



COMPANY PROFILE





Energy is a matter of culture.

Producing energy **efficiently, sustainably and renewably** is a matter of culture.

Today, it is possible to **reduce CO2** emissions thanks to a proven technology designed to meet future challenges: **cogeneration**.

Cogeneration is highly efficient and can be powered by **renewable fuels**.

Integrating cogeneration, photovoltaic systems and heat pumps with the best technologies on the market is our contribution to leaving a better world for our children. Let's do it together.

YOUR CHILD DESERVES
A BETTER WORLD

*Choose
cogeneration*

mtm
energia 



About us

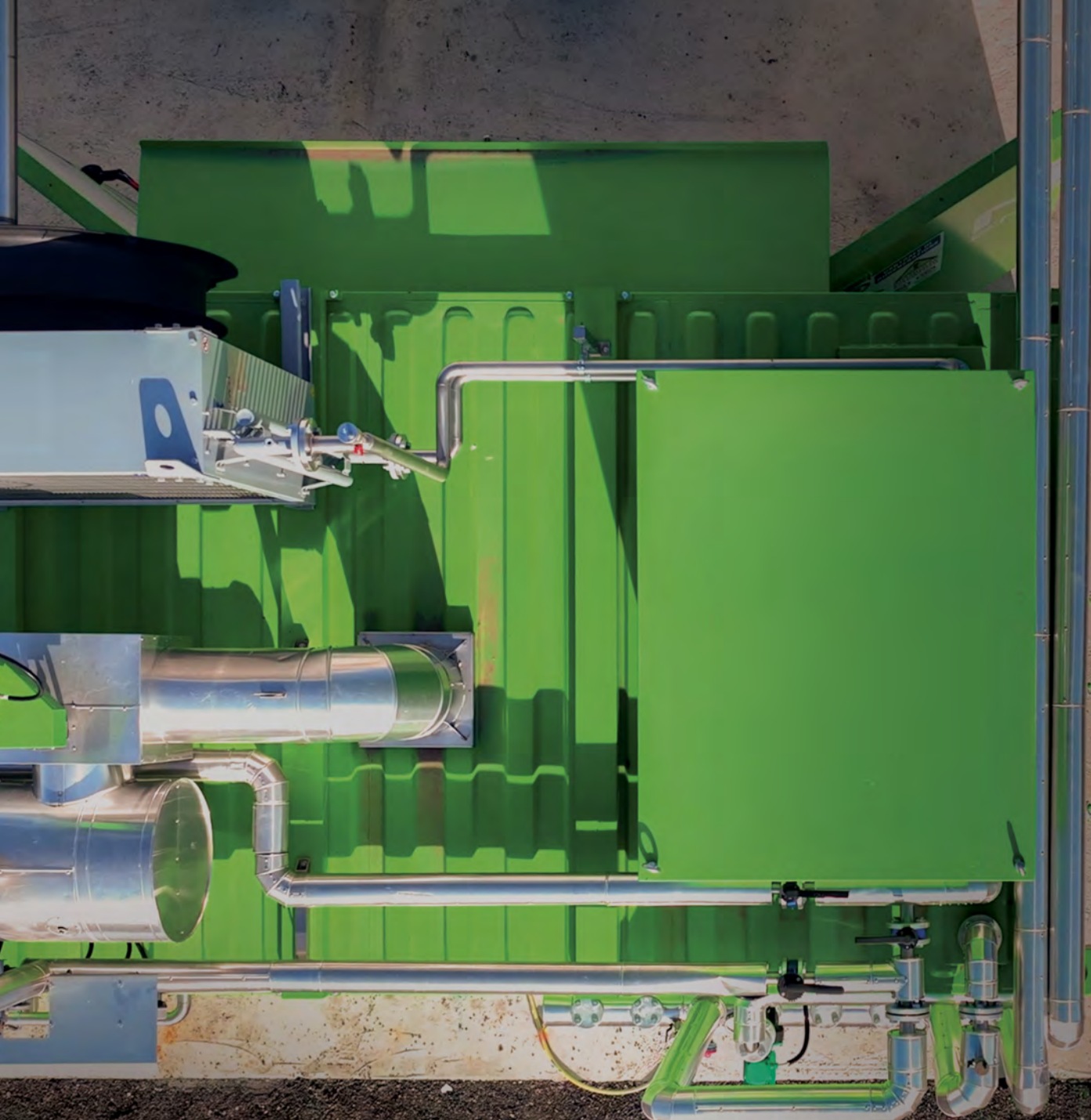
We are a multidisciplinary company driven by a team of people who believe they can do their part to **create a better world.**

