ENERGINEERING

The G_ENIUSENERGY® and PYROSLUDG_EN® processes to enhance your waste and produce renewable energy

WORKING 4 SOLUTIONS

www.genhub.eu

G_en Energineering proposal

We bring our contribution, entrepreneurial, scientific, technological and social in the scenario of the energy transition towards the maximum diffusion of renewable sources.
We design concrete and sustainable solutions.

Our mission is to enhance waste materials in the area to produce energy and generate profit together with the environmental and social impact for the local community.

Our aim is to design “taylor made” pyrolysis plants or integrated solutions for the treatment and volumetric reduction of by-products of agro-food processing, biomass, biological sludge coming from local plants for the purification of civil waste water, waste, oversize and waste materials aimed at the co-generation of electricity and heat;

We propose and create a model that, in the most traditional sense of creativity, combines elements known in different ways:

- uses the "ancient" and safe pyrolysis process to produce energy;
- enhances residual matrices, with a high regeneration rate, for cogeneration;
- allows the drastic reduction of energy consumption for energy-intensive production processes.

G_en Energineering proposal

Through our own **G_ENIUSENERGY® and PYROSLUDG_EN® processes** we propose a safe and technologically innovative solution that guarantees an almost total disposal of waste in landfills, a strong energy production and at the same time the minimum possible environmental impact.

G_ENiusenergy® provides a technologically advanced solution to two important issues of the current industrial development phase:

- waste management and disposal;
- the strong demand for energy.

The main goal is to transform ecological, emergency and economic problems into important resources, producing thermal and electrical energy from waste treatment.

The system we propose represents a valid alternative to the careful selection of waste collection, certainly important but decidedly expensive and sometimes difficult to implement.

G_en Energineering proposal

G_ENIUSENERGY® is an integrated modular treatment system that integrates different technologies for the management of MSW, able to respect the 3R philosophy (reduce, reuse and recycle) and to extend the duration of existing landfills, combined with a generation of energy that uses biogas and syngas produced in appropriate cogeneration units.

Four integrated platforms to maximize the effects

The waste disposal plant consists of 4 different platforms that work together, 3 different work stations that operate in sequence before transferring the remainder to the landfill:

- MRF platform (Material Recovery Facility) for transfer, separation and preparation of the MSW, with the aim to reuse all recyclable materials;
- Anaerobic Digestion Platform and Forced Biostabilization for producing biogas and/or biofuel from the hydrosoluble organic fraction of the MSW;
- Composting platform for producing a fertilizer completely hygienized useful in agriculture;
- Pyrolysis platform, with PYROSLUDG_EN® process, to reduce the volume of all the organic fraction present in the residual part of the waste at the end of the whole treatment.

Controlled landfill

G_en Energineering proposal

The main benefits of G_ENiusenergy®

- the same material produces energy twice
- the emissions are controlled from the beginning of the process when the unsorted waste arrives at the plant, because all the waste is transferred and handled in closed areas
- the dioxin level is non-existent and the emissions of furans released by the catalytic pyrolysis plant are 20 times lower than those of an incinerator
- the volume of waste is reduced by up to 90%, therefore the use of the landfill is drastically limited
- **the pyrolytic system, PYROSLUDG_EN®, can be powered with different materials** by operating only a few variations/adjustments on the system control program (software).
- the G_ENiusenergy® system, with the controlled landfill integrated in the same site, allows to avoid further emissions of CO2 and PM10 into the atmosphere attributable to the means that should transfer the residual material if the landfill is located in another site.

WHO IS

ENERGINEERING

We are a north-western Italian Company, based in Torino, that works in the field of reneawables and waste to energy.

Our main skills are in energy services, integrated engineering design, technical consulting, plant design and project management.

Watch our presentation

ENERGINEERING

OUR MAIN ACTIVITIES

LOCAL DEVELOPMENT SERVICES

FEASIBILITY STUDIES & BENCHMARKING in field of:
- waste to energy integrated platforms
- energy saving by saving space processes
- management of innovative social solutions
- water treatment integrated projects

IMPACT ANALYSIS with predictive tools
COMMUNICATION AND AUGMENTED REALITY
TRAINING

LOCAL DEVELOPMENT OPPORTUNITIESES

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

ENERGINEERING

BUSINESS AREAS

WASTE TO ENERGY

VOLUMETRIC REDUCTION AND ENERGY
VALORISATION OF ORGANIC COMPONENTS OF SLUDGE
NON RECYCLABLE PLASTIC
FOOD WASTE
SANITARY WASTE
EXHAUSTED TYRES

PYROSLUDG_EN® PROCESS (own)
G_ENIUSENERGY® PROCESS (own)

DESIGN
ENGINEERING
TRAINING
COMMUNICATION

ENERGINEERING

SUSTAINABLE DESIGN

ENERGY EFFICIENCY

NZE BUILDINGS

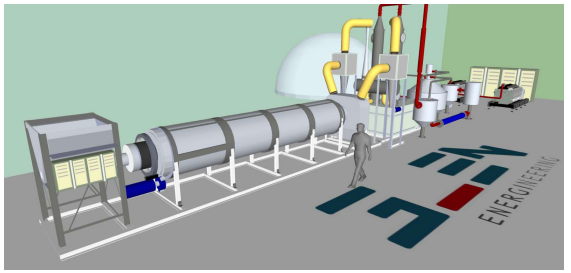
BIO-ARCHITECTURE

SOLAR & GEOTHERMIC SOLUTIONS

INTEGRATED MODELS

ENERGINEERING

ENGINEERING



PLANT DESIGN

TAYLOR MADE PYROLISIS

FEASIBILITY STUDIES

WASTE TO ENERGY

INTEGRATED PLATFORMS

SOLAR PLANTS DESIGN

ENERGINEERING

RESEARCH

ENERGY TRANSITION

BIOCHAR

HYDROGEN

FUEL CELLS

SMART GRID

ECO-DESIGN

WATER TREATMENT

ENERGINEERING

TRAINING AND COMMUNICATION

TECHNICAL TRAINING

COMMUNICATION TOOLS

AUGMENTED REALITY

TRAINING ON THE JOB

VIDEO STORY TELLING

WEB TV E_CHANNEL

ENERGINEERING

SOCIAL INNOVATION

SOCIAL DESIGN

ECOSCHOOL DESIGN

CORPORATE SOCIAL RESPONSIBILITY

SOCIAL REPORTING

COMMUNITY REPORT

IMPACT ANALISYS

B-CORP ORIENTATION

G_EN HUB

STRATEGIES

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

COMMUNICATION

The section that deals with communication, industrial video, training, territorial marketing and social responsibility.

ENERGINEERING

The section that deals with startupping and industrialization of models and projects for the production of energy from renewable sources.

PARTNER & NETWORK

Termomeccanica Ecologia
Termomeccanica Group

Termomeccanica Industrial Process
Termomeccanica Group

AGRIMECCANICA BR CREMA

solar design

waterjug
innovation design

NEXTA CAPITAL PARTNERS
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ENKIDEC
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ENERGINEERING

BUSINESS FORECAST

LOCAL DEVELOPMENT

WASTE TO ENERGY

SMART GRID

WATER

BLOCKCHAR

CIRCULAR ECONOMY

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