

BIOMETHANE



Innovation driving sustainable infrastructure for the circular energy future.

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OUR DNA

Techbau presents itself as a unique interlocutor and General Contractor, undertaking projects in the various fields of civil engineering and infrastructure. **Techbau** works in the residential, tertiary, industrial, logistics, data center and renewable energy sectors, complying with the highest quality and safety standards.

Founded in 1997, over the years **Techbau** has grown, constantly enlarging its organisation, extending its expertise and employing an ever-increasing number of highly **skilled professionals**.

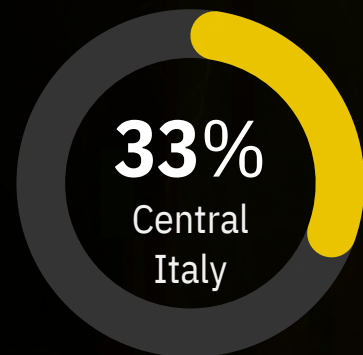
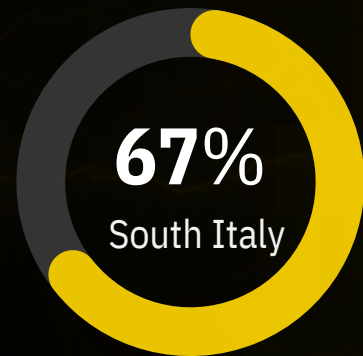
A common aspiration, a shared intent and a very clear objective: to assist the customer in the entire process of the design, construction and **realisation of the building**, through complete management of planning, administration, construction and authorisation aspects.



Techbau is official partner CIB
CONSORZIO ITALIANO BIOGAS



OUR PRESENCE





PRODUCTION PLANTS



Biomethane plants

22



Digesters

66



Composting plants

16



Biomethane products

500 Smc/h



Fertilizers produced

110 kton/
anno

WE HAVE DESIGNED AND BUILT AN INTEGRATED SYSTEM TO PRODUCE BIOMETHANE AND NATURAL FERTILIZERS, ENHANCING LOCAL RESOURCES AND GENERATING TRULY SUSTAINABLE ENERGY.

With 22 biomethane plants and 16 composting facilities, we ensure up to an **80% reduction in emissions** and the **efficient management of 180.9 kton/year of agricultural by-products**.

The system produces over 110 kton/year of natural fertilizers, **combining innovation, sustainability**, and the promotion of local supply chains.

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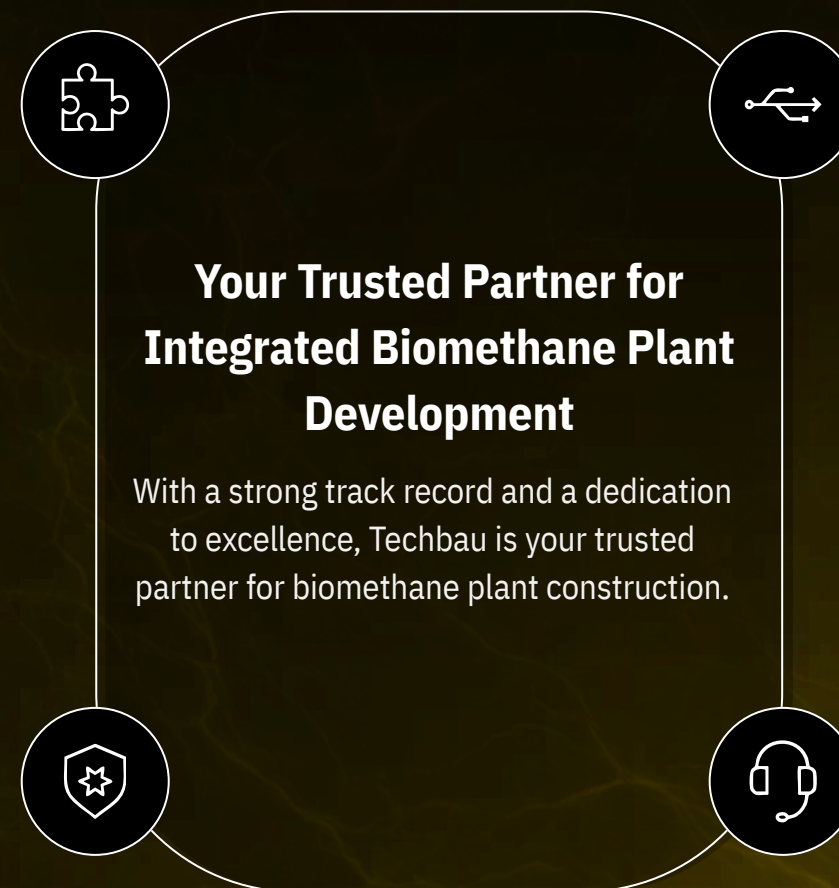
DEVELOPMENT & EPC