Founded and developed as a **team of specialists** in the design, construction and maintenance of high-efficiency cogeneration and trigeneration plants, we are now manufacturers of highly customised energy production plants **tailored to our customers' needs.**

What we do

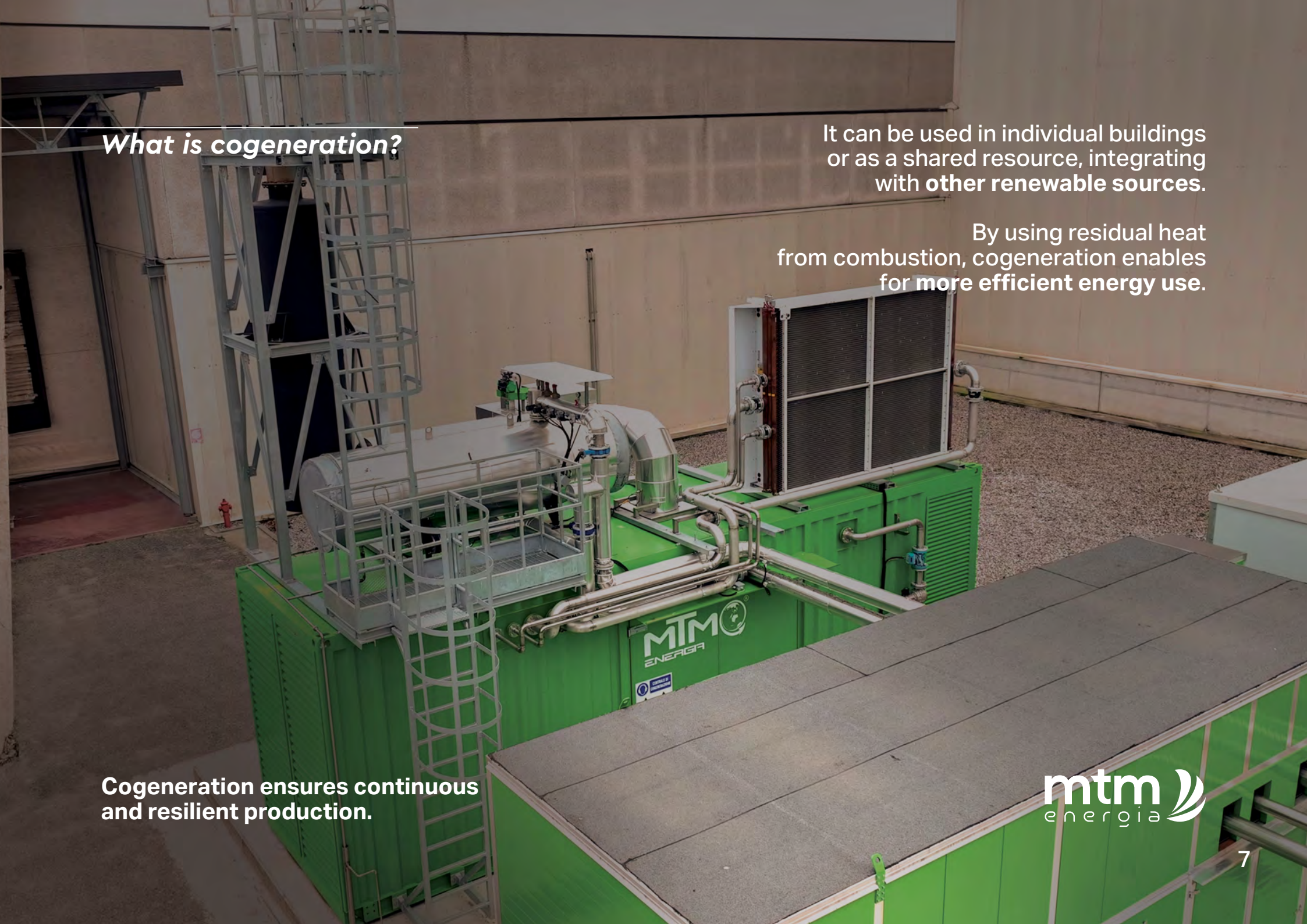
In addition to cogeneration, we integrate the most advanced technologies available for distributed energy generation from renewable or traditional sources with **maximum efficiency** into our projects.



