

Company presentation



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## MAIN ACTIVITIES

Energy services, integrated engineering design, technical consulting, plant design and management

## VISION

Contribute to local development with investment projects on the production of energy from renewable sources, especially biomass, biological sludge from local civil wastewater treatment plants and organic materials

residues from food production, innovative projects on sustainable technologies, training, scientific research and communication of developed models;

## MISSION

Valorize residual and waste materials present on the territory to produce energy and generate positive environmental impact and high social impact for the local community.



B-CORP ORIENTED

G\_EN operates with an innovative approach, "Benefit Corporation" oriented, which aims to produce benefits for the environment and society, especially for the host territorial community, while achieving the necessary business return and experimenting with new paradigms of public-private and profit-no profit collaboration.

SCIENTIFIC BOARD

The main purpose of the activity of the G\_EN scientific board is to identify, analyze, understand, develop, test, disseminate, transfer management approaches and solutions, processes and technologies of energy sustainability.

SDGS

G\_EN operates in fully accordance with the UN Agenda 2030 and following the 17 SDGs (Sustainable Development Goals).



LOCAL DEVELOPMENT  
SERVICES

LOCAL DEVELOPMENT  
OPPORTUNITIES

FEASIBILITY STUDIES & BENCHMARKING in field of:

- waste to energy integrated platforms
- energy saving by saving space processes
- management of exhausted tires solutions
- water treatment integrated projects

IMPACT ANALYSIS with predictive tools  
COMMUNICATION

VIRTUOUS PROCESSES FOR THE VALORISATION OF WASTE -  
DESIGN AND ENGINEERING

- volumetric reduction
- recycling and new life for things
- energy improvement
- reduction of the environmental impact
- increase in the life cycle of landfills
- job and new professionalism creation
- transition from fossil fuels to renewable energy
- transferability of know-how
- modularity and scalability of solutions
- social and open innovation

## WASTE TO ENERGY



**G\_ENIUSENERGY**<sup>®</sup> an integrated system built with modular treatment platform with different technologies can handle MSW, respecting the 3Rs philosophy and expanding the lifespan of the existing landfills combined with an energy generation using the produced biogas and syngas in CHP units.

Is composed with an **MRF platform** (Material Recovery Facility) with the aim to Reuse all Recyclable materials, an **AD platform** (Anaerobic Digestion) for producing biogas and/or biofuel from the hydrosoluble organic fraction of the MSW, a **COMPOSTING platform** for producing a fertilizer completely hygienized useful in agriculture, a **PYROLYSIS platform** to reduce the volume of all the organic fraction present in the residual part of the waste at the end of the whole treatment. If useful, the pyrolysis plant can produce energy, to optimize self-consumption or for the realization of smart grids for energy communities.

## ORGANIC MATTER TO ENERGY



**PYROSLUDG\_EN®** The choice of the pyrolysis process is because is a thermodynamic system for transforming complex (natural) organic compounds into simple substances at low temperature.

Pyrolysis is a safe technology of decomposition of matter, which operates in the absence of oxygen (non-combustive), inducing the molecular disintegration reaction through the simple transfer of the necessary thermal energy to the process.

With this process pollutants are not generated and the organic matter, previously dried, where necessary, guarantees a remarkable energy yield, particularly in the case of the sludge produced in civil waste water treatment plants, mainly composed by organic fraction.

## G\_EN HUB



G\_EN Energineering is part of a hub (G\_ENHUB) that designs, develops and communicates energy transition models towards a low consumption of coal and a high rate of use of renewable sources.

The hub provides advice in the field of green solutions, develops prototype and project management systems; carries out activities of:

- commissioning, startuapping and training;
- design and management of plants for the production of energy from renewable sources;
- communication and territorial marketing;
- local development with projects with a high technological index and low environmental impact.



## G\_EN STRATEGIES

The "G\_EN HUB" section that deals with designing and developing local development models in the field of environmental sustainability and social innovation.

It carries out activities of:

- preliminary and executive planning;
- strategic consulting;
- development of prototypal systems with a high technological index and low environmental impact;
- project management and commissioning;
- accompaniment to the establishment and management of energy production plants.





## G\_EN COMMUNICATION

The "G\_EN HUB" section that deals with communication, territorial marketing and social responsibility.

It carries out activities of:

- promotion of the culture of sustainability;
- web TV management on renewable energy;
- integrated reporting;
- relationship with the scientific and academic world;
- publishing production;
- training (even on the job and at a distance).

## G\_EN ENERGINEERING



The "G\_EN HUB" section that deals with startapping and industrialization of models and projects for the production of energy from renewable sources.

It carries out entrepreneurial activity through the creation and management of a co-generation production line, which uses pyrolysis, with its PYROSLUDG\_EN process, to enhance the organic component of the biological sludge coming from local water purification plants and waste of civil nature for energy purposes.

## DESIGN APPROACH: METHODOLOGY



G\_EN adopted since the beginning an holistic approach on environmental issues to find the best available solutions developed case by case.

With the multidisciplinary skills resident in the G\_ENHUB we can use a transversal approach that embraces:

- environmental care and protection,
- knowledge transfer,
- job creation and new job profiles
- social benefits
- balance cost and benefits optimizing the plant's yield
- communication to create awareness
- The 17 SDGs from UN

## BOARD SKILLS

LIBORIO L'ABBATE

- CEO

MASSIMO DI NICOLA

- TECH & INNOVATION MANAGER

JOSE PERFETTO

- SUSTAINABILITY MANAGER

RICCARDO LOMBARDO

- STRATEGY & CSR

GIANCARLO D'ERRICO

- SOCIAL MANAGER



Documentarist and director for national and international productions, managing director at Eoslab 1 MW biomass co-generation power plant in Torrazza Piemonte.