Custom Plant Design

We specialize in the design and construction of custom biomethane plants, fully adapted to the specific needs of your project. From concept to commissioning, we transform your vision into an efficient, reliable, and state-of-the-art facility.

Project Expertise

Our team applies a collaborative and structured workflow, ensuring that every phase — from preliminary studies to plant start-up — is carefully evaluated, optimized, and executed with precision.



Quality & Technology

Quality, safety, and efficiency are at the heart of our methodology. We combine advanced technologies with industry best practices to deliver systems that guarantee high performance, sustainability, and long-term durability.

Integrated Services

We manage the entire process:

- Site selection & analysis (if required)
- Planning & engineering
- Project & construction management
- Plant commissioning & first gas



COMMISSIONING

OUR COMMISSIONING DOCUMENTATION COMPILES ALL ACTIVITIES INTO A DETAILED REPORT PROVIDED TO THE CLIENT

Our commissioning process ensures seamless integration and maximum performance of **biomethane plants**.

During construction, the complexity and uncertainty of subsystems — anaerobic digestion, upgrading, cogeneration, wastewater treatment, electrical and control systems — makes rigorous verification and testing essential.

Commissioning validates the plant design and construction as a fully integrated system, ensuring reliability, efficiency, and operational continuity.

We guide the client throughout this process, collecting and organizing all activities into detailed, transparent documentation.

Our approach begins with careful planning, defining project objectives, and assembling a highly qualified team dedicated to successful start-up and performance testing.

Phase 01



Planning & Preparation

Phase 02



Factory Witness Testing (FWT)

Phase 03



Installation & Site Acceptance Inspection (SAI)

Phase 04



Pre-Commissioning & Verification

Phase 05



Commissioning and operational start-up
(first gas)



Transforming Local Resources into Sustainable Energy



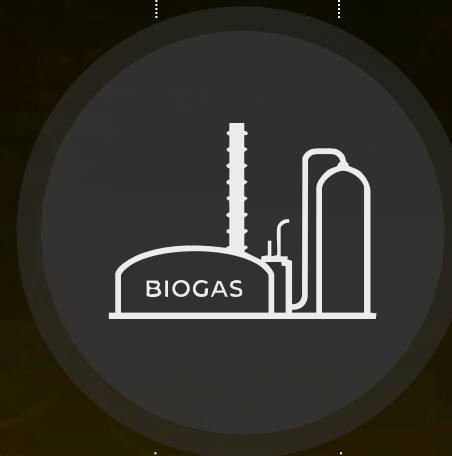
Biomethane

Agricultural waste and manure undergo anaerobic digestion, to be converted into biomethane, a renewable alternative fuel

CO₂

Biogenic CO₂

CO₂ captured from biogas is processed and sold as biogenic CO₂, further enabling the decarbonization of industries



Green Certificates



Green certificates verify biomethane production from renewable sources, promoting sustainability and clean energy