A photograph of a green industrial cogeneration unit. The unit is a large, rectangular, green-painted metal structure with a corrugated top section. It is connected to a complex network of silver-colored metal pipes and valves. The pipes run horizontally and vertically, with some featuring hand-operated valves. The unit is situated outdoors on a dark, gravelly surface next to a light-colored concrete wall.

What is cogeneration?

Cogeneration is a technology that allows electricity and heat to be produced simultaneously with an **efficiency of over 90%**, reducing waste and emissions compared to traditional systems.



What is cogeneration?

It can be used in individual buildings
or as a shared resource, integrating
with **other renewable sources.**

By using residual heat
from combustion, cogeneration enables
for **more efficient energy use.**

**Cogeneration ensures continuous
and resilient production.**

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The milestones of our history

2009
Year of establishment and obtaining
the first certification to operate on MAN engines

2010
Production of the first biogas,
vegetable oil and natural gas cogenerators

2014
CQOP SOA certification.
Category OG9 for public works

2016
Achievement of more
than 10 MW installed

2018
First biogas plant built abroad
and certification obtained
to operate Jenbacher engines

2017
Relocation to the new,
larger headquarters
in Magnago (Milan)

2019
Construction of the first
1.5 MW natural gas plant
producing five forms of energy
(electricity, hot water,
chilled water, diathermic oil,
superheated water)

2020
Certification to work
on MWM engines

2022
Realisation of the first integrated
systems with complementary
technologies

2024
Achievement of the milestone
of more than 100 plants built

Our products and services

Energy efficiency

Renewable sources

Integration of complementary
technologies

Consultancy and service

Customer Service

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Energy efficiency
Systems that reduce waste

Micro-cogeneration, cogeneration and trigeneration plants powered by natural gas or LPG enable companies and businesses in a wide range of sectors to achieve significant energy savings while respecting the environment.

Energy efficiency

Micro-cogeneration

HOME plant in Milan
2 x 20 kWe electrical power
2 x 41 kWt thermal power



HOME SERIES

Sizes

6/9/16/20 kWe

Distinctive features

- **Quiet:** 50 dB(A) @ 1 m
- **Compact:** HOME6/9 dimensions 1200 x 600 x H 1100
HOME16/20 dimensions 1400 x 700 x H 1240
- **Versatile:** internal/external plug and play installation kit,
inlet water temperature allowed from 25°C to 72°C
to adapt to different operating conditions,
adjustable supports for installation on any surface
- **Complete:** flue gas condenser, power factor correction, SPI,
supervision, pumps, heat exchangers, catalyst
- **Efficient:** efficiency > 95%, water cooling
- **Low emissions:** <50 NOx; <50 CO mg/Nm³
for installation in critical areas
- **Certified:** CEI 0-16, CEI 0-21, EPREL, CE
- **Durable and affordable:** 1 service per year or every 3000/6000 hours
Motor life 60,000 hours

Typical applications

Hotels, swimming pools, nursing homes,
sports centres, small industries,
offices, apartment buildings

MTM ENERGIA manufactures, customises and installs its own turnkey cogeneration plants.

All systems are sized and designed according to the specific requirements of each customer, with criteria of **quality, simplicity and efficiency**.

CH4 SERIES

Sizes

Applications from 30 to 2,000 kWe powered by natural gas or LPG

Distinctive features

All systems are designed and engineered in-house to order, with particular attention to the characteristics of the specific application and following the principles of:

- **Quality**: : piping entirely in stainless steel, MOTORTECH motor controls, high-level vendor list
- **Ease of management**: monitoring through dedicated HMI and cloud-based supervision of energy data
- **Reliability and expertise**: more than 15 years of experience in the sector and more than 100 systems installed
- **Ease of safe maintenance**: particular attention to spaces, openings and lifting equipment
- **Flexibility**: possibility of using all engines available on the market, such as MAN, JENBACHER, MWM, TEDOM, etc.



*Natural gas plant in Grandate (CO)
500 kWe electrical power
565 kWt thermal power*

Energy efficiency

Trigeneration

In trigeneration plants, through the use of absorption refrigerators, **heat can also be used to produce chilled water at various temperatures**, which is useful in industrial processes and for cooling buildings in summer, as an **alternative to traditional chillers**.

*Trigeneration plant in Livorno
1.2 MWe electrical power of cogeneration engine
-8°C set point of return water temperature*

Trigeneration plants therefore generate **electricity, heat and chilled water with maximum efficiency**.

