This includes the development of optimal feedstock recipes and the use of **micronutrients**: this is **METANlab**.

Our laboratory also provides fundamental scientific support in the design of plants, **simulating and in continuous research into biogas production of new substrates**, of which there are no available literature data, or **complex recipes**, determining possible **inhibitions and/or synergistic effects** in the microbiological process.



# BTS DevCo: OUR PLANTS FOR BIOMETHANE PRODUCTION

In December 2022, **BTS DevCo** joined BTS Biogas. As a group company, it focuses on the development and direct management of its own plants.

**BTS DevCo** positions itself in the market as an investor and producer of sustainable energy, contributing to the energy transition with circular economy projects that generate energy from the valorisation of effluents and by-products.

By producing biomethane - a fuel derived from the natural process of anaerobic digestion-**BTS DevCo** helps reduce greenhouse gas emissions, as it is **carbon-neutral**.

More specifically, BTS Devo focuses on:

- **Develop, design, construct, and manage** greenfield and brownfield biomethane projects
- **Acquire project** for the construction of agricultural and OFMSW (Organic Fraction of Municipal Solid Waste) biomethane plants, whether already authorised or in the process of authorisation
- **Purchase biogas plants** currently configured for cogeneration to convert them to biomethane production
- **Participate in special purpose companies** for the construction and management of biomethane plants in partnership with institutional investors (investment funds, multi-utilities, etc.).



**BTS**

## INVESTMENTS in the biomethane market INVESTMENTS in the future

We develop projects,  
We buy plants



**Project  
development**



**Participation in special-  
purpose vehicle (SPV)**



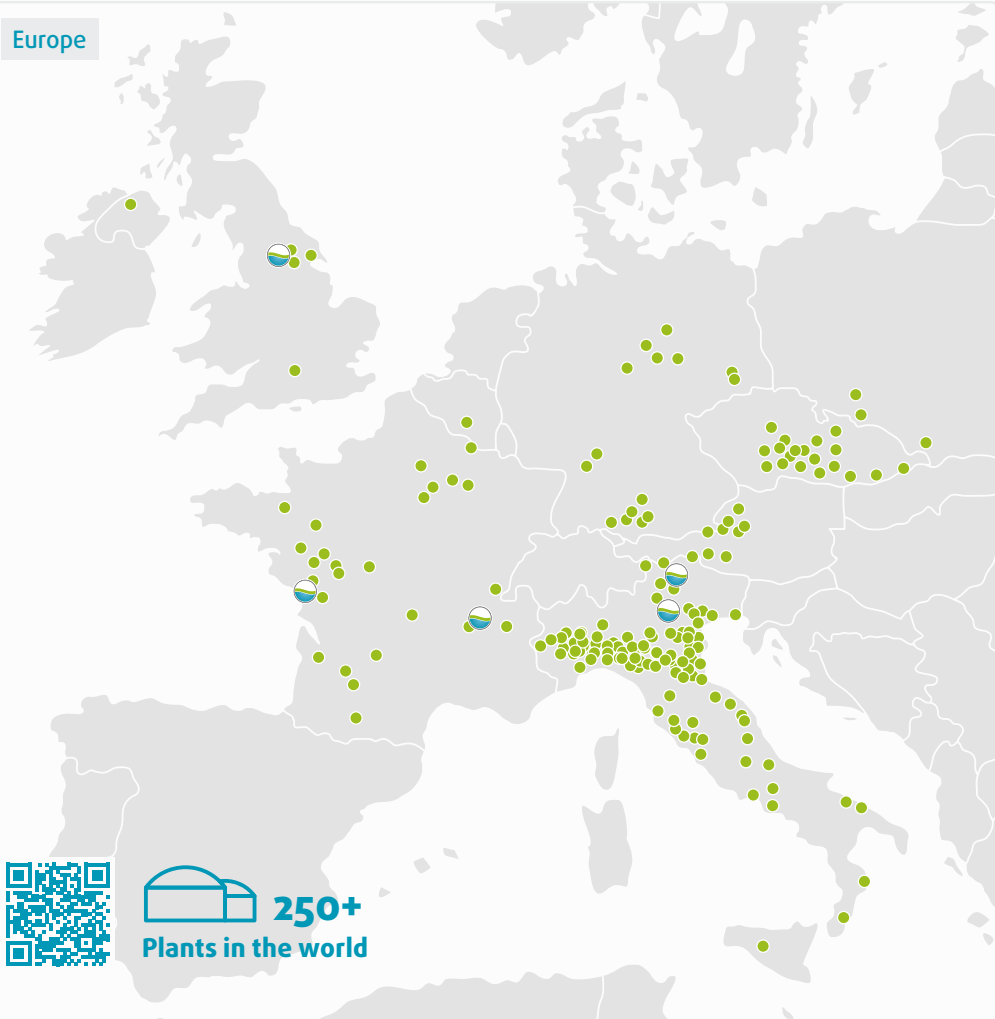
**Acquisition of plants and  
biomethane revamping**