Biofertilizer

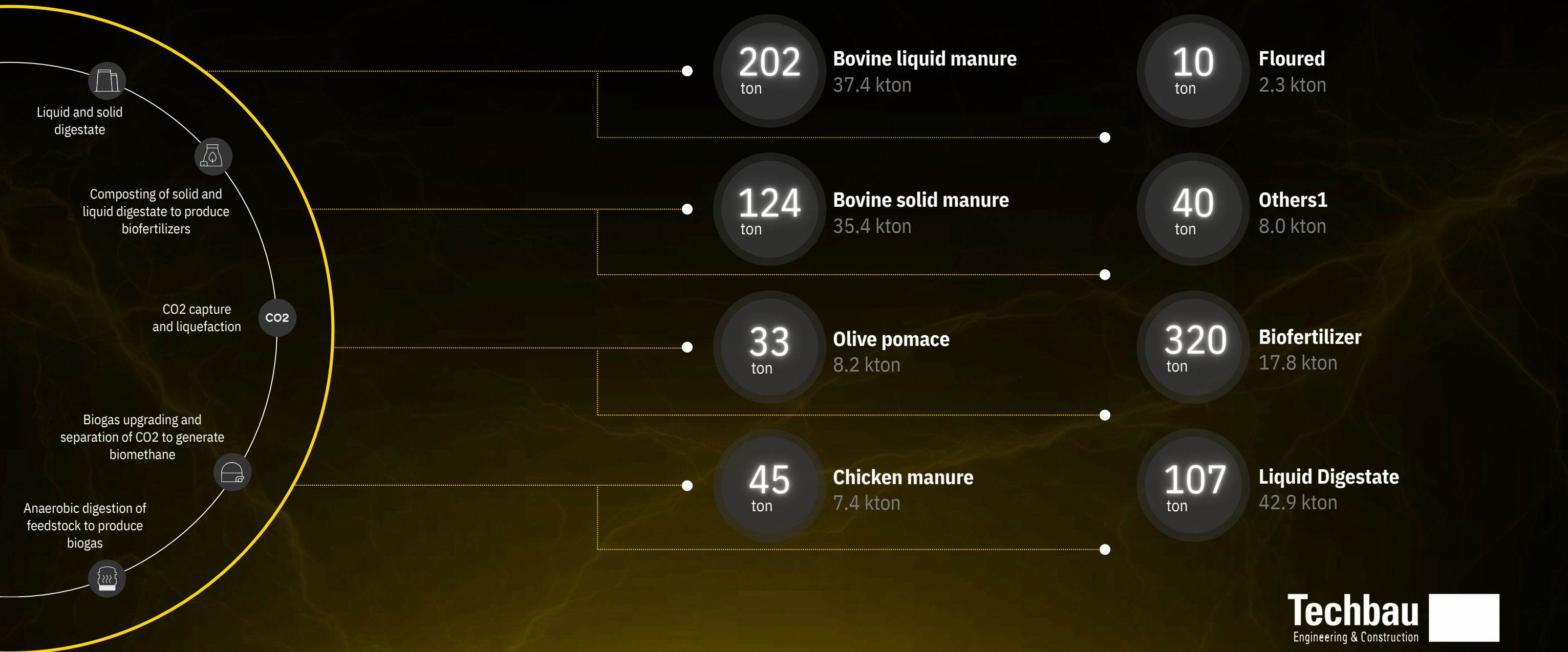


Digestate is enhanced through composting unit, to be sold as soil improver and biofertilizer that boost soil health and promote sustainable crop yield





Production scheme for one standard plant





CONSTRUCTION



PROJECT MANAGEMENT

Our **project managers** (certified **PMP** or **IPMA**) are the driving force behind every biomethane plant project, overseeing each phase of the process to ensure timelines are met, costs are controlled, and **quality standards** are impeccable. They are supported by a team of **dedicated site managers** and **supervisors**, ensuring smooth progress of works in **total safety**, while keeping you continuously updated on project developments.



TECHNICAL TEAM

Our **subcontractors** handle the **operational construction** of the plant. Each team is carefully selected for **specialized expertise**, including civil works, technological components, piping and welding, mechanical, electrical, instrumentation systems, biogas treatment, fire protection, and security systems. **Techbau** strongly promotes **prefabrication strategies** to optimize construction, **improve quality, enhance EHS conditions**, reduce installation time, and minimize critical on-site activities.



HEALTH & SAFETY

Our **Health & Safety Officers** ensure that all activities are carried out **safely** and in full compliance with current occupational **health and safety regulations**. They conduct **regular site inspections**, **identify potential risks**, and define protocols and operational procedures aimed at **minimizing** the likelihood of **accidents** or injuries, **ensuring a safe** working environment for all personnel involved in the construction of the biomethane plant.