Typical applications

Food, textile, manufacturing, chemical, logistics and cold chain industries, large apartment buildings, large accommodation facilities, hospitals, nursing homes, energy-intensive industries and facilities in general.



Renewable sources *New energies*

Energy from renewable sources
is a fundamental resource of
the present and an opportunity
for a better future.

MTM Energia promotes energy
self-production through **biogas**
cogeneration solutions using livestock
waste, wastewater treatment and
landfill gas, and builds **Upgrading**
plants for producing biomethane.

WE TURN WASTE INTO A RESOURCE



Renewable sources
New energies

MINI-BIO SERIES

Sizes

MINI-BIO: 25/37/49/64/84/100/107/124 kWe
powered by biogas

Distinctive features

- **High product standardisation**, making it compact and complete
- **Cost-effectiveness**: technically and economically optimised solution
- **Integrated biology management**: single PLC, single CHP and biology control and supervision system
- **Quality**: aluminium containment box, stainless steel piping, MOTORTECH motor controls, MAN and TEDOM motors
- **Ease of management**: remote carburetion control, simple and economical maintenance
- **Reliability**: average history of 8640 h/year of operation out of 8760 h available

Typical applications

Farms, landfills, treatment plants

Our small-scale
cogenerators integrate
biological management,
optimising space and costs.

BIO2 SERIES

Sizes

From 150 to 1,000 kWe

Distinctive features

- **Quality:** coating for corrosive environments, piping entirely in stainless steel, MOTORTECH engine controls, high-level vendor list
- **Remote management:** remote carburetion control, monitoring via dedicated HMI and cloud supervision of energy data
- **Easy and safe maintenance:** attention to spaces, openings and lifting equipment
- **Flexibility:** possibility of using all engines available on the market, such as MAN, JENBACHER, MWM, TEDOM, etc.
- **Customisation:** our cogenerators can be manufactured in versions with integrated MT section or can include accessories such as filtration systems, torch, integrated boiler, hot water distribution, etc.

Typical applications

Farms, biomethane plants, food companies, landfills and sewage treatment plants



Biomethane Upgrading

Sizes

From 50 to 1,000 Smc/h

Distinctive features

- **High methane recovery efficiency** (>99.6%).
- **Low operating and maintenance costs.**
- **No chemical reagents**, ensuring a more sustainable process.
- **Modular structure** that facilitates installation and expansion, allowing adaptation to future flow rate variations.

Typical applications
Farms, landfills and treatment plants

Retrofitting and derating *Biogas cogenerators*

MTM Energia offers **retrofitting and derating** solutions for existing cogeneration plants in the agricultural sector.

These solutions allow farmers who own biogas cogeneration plants and want to switch to **biomethane production** to enhance the value of their plants.

These measures are suitable for extending the service life of existing systems and maximising **return on investment**.

Renewable sources

Syngas and vegetable oil

Syngas plants

For several years now, cogeneration plants fuelled by gas derived from wood biomass have been built and developed.

Plants that use this particular gas, rich in hydrogen and carbon monoxide and low in methane, must be studied on a case-by-case basis.

