### InnoVateQ

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### **ENERGY PRODUCTION**



### InnoVateQ

# Dur firm

InnoVateq is a French firm which designs, develops, manufactures and distributes systems for power generation from renewable sources.

Our core business is represented by the Low-Temperature Organic Rankine Cycle power generation modules we designs and manufacture in our works in France.

The modules are fine-tuned in each step of design and manufacture to obtain optimal performances.

Care, commitment and professionalism are employed every day by our engineering staff to ensure that each client's specific power generation needs are satisfied by a high-tech, high quality solution.



Our enterprise ethics may be resumed in a few, significant points:

- Flexibility
- Dynamicity
- Creativity
- Sustainability
- Environmental Care



 ${\sf K}$ esearch & development

Finding new technologies to improve the efficiency of our products has always been a top priority for us.

For this purpose, we constantly invest significant resources in R&D activities.

This led us to form synergies and collaborations with renowned European university and research centres which allowed us to obtain cutting-edge know-how and unique proprietary technologies to optimize the performances of our products



## The environment and us

Just as energy and environment are inseparable concepts, efficiency ed eco-sustainability are the basic concepts our engineers and designers refer to in all the development steps of InnoVateq products, to make sure that manufacturing steps, design solutions and materials combine maximum efficiency and minimum environmental impact

From an environmental standpoint, our systems...

- Allow tapping into otherwise unexploitable power sources, thus reducing the use of fossil fuels;
- Transform waste products and waste heat into valuable resources;
- Do not damage the ozone layer;



- Have at least a neutral CO2 balance, thus avoiding any contribution to global warming;
- Are entirely made of reconditionable and recyclable components;
- Use unique 100% biodegradable, non-toxic, non-flammable and non-explosive working fluids.





### The manufacturing area

InnoVateq has an extensive manufacturing area where its products are assembled and tested.

The modules are assembled on **custom containerizable supports** ("skids") which host **custom turbine generators** designed and developed by our engineers as well as all accessory systems ( heat exchangers, control and power distribution panels, pumps...) required for their operation.

InnoVateq modules **may be easily interfaced to most heat sources**, from boilers to engine cooling systems, to efficiently produce electric power from where it was thought no further power could be obtained



THE TESTING AREA

InnoVateq is one of the few firms now in France to have a permanent testing area where the real operational and environmental parameters of the clients' plants can be simulated.

In this area the client itself can test its own commissioned system **before finalizing its acquisition**, thus verifying its functionality and the performances agreed upon when ordering.





# COGETHERM EMA-50 POWER GENERATION MODULE

Its performances make it ideal for primary power production as well as for waste heat recovery and other low-temperature applications (e.g. geothermal power).

This is a low-temperature ORC system using **common hot water** ( $T \ge 95^{\circ}$ C) as a thermal vector, capable of **50 kWE power output** with a 550 kWT thermal input, a 26°C condensation temperature and a 35°C condensing point.The high condensing temperature of our unique working fluid allows the system to have **nominal performances even in the full of summer**, as the required temperatures are easily obtainable almost anywhere in the world by using simple cooling towers.



# COGETHERM HA-NA150 POWER GENERATION MODULE

Its performances make it an ideal candidate for primary power production in association with biomass-fueled boilers as well as for waste heat recovery in higher-temperature situations

This is an ORC system using **overheated** water ( $T \ge 155^{\circ}$ C) as a thermal vector and having a **150 kWE power output** with a 1100 kWT thermal input, a 28°C condensation temperature and a 40°C condensing point. In this case too, the high condensing temperature of our unique working fluid allows the system to have **nominal performances even in the full of summer**, as the required temperatures are easily obtainable almost anywhere in the world by using simple cooling towers.