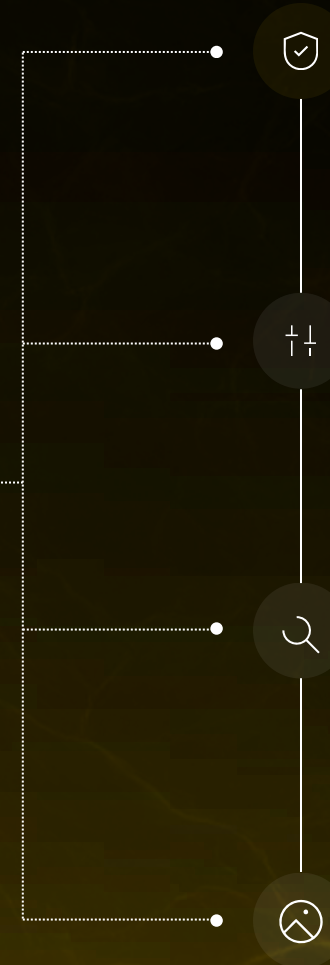
QUALITY CONTROL

Our **commitment to quality**, innovation, and excellence drives the development of reliable, sustainable, and resilient construction solutions. **Techbau's Quality Control and Assurance Inspectors** continuously monitor materials, supplies, and workmanship throughout construction, ensuring each phase meets **technical standards**. This rigorous approach delivers fully tested, operational biomethane plants with high performance and **long-term reliability**.

ENGINEERING

[About us](#)[Projects](#)[Contacts](#)

DESIGN & ENGINEERING ORGANIZATION



DESIGN VALIDATION

Our engineers ensure that every aspect of your biomethane plant design is robust, efficient, and sustainable.

TECHNICAL TEAM

Our engineering team, specialized in RIBA WS4–WS6, delivers reliable and innovative solutions for residences. From RIBA WS0 to WS3, we manage every phase of the project.

DISCOVER EXPERTISE

Our engineers boast ATD Uptime Institute Certification and are Chartered Members of Italian Design Associations.

HOW WE DESIGN

Our commitment to excellence is reflected in our adherence to ANSI/TIA-942 and Uptime Institute standards, ensuring that every facility we build is equipped to meet the demands of today's digital landscape.



GRID INJECTION



SNAM Grid Connection

Biomethane plants built by Techbau can be directly connected to the national gas network via SNAM connection, ensuring maximum integration with existing infrastructure and continuity of supply.



In both cases, Techbau manages the technical connections and safety checks to ensure full compliance with current regulations.



Alternative Supply

When a grid connection is not immediately available, it is possible to use supply via gas trailers, a flexible solution that allows storage and transport of biomethane to the point of use, ensuring continuous operation and process continuity.





BIM PDR74:2019

Techbau offers a highly specialized team in project management. We put customers at the center of the project in order to build properties that can meet and exceed the expected requirements with a common thread: apply technologies and the best standards of materials, construction philosophies, **NZEB** applications and highly efficient technological systems to guarantee an eco-sustainable real estate development.

Techbau is **PDR74:2019 Bureau Veritas** certified, thanks to a 360 ° integrated BIM design, optimize all development processes e realization.

Techbau is committed to utilize Building Information Modelling (BIM) tools to support the delivery and management of all its outstanding projects **Techbau's** goal is to deliver higher value in Health, Safety, Quality, Timeliness, Cost, and to maximize building performances during operations.





QUALITY ASSURANCE

TECHBAU STRONGLY BELIEVE THATS A FIRM QUALITY SYSTEM IS THE BASE TO IMPROVE THE QUALITY OUTCOME OF DELIVERABLES.

Quality principles are in our **DNA**, because we are passionate about:

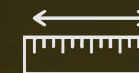
The Quality System is at the core of our continuously improvement agenda to innovate our know-how while effectively reducing operational risks, costs and maximizing our clients return on investment.



Listening to our clients' and all stakeholders' needs.



Operating via lean and agile processes.



Measuring our performance to continuously excel and generate value.