Chemical Engineer with Master Degree with expertise worldwide as process engineer in water treatment, waste treatment and valorization, biogas production, pyrolysis plant, and as Project Manager 2.0

Architect with Master Degree expert in bioclimatic architecture and design of energy system, Sustainability manager, Energy Manager. Collaborates with leading national and international public and academic institutions.

Strategic designer with Master Degree in Training Science and Masters in HR, Marketing & Communication, Management and Leadership.

National leader in the management of social projects, he is Vice President of the regional Delegation of the non-profit organization A.N.F.F.A.S



## PARTNERSHIPS

TERMOMECCANICA  
ISOTECH MANAGEMENT  
SOLAR DESIGN  
WATERJUG  
BIOR&D  
GRENSAS  
PROGETEK  
CHEMATEK  
PoliTo  
UniTo  
UPO  
CNR  
ANFFAS  
SMART COMMONS LAB

Collaborates with academic and scientific institutions (CNR, Turin Polytechnic University, Turin University), with administrations and waste management consortiums and with leading companies in the field of innovative technologies, such as TERMOMECCANICA ECOLOGIA, TERMOMECCANICA INDUSTRIAL PROCESS, ISOTECH MANAGEMENT, WATERJUG, PROGETEK, GRENSAS, SOLAR DESIGN and other.

A particular importance in terms of social innovation is the active collaboration with A.N.F.F.A.S. National Association of Families of People with Intellectual Disability, as regards the possibility of creating particularly profiled employment on the capacity of people with different abilities.

## RENEWABLE ENERGY PLANTS



## OUR PROFESSIONALS HAVE COLLABORATED TO THE REALIZATION OF THE FOLLOWING PLANTS

- 2017> Executive Design, Environmental impact assessment of “ Green Power for Rail” Project client Terna Spa
- 2014 > Permitting, Health and Safety, O&M Site managing PV systems for 6 MWp client Rete Rinnovabile (Terna Spa)
- 2014 > Design , Business Plan and System Energy Sizing of a Remote radio transmission unit powered by a Stand Alone PV system–client Alenia S.p.A.
- 2012-13 > Executive Plan, the authorization process, Environmental Impact of PV system , 3 MWp for Municipality of Santhià (VC) –
- 2012 > Energy Efficiency and solar PV systems on buildings, Safety Coordination in Execution of work in accordance with Decree Law 81/08 for Municipality of Lauriano (TO) –
- 2012> Executive Design, Permitting , Health and safety of 5 large rooftop PV systems client Delta Srl
- 2011 > Executive Design, Permitting, EIA of PV system , 1 MWp for Municipality of Aramengo (AT)
- 2011> Executive Design, Permitting, EIA of PV system PV systems 3 MWp client Novaen Srl and Enerpoint Spa
- 2010> Executive Design, the authorization process, Environmental impact assessment of PV systems 9 MWp client Terna Spa –
- 2010> Executive Design and EIA of 993 kWp PV system in Salmour (CN) client. X-Tek. Spa

## INTEGRATED SYSTEMS AND WASTE TREATMENT PLANT



- Germany - Dettendorf - County Neustadt-Aisch/Bad Windsheim, D-91456 Diespeck  
Plant powered with 10.000 t/y of organic fraction (F.O.R.S.U.), green waste and Pnst. = 265 kWe  
Plant in operation
- Germany - Langenau - Agricultural Equipment Leasing Ltd., D-89129 Langenau  
Plant powered with 15.000 t/y of green waste, corn silage and Pnst. = 540 kWe  
Plant in operation
- Germany - Leinfelden - Biogas Leinfelden GmbH & Co. KG, D-70771 Leinfelden  
Plant powered with 6.500 t/y of agro-food waste, green waste, corn silage and Pnst. = 340 kWe  
Plant in operation
- Germany - Eiselfing - Bioenergiepark Aham Aham 29, D-83549 Eiselfing  
Plant powered with 10.000 t/y of green waste and Pnst. = 265 kWe  
Plant in operation
- France - Brametot – Veolia France  
Plant powered with 18.000 t/y of organic fraction (F.O.R.S.U.), green waste and Pnst. = 550 kWe  
Plant in operation

## PYROLYSIS PLANT



- Italy - Firenzuola – Firenzuola Energia Pulita s.r.l.  
Plant powered with 11.000 t/y of chopped wood and Pnst. = 999 kWe  
Plant in operation
- Italy - Torrenova (ME) – Multiecoplast s.r.l.  
Plant powered with food industry by-products and MSW with capacity 2.500 t/y e  
Pnst. = 199 kWe  
Plant in operation
- Italy - Capo d'Orlando (ME) – Nautilus s.r.l.  
Plant powered with food industry by-products with capacity 1.900 t/y e Pnst. = 160  
kWe  
Plant in operation
- Italy - Crema (CR) – Agrimeccanica s.r.l.  
Plant powered with food industry by-products, chopped wood, plastics with  
capacity 2.000 t/y e  
Pnst. = 200 kWe. Plant in operation discontinuously





contatti:

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