Vegetable oil systems

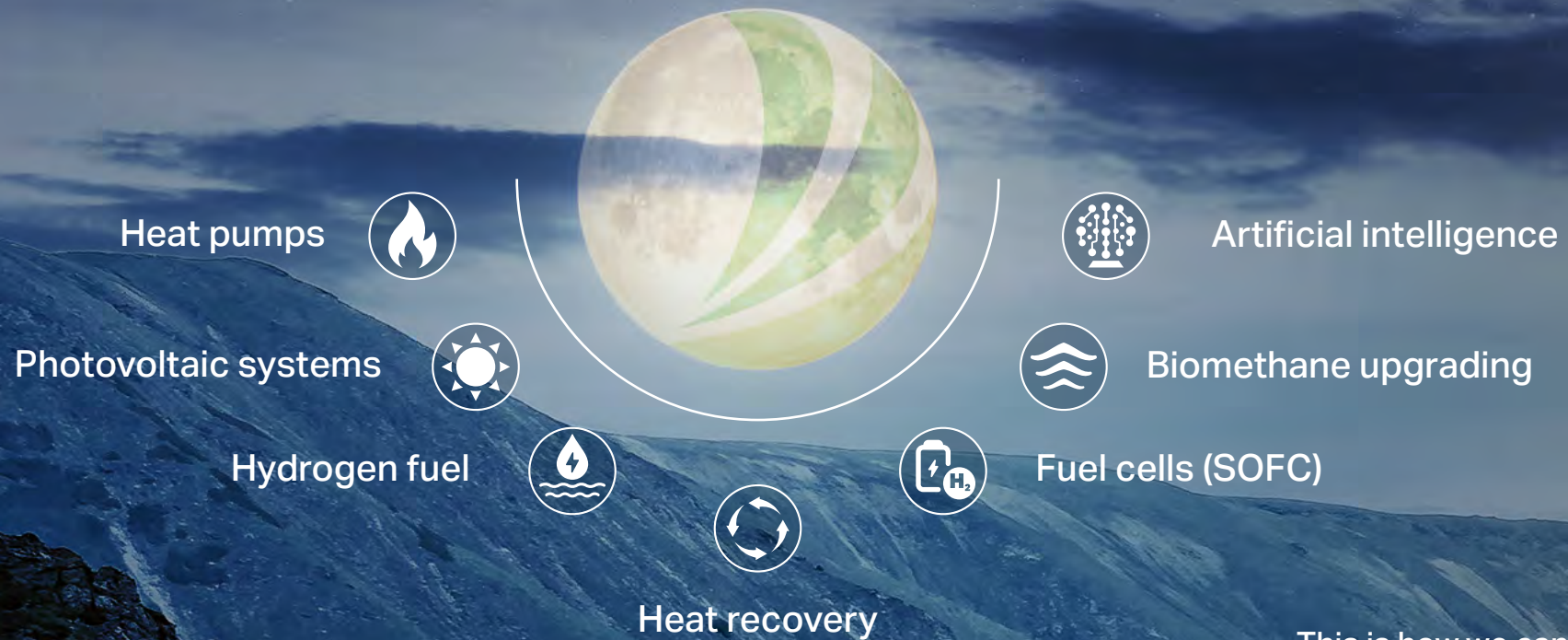
MTM Energia manufactures systems powered by vegetable oil and animal fat.

In addition to constructing new plants, the company is specialised in revamping existing power stations with a capacity of up to 1000 kWe.

Not just cogeneration

The integration of complementary technologies

We have **broadened our technological offering** by integrating **other sustainable and renewable technologies** with cogeneration, such as:



This is how we can respond **flexibly** and **adaptively** to the specific needs of each customer.

Customer service

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SERVICE MAKES THE DIFFERENCE

Distance is not a problem.

- IoT connectivity in the cloud
- 24/7 availability, 365 days a year
- Guaranteed response within 24 hours of notification
- Predictive maintenance
- Monitoring
- Remote management



What makes the difference



Preliminary consultation

When we take on a client's request, we always carry out a careful preliminary analysis of their actual needs.

Design

Thanks to our in-house design department, we develop tailor-made solutions based on your needs.

Installation

Our technicians can carry out on-site project management and installation directly.

Authorisation Procedures

MTM ENERGIA can take care of all the bureaucratic procedures involved in commissioning the plant.

Check-up service

MTM ENERGIA can perform a thorough, non-invasive check-up of an existing power plant.

Case History

Food industry company.

Requirement

The customer turned to MTM Energia to optimise energy management and improve consumption efficiency.

Solution

MTM Energia designed a customised trigeneration plant, integrating the existing 800 kW photovoltaic system. Sized to provide 500 kW of electricity, 650 kW of heat and 450 kW of chilled water, the plant has delivered significant results:

- **82.8% reduction in electricity consumption from the grid.**
- **10% savings in primary energy consumption.**
- **34% reduction in CO2 emissions, equal to 630 tonnes per year.**

Thanks to this solution, the customer is able to cope with rising energy costs with an accelerated return on investment, while supporting an increase in production capacity of up to 67%.



Interporto Toscano Amerigo Vespucci, logistics and transport sector.

Requirement

Increase the use of energy from alternative sources to meet the energy demands of the interport logistics sector, with particular reference to the Cold Village.

Solution

MTM Energia has built a natural gas-powered trigeneration plant (1,200 kW_e Jenbacher engine), designed to simultaneously produce electricity, heat and cooling. This solution optimises resources by adapting to changes in energy demand, reducing operating costs and environmental impact.

This ensures an efficient supply for the entire freight village area.





Villaggio Giardino, district heating project with the Hera Group.

Requirement

Completely replace an obsolete cogeneration section within the Modena TLR power plant, keeping the other existing sections in operation and integrating the new plant with the existing control systems.