HSE

THE MANAGEMENT SYSTEM IS DEFINED, DOCUMENTED, IMPLEMENTED AND KEPT CONTINUALLY UP TO DATE TO ENSURE ITS EFFICACY AND ADEQUACY WITH REGARD TO THE CORPORATE SAFETY/ENVIRONMENT OBJECTIVES AND COMPLIANCE WITH THE ISO 45001:2018 AND ISO 14001:2015 STANDARDS.

The protection of safety, the environment and occupational health are an integral part of Techbau's operations. Techbau is aware of the importance of environmental and safety issues, both within the construction industry and for the community as a whole. **Techbau** is actively committed to complying with all relevant environmental and safety legislation, with the aim of continually improving its performances through appropriate programmes, controls, resource procurement and training of the workforce.

The company is committed to working to monitor and continually improve **safety and environment performances** through the application of a management system (SEMS), which sets out the procedures for defining the responsibilities, procedures, processes and resources within the company's organisation for the realisation of its corporate prevention policy, in accordance with current health, **safety and environment regulations**.





CARBON NEUTRALITY



Techbau has successfully implemented the ILFI certification procedure, the world's first **certified Zero Carbon standard**.

The prerogatives of our projects are: **energy efficiency, implementation of renewable resources and reduction of carbon emissions.**

Our projects have always followed the major international protocols for the protection of the environment, but we do not stop believing in the future by targeting the directives from **the Paris Agreement on Climate Change of 4 November 2016, and the EU Environmental Taxonomy Introduced by REGULATION (EU) 2020/852.**

As provided for in the agreement, the EU presented its long-term strategy for reducing emissions and its updated climate plans before the end of 2020, committing to reducing its emissions by at least 55% by 2030 compared to 1990 levels. **The EU will achieve climate neutrality by 2050.**





ESG

Techbu adheres to the top international environmental certification mechanisms such as **USGBC LEED** and **BREEAM**, providing LEED AP, BREEAM Assessors, Energy Managers and SQE Qualified Renewable Energy and Environment Engineers from within its organisation. So not energy saving alone but also water saving, emissions reduction and a focus on the site and its potentials and peculiarities. **Techbau** is also very aware of the issues of reducing land use, increasing comfort for occupants and raising the concepts of recycling and recyclability with regard to the choice of building materials to extremes.

Techbau adopts tools such as **LIFECYCLE ASSESSMENT, CARBON FOOTPRINT ANALYSIS** and landscaping for compensation and redevelopment purposes.



USGBC
MEMBER

BREEAM®



HIGHLIGHTS

TRACK RECORD



4,750,654 Smc/y

BioM Smc production

23,245 Ton/y

Bio fertiliser production

6,375 Ton/y

Production CO₂

105,000 Ton/y

Biomass input

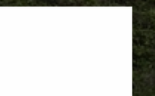
Biomethane

N15 - Dragoni

Province of Caserta | Italy

The N15 – Dragoni project, located in the **Province of Caserta**, produces **4,750,654 Sm³/year of biomethane** from **105,000 tons/year of biomass**. The process also generates **23,245 Sm³/year of biofertilizer** and **6,375 tons/year of biogenic CO₂**, contributing to the energy transition and promoting a **circular economy model**.

[View more](#)





4,566,234 Smc/y

BioM Smc production

17,614 Ton/y

Bio fertiliser production

6,375 Ton/y

Production CO₂

100,500 Ton/y

Biomass input

Biomethane

N4 - Terracina

Province of Latina | Italy

The N4 – Terracina project, located in the Province of Latina, produces 4,566,234 Sm³/year of biomethane from 100,500 tons/year of biomass. The process also generates 17,614 Sm³/year of biofertilizer and 6,375 tons/year of biogenic CO₂, contributing to the energy transition and promoting a circular economy model.

[View more](#)





4,610,037 Smc/y

BioM Smc production

19,078 Ton/y

Bio fertiliser production

6,375 Ton/y

Production CO₂

103,000 Ton/y

Biomass input

Biomethane

N13 - Pignataro Maggiore 2

Province of Caserta | Italy

The **N13 – Pignataro Maggiore 2** project, located in the Province of Caserta, produces 4,610,037 Sm³/year of biomethane from **103,000 tons/year of biomass**. The process also generates **19,078 Sm³/year of biofertilizer** and **6,375 tons/year of biogenic CO₂**, contributing to the energy transition and the **circular economy**.