**Strategic  
partnership**

# TECHNOLOGIES | BIOMETHANE REVAMPING EPC | GENERAL CONTRACTOR | TURN-KEY PLANTS

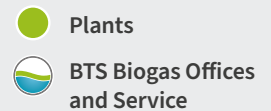
Europe



Americas



Japan



# AGROENERGY (Gruppo Agresti)

Plant size: 500 kWel



## FUEL SUPPLY

100% with olive pomace



## DESCRIPTION

This plant's uniqueness lies in being **one of the first in Europe to be fully powered by the organic residues from olive milling**. This highlights its capability to manage the anaerobic fermentation of olive pomace. The plant's efficiency and reliability are guaranteed by PhenolTech, an innovative technology that **BTS Biogas is in the process of patenting**. This technology effectively neutralises the negative impacts on anaerobic digestion from certain natural substances, such as the polyphenols present in olive pomace.



## BIOGAS USE

Production of electrical and thermal energy



## DIGESTATE USE

It is part of the vegetable cycle of olive production helping to improve quality and quantity



# oudon BIOGAZ

Plant size: 635 Sm<sup>3</sup>/h biomethane



## FUEL SUPPLY

By-products from agricultural activities such as manure and straw



## DESCRIZIONE

Oudon Biogaz's objective is to sustainably utilise over **140,000 tonnes of effluents produced by its 70 farms**, generating 5.5 million Sm<sup>3</sup> of biomethane annually, which is equivalent to the energy needs of **9,000 households in the Craon area**. The plant can also use **cereal waste and by-products from the local agro-industry**. The biomethane produced is fed into the national grid, preventing the release of around **14,000 tonnes of CO<sub>2</sub>**, equivalent to the

greenhouse gas emissions from 5,500 cars (driving an average of 20,000 km per year). The digestate is applied to **7,700 hectares of farmland** managed by Oudon Biogaz's farms, reducing the need for chemical fertilisers. The Oudon Biogaz plant not only accounts for **25% of biogas production in the Mayenne Department** but also creates **10 jobs**.



### BIOGAS USE

Putting it into the grid



### DIGESTATE USE

Valorisation as an organic fertilizer

# SOUTH MILFORD

Plant size: 500 kWel + 500 Sm<sup>3</sup>/h biomethane



## FUEL SUPPLY

100% organic waste and industrial food processing waste



## DESCRIPTION

The plant is designed to **receive 60.000 tons per year of food waste and clippings**. After the pre-treatment modules and the fermenters for anaerobic digestion, a membrane purification system was engineered and developed: the latter allows the transformation of biogas into biomethane and to introduce it directly into the national gas grid. This allows the valorisation of the biogas produced with maximum efficiency and reduces CO<sub>2</sub> emissions to a minimum.

## BIOGAS USE



Electricity production

Upgrading and production of biomethane for direct supply to the grid

## VALORISATION OF THERMAL ENERGY



Heating of fermentation tanks

Upgrading unit and pasteurization system

## DIGESTATE USE



Production of 50.000 tonnes per year of pasteurized liquid fertilizer



# MARYLAND BIOENERGY CENTER

Plant size: 1.100 kWel + 1.105 Sm<sup>3</sup>/h biomethane



## FUEL SUPPLY

125.000 t/y of food waste, FOG and other organic waste



## DESCRIPTION

The plant is located at the Maryland Food Center, home to one of the largest industrial and logistical areas of the agri-food sector in the region and is able to process up to **125.000 tonnes per year of organic by-products (waste from fruit processing and vegetables, meat, baked goods, oil and fats, etc.) and wastewater from the food industry.**

The plant produces a **quantity of biomethane** equivalent to the **needs of 4.800 homes.**



## BIOGAS USE

Production of biomethane for supply to the grid and automotive fuel.



## VALORISATION OF THERMAL ENERGY

The thermal energy produced is used to heat digesters and the surplus sold to third parties



## DIGESTATE USE

Nitrogen recovery and water purification thanks to a semipermeable membrane technology, partial reuse of purified water in industrial processes



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