Solution

MTM Energia replaced one of the three internal combustion engines of the existing power plant, fuelled by natural gas, with a new high-performance system. The engines, each with a power output of **1,200 kW**, contribute to a **total plant capacity of 3,600 kW electrical and 3,660 kW thermal**.

This solution was designed to meet the needs of a large urban area, ensuring reliability, sustainability and efficiency for a complex energy infrastructure.



Centro Fitness Serendip, sports facility.

Requirement

To reduce operating costs and ensure significant energy savings for the sports centre.

Solution

MTM Energia installed a HOME 20 micro-cogenerator, one of the company's standard solutions, designed for small and medium-sized facilities.

This system allows:

- To supply both electrical and thermal energy directly on site.
- Increase overall energy efficiency.
- Reduce operating costs and pollutant emissions.

This installation is a concrete example of how MTM technology can be perfectly adapted to the needs of sports and wellness facilities, contributing to more sustainable resource management.

Macchiorlatti Vignat Agricultural Company, agriculture and livestock sector.

Requirement

To use livestock waste to power a biogas cogeneration system, improving the company's overall energy efficiency.

Solution

MTM Energia has built a 210 kW electric biogas cogeneration plant at the farm in Cumiana (Turin), a company with almost a century of experience in the sector. The system includes:

- A 12-metre container, which houses the cogeneration unit with a MAN 6-cylinder turbo engine, the control panel and a medium-voltage section.
- A biogas pre-treatment system, with gravel filter, dehumidifier, activated carbon filter and blower, entirely pre-assembled in the MTM workshop.

This project is a virtuous example of the circular economy, maximising the use of company resources and ensuring sustainability and energy savings.



Salice Salentino wastewater treatment plant, wastewater treatment sector.

Requirement

Revamping of the plant to improve energy and operational efficiency, commissioned by Cogei.

Solution

MTM Energia supplied an 83 kW_e biogas cogeneration system, designed to serve the treatment plant that manages the civil agglomerations of Salice Salentino and Campi Salentina, in Puglia. The solution includes: a gas generator set with a Tedom engine, an electrical control and parallel panel, an emergency dry cooler for operational safety, and a shell and tube heat exchanger, complete with a 3-way valve and bypass, for heat recovery from exhaust gases. Each component has been designed to ensure optimal integration into the existing system, contributing to the environmental sustainability and energy efficiency of the plant.

Econord S.p.A. environmental services sector.

Requirement

To continue to exploit the biogas produced by the landfill for electricity generation, moving from an oversized and obsolete plant with two 350 kWe engines to a new 123 kWe plant, correctly sized in relation to the residual production of the landfill in post-management.

Solution

MTM Energia built a biogas cogeneration plant powered by a 6-cylinder turbocharged TEDOM engine, designed to convert the biogas generated by waste into electricity.

The solution adopted made it possible to upgrade part of the existing plant. The custom design of the product allowed for a quick and easy switch from the old to the new plant through the "plug & play" installation of the new engine

This project is a concrete example of the circular economy, transforming waste into an energy resource and offering an efficient and sustainable model for landfill management.

Bettoni Farm, agriculture and livestock sector.

Requirement

To use waste slurry to power a biogas cogeneration system, improving the farm's overall energy efficiency.

Solution

Construction of a **49kWe biogas-powered** cogeneration plant, with integrated biological management and a lightweight aluminium containment system.



Corporate Certifications

MTM Energia is actively involved in the field of cogeneration and servicing existing plants. Thanks to its commitment and recognised professionalism over the years, it has obtained several important certifications for business growth that strengthen and highlight its core business.

CQOP SOA OG9 CL IV

Certifies the skills required to participate in public tenders in the electricity production plant sector.

CQOP SOA
COSTRUTTORI QUALIFICATI OPERE PUBBLICHE

CQOP SOA OS16 CL I

Certifies expertise in contracts for electrical systems in power plants.

UNI EN ISO 9001

Certifies the requirements for the quality management system.



UNI ISO 45001

Certifies the requirements for an occupational health and safety management system.

UNI ISO 14001

Certifies the requirements for an environmental management system.



Technical
Qualifications

MOTORTECH[®]

MWM

TEDOM

MAN

JENBACHER





MTM Energia S.r.l.

Via G. Marconi, 107 

20020 Magnago (MI) Italy 

+39 0331.658627 

Info@mtmenergia.com 

www.mtmenergia.com 