[View more](#)





4,660,135 Smc/y

BioM Smc production

19,560 Ton/y

Bio fertiliser production

6,375 Ton/y

Production CO₂

102,000 Ton/y

Biomass input

Biomethane

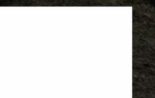
N5 - Pietravairano

Province of Caserta | Italy

The **N5 – Pietravairano** project, located in the **Province of Caserta**, is a high-efficiency biomethane production plant from biomass. The plant produces **4,660,135 Sm³/year** of biomethane, utilizing 102,000 tons/year of biomass as input.

The process also generates **19,560 Sm³/year** of biofertilizer and **6,375 tons/year** of biogenic CO₂, contributing to the energy transition and supporting the development of a **circular economy model**.

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4,531,327 Smc/y

BioM Smc production

17,831 Ton/y

Bio fertiliser production

6,375 Ton/y

Production CO₂

95,000 Ton/y

Biomass input

Biomethane

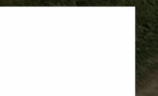
N1 - Sessa Aurunca 1

Province of Caserta | Italy

The **N1 – Sessa Aurunca 1** project, located in the **Province of Caserta**, is a high-efficiency biomethane production plant from biomass. The plant produces 4,531,327 Sm³/year of biomethane, **utilizing 95,000 tons/year of biomass** as input.

The process also generates **17,831 Sm³/year of biofertilizer** and 6,375 tons/year of biogenic CO₂, contributing to the energy transition and supporting the development of a circular economy model.

[View more](#)





4,531,327 Smc/y

BioM Smc production

19,200 Ton/y

Bio fertiliser production

6,375 Ton/y

Production CO₂

95,000 Ton/y

Biomass input

Biomethane

N8 - Sessa Aurunca 2

Province of Caserta | Italy

The **N8 – Sessa Aurunca 2** project, located in the **Province of Caserta**, is a high-efficiency **biomethane production plant** from biomass. The plant produces 4,531,327 Sm³/year of biomethane, utilizing 95,000 tons/year of biomass as input.

The process also generates 19,200 Sm³/year of biofertilizer and 6,375 tons/year of biogenic CO₂, contributing to the energy transition and supporting the development of a circular **economy model**.

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4,633,812 Smc/y

BioM Smc production

18,804 Ton/y

Bio fertiliser production

6,375 Ton/y

Production CO₂

98,800 Ton/y

Biomass input

Biomethane

N14 - Pontinia

Province of Latina | Italy

The **N14 – Pontinia** project, located in the **Province of Latina**, is a high-efficiency biomethane production plant from biomass. The plant produces 4,633,812 Sm³/year of biomethane, utilizing 98,800 tons/year of biomass as input.

The process also generates 18,804 Sm³/year of biofertilizer and 6,375 tons/year of biogenic CO₂, contributing to the energy transition and supporting the **development of a circular economy model**.

[View more](#)





5,143,684 Smc/y

BioM Smc production

16,785 Ton/y

Bio fertiliser production

6,375 Ton/y

Production CO₂

99,500 Ton/y

Biomass input

Biomethane

N19 - Velletri 2

Province of Rome | Italy

The **N19 - Velletri 2** project, located in the **Province of Rome**, is a high-efficiency biomethane production plant from biomass. The plant produces 5,143,684 Sm³/year of biomethane, along with 16,785 Sm³/year of biofertilizer and 6,375 tons/year of biogenic CO₂.

By utilizing biomass of agricultural origin, the project contributes to the energy transition, the valorization of by-products, and the development of a **circular economy** model in the region.

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Techbau S.p.A.

Head office

Via del Lago, 57
28053 Castelletto Sopra Ticino (NO) . Italy
Ph +39 0323 589500
info@techbau.it
www.techbau.it

Rome Office

Via Emanuele Gianturco, 6
00196 Roma (RM) . Italy
Ph +39 06 92044282

Techbau S.p.A.

Registered office

Corso di Porta Nuova 3/A
20121 Milan / Italy
Cap. Soc. € 10.050.000,00 int. versato
Reg. Imprese Milano, C.F., V.A.T. IT
06336690968
REA MI-1922561