

ave Energy Converter



AR AMBITION, TO HELP THERWIRONMEN

ENERGY FROM WAVES NATURAL ENERGY FOR THE WORLD

The demand for energy from renewable sources is a growing need of our times. As with all alternative energies, marine energy has the advantage of being sustainable and environmentally friendly. A change of course is therefore needed: a switch to green energy is the only way to meet the world's energy needs. The supply of energy from renewable sources is indeed the goal of many countries. The growth of this sector means that the challenges of developing new products, protecting the environment and complying with regulations are constantly evolving.

Kinetic energy from the movement of waves, oceans and seas are an inexhaustible source of natural energy produced by the "WAVE MOTION", Thanks to its technology and conformation, GEA's TRITON system can be placed, applied and used globally according to need and place of installation, using the inexhaustible natural energy of the oceans and seas, where there is adequate wave motion, while respecting the local ecosystem, thus providing a real and concrete factor for eco-sustainable development.

It can be used to place marine production sites (FarmWaveEnergy), in some cases allowing disused platforms to be redeveloped for the production and transformation of "Wave Energy".

GEA is in fact a 24-hour technology and differs from other systems or technologies in its ability to adapt and produce even in low wave locations such as Northern Europe using the best available energy. Waves are the largest untapped source of renewable energy, they have high predictability, low variability and extremely high energy density.

BUT ALL THIS MAINTAINING AND ENSURING HIGH PRODUCTION RATES.

SAFEKEEPING OF THE ENVIRONMENT ALWAYS. EVERY DAY.

The production of synthetic fuels such as methane, hydro-methane, hydrogen, methanol, or liquid fuels, using the energy in "sur plus" to directly treat the waste produced, obtain energy from it again, reusable/saleable raw material, clean water treatment plants for fountains, irrigation, etc., avoiding highly polluting leakages into the water table.

Users close to the coast can obtain great advantages, but in reality the energy produced and fed into the supply network does not determine the necessary proximity to the sea of companies, municipalities, bodies, energyintensive activities, etc. interested in the creation of a "Farm Wave Energy".

There are more than 2,200 inhabited islands in the European Union where, despite the abundance of renewable energy sources (wind, solar), the energy supply for their needs depends on expensive imports of fossil fuels. GEA's technology with the creation of various local FarmWaveEnergy would put an end to the dangerous journey of dozens of oil tankers that continuously bring in oil fuel to power islands around the world and power plants: disposing of local waste, producing hydrogen, producing drinking water from the sea/ ocean. In the case of our Italian coasts, there are problems due to "coastal erosion", which every year requires beach nourishment of several tens of millions of euros in relation to damage caused by excessive rainfall, but in our specific case by strong sea storms.

Not only do storm surges require beaches or coastal areas to be cleaned up, but more and more often the damage involves roads, sewers, lighting networks, etc. The application of FarmWaveEnergy in those marine areas makes it possible to significantly reduce the intensity of storm surges, each system that generates energy actually removes kinetic energy from the incoming waves, creating a natural containment of the intensity of wave motion. The benefits are not to be underestimated for environmental protection.

Environmental catastrophes, pollution, deforestation and climate change are becoming increasingly topical. GEA, with its sustainable technology, wants to make a concrete contribution to stopping this and the continuing deforestation (see Madagascar) and damaging occupation of land to produce energy and charcoal with the logging of trees that affect the local fauna and the future of those populations.

SAFE FORM OF POWER GENERATION THAT TOTALLY ELIMINATES ANY ENVIRONMENTAL RISK OR HAZARD.



18% - 28%

WINDFARM OFF SHORE MAXIMUM YEARLY OUTPUT



+50%

GEA MAXIMUM YEARLY OUTPUT



PRODUCTION OF GASEOUS FUELS AND REDEVELOPMENT OF INDUSTRIAL SITES

With its H24 technology, GEA is able to continuously power water hydrolysis equipment in 500 kW or 1 MW containers;

These containers can be unloaded and easily positioned wherever deemed useful, even on disused platforms in the open sea. Given the need for significant energy input for their use (they are among the highly energy-intensive systems), it is possible to create substations at sea for their direct or indirect operation, with the possibility of hydrogen storage, particularly at night. Italy would in fact benefit considerably from this, both for the main arteries running along its coasts and in relation to its large mediterranean islands.

This would provide motorways and communication routes on which to install hydrogen refuelling stations, without changing anything in the current system, but by consolidating existing distribution points, where existing fuel pumps can be easily integrated with hydrogen distribution pumps, distribution systems that are already on the market, for example in Canada.

As regards disused oil platforms, ENI should have around 120 in the Adriatic alone, both wired and unwired. This would allow them to be reused or expanded for the production of (1) METHANE - (2) HYDROGEN - (3) ELECTRICITY - (4) GTL (GAS - TO - LIQUID)

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However, it is clear that the oxygen and hydrogen produced can also be used for numerous applications, medical, industrial, civil. Upgrading existing industries.

GEA AND THE TRITON SYSTEM USES AND OPTIMISES WHAT ALREADY EXISTS.



WavEC Offshore Renewables is a private association established in 2003, who carries out activities in various fields:

- Applied Reserch
- Certificatins
- Consultation services
- Promotion of Energy from the Seas
- Mathematical Certification of Technologies

WAVE ENERGY DIRECT CONVERSION SYSTEM

- Minor energy loss during conversion
- Very High Efficiency
- High Capture Capacity of Wave Energy

USE OF MATERIALS FROM PROVED AND TESTED TECHNOLOGIES:

- Quickly available on the market
- Low Costs, High Quality

CERTIFICATION WAVEC:

- Proof of Concept Design and Numerical Modelling,
- Certified by Wave Industry Experts

NEW WAVE ENERGY FRONTIER

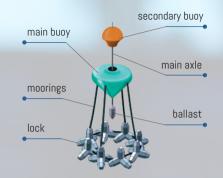
• New paradigm for energy production

ACHIEVMENT OF INTERNATIONAL STANDARD W.E.C.

- Unique Opportunity to Set the Industry Standard
- We are the New Frontier of Wave Energy

SIZE OF THE WAVE ENERGY MARKET

- Massive Proportions.
- Huge market opportunities



TRITON TECHNOLOGY AND SYSTEM ENABLE

- Shorter times for routine maintenance
- Reduced downtime
- A higher overall output
- Reduced and unnecessary maintenance costs
- Total Maintenance Cost: Low

STRENGTHS AND OPPORTUNITIES





17.500 HOURS ANALYSIS LABORATORY

50 MILLION EURO SET-UP COSTS FOR WASTE TREATMENT BY USING PLASMA

50.000

WASTE TREATED PER YEAR +5

MEGAWATT

ENERGY PRODUCED AND OTHER RAW MATERIALS

INDUSTRIES

- Industries:
- Oil and Gas
- Waste Disposal & Recycling
- IT
- Defence
- Confidential 30
- Shipbuilding
- Transport
- Ports / Airports
- Paper Industry
- Railways
- Manufacturing

APPLICATIONS

Food Oil Production

- Deep Water ROV Powering
- (Remotely Operated Vehicles)
- Renewable Energy Suppl and Storage
- Confidential 31
- Hydrogen Production
- Methane Production
- Synthetic Oils Production
- Waste Disposal
- Water Desalination
- Reuse of Undismantled Oil Installations

REAL CHANCES FROM WASTE TREATMENT

It is essential to avoid energy losses. With the TRITON H 24 system, GEA meets high energy demands, allowing the realisation of energy-efficient plasma technologies for waste treatment, creating a real ecological transaction with progressive disposal and elimination of waste dumps.

All this is possible by building a plasma gasifier, a plant for the treatment of undifferentiated waste, which at a cost of around 50 million euros could treat 50,000 tonnes of waste per year.

The plasma disintegrator can produce at least 5 Megawatts of electrical energy and would be able to treat municipal solid-liquid waste (at a cost per tonne - 2019 - of 340 euros), solid, liquid, industrial and hospital waste (at a cost - 2008 - of 135 euros per tonne) and poisonous, toxic and special waste (175 euros - 2008 - per tonne).

Plasma technology was used in Florida -USA- in 2005, the material was processed into metal ingots to be refined, syngas, hydrogen, glass, steam, and waste material to be reused.

This avoids the creation of new and continuous landfills that will have to be "disposed of" in the future, eliminating the occupation of land - risks of possible groundwater and environmental pollution and visual environmental impact by eliminating the current systems of storage, transport, traffic of the various substances, etc., since the temperatures of these systems could vary from 1,000 degrees to 8,000/12,000 and given the magnetic field, the type of rays generated, etc., there are currently no materials that cannot be broken down or treated.

WE WILL HAVE NEW PRODUCTS AND NEW ENERGY THANKS TO SYSTEMS OF THIS TYPE, AND THE MATERIALS TREATED NO LONGER PRESENT IN THE ENVIRONMENT, TRANSFORMING THEM DE FACTO INTO RESOURCES AND ECONOMICALLY REUSABLE.



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