



# ENERGY EFFICIENCY FOR WASTE TREATMENT PLANT

# GREEN AND FREE ELECTRICITY

The ORC modules of Enertime can improve the energy performance of waste treatment units thanks to their ability to transform waste heat into electricity.

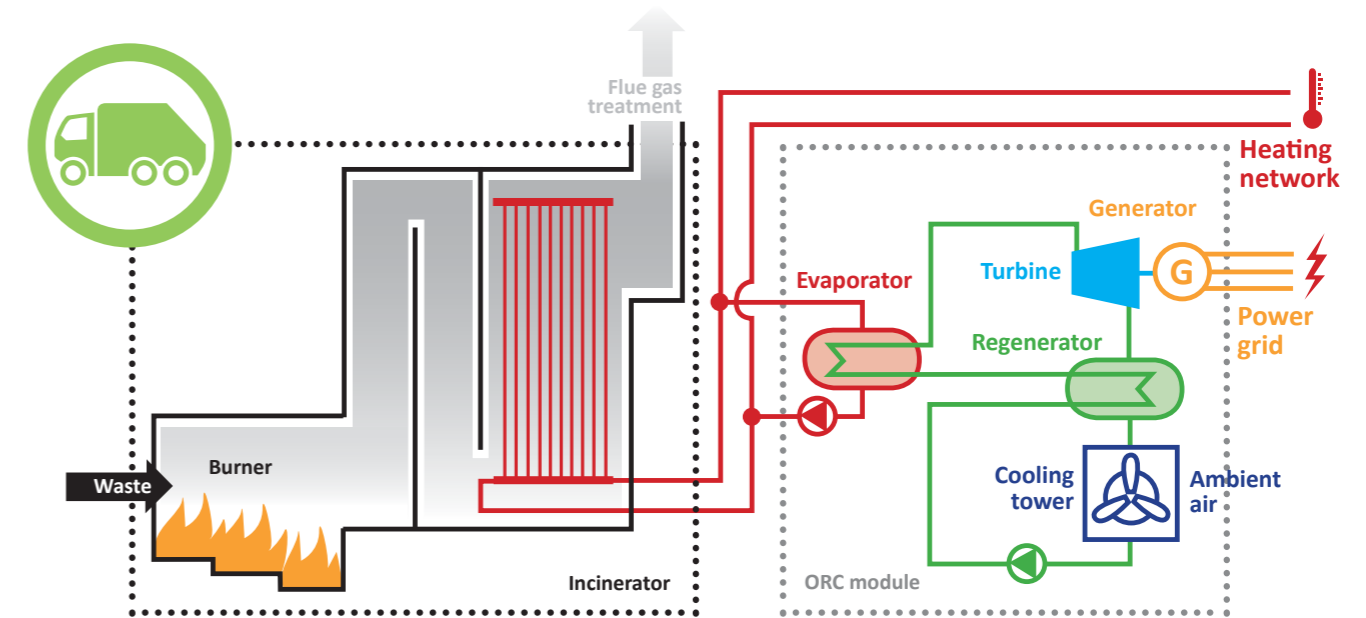
Using the electricity produced or exporting it to the grid, the waste treatment unit thus becomes more energy efficient and saves money.

Enertime offers industrial solutions to existing plants which are not yet producing electricity and which possess unused thermal sources at temperatures above 130°C (hot gas, fatal steam, heat over dissipated oil loop...) or new plants with a small or medium size, that is too small for benefitting from a steam cycle.

# ENVIRONMENTAL PERFORMANCE

Enertime's systems have been developed by using non-toxic, non-flammable thermodynamic fluids that are safe to use in an industrial environment and have no impact on the environment.

In the production of electricity, ORC machines designed by Enertime do not emit significant greenhouse gases nor generate environmental pollution.



# THE ORC TECHNOLOGY

An Organic Rankine Cycle or ORC module is a thermodynamic machine that transforms waste heat into electricity through a turbine fed by an organic fluid circulating in a low-pressure closed circuit.

Proven for decades, the ORC technology requires very little maintenance and is particularly adapted to valorise heat sources at low and medium temperatures (< 300°C) within small and medium-size production sites.

# TAILOR-MADE IMPLEMENTATION

Enertime offers a complete, easy-to-install solution that carries no impact on the incineration process and which entails only minimal connection and civil works on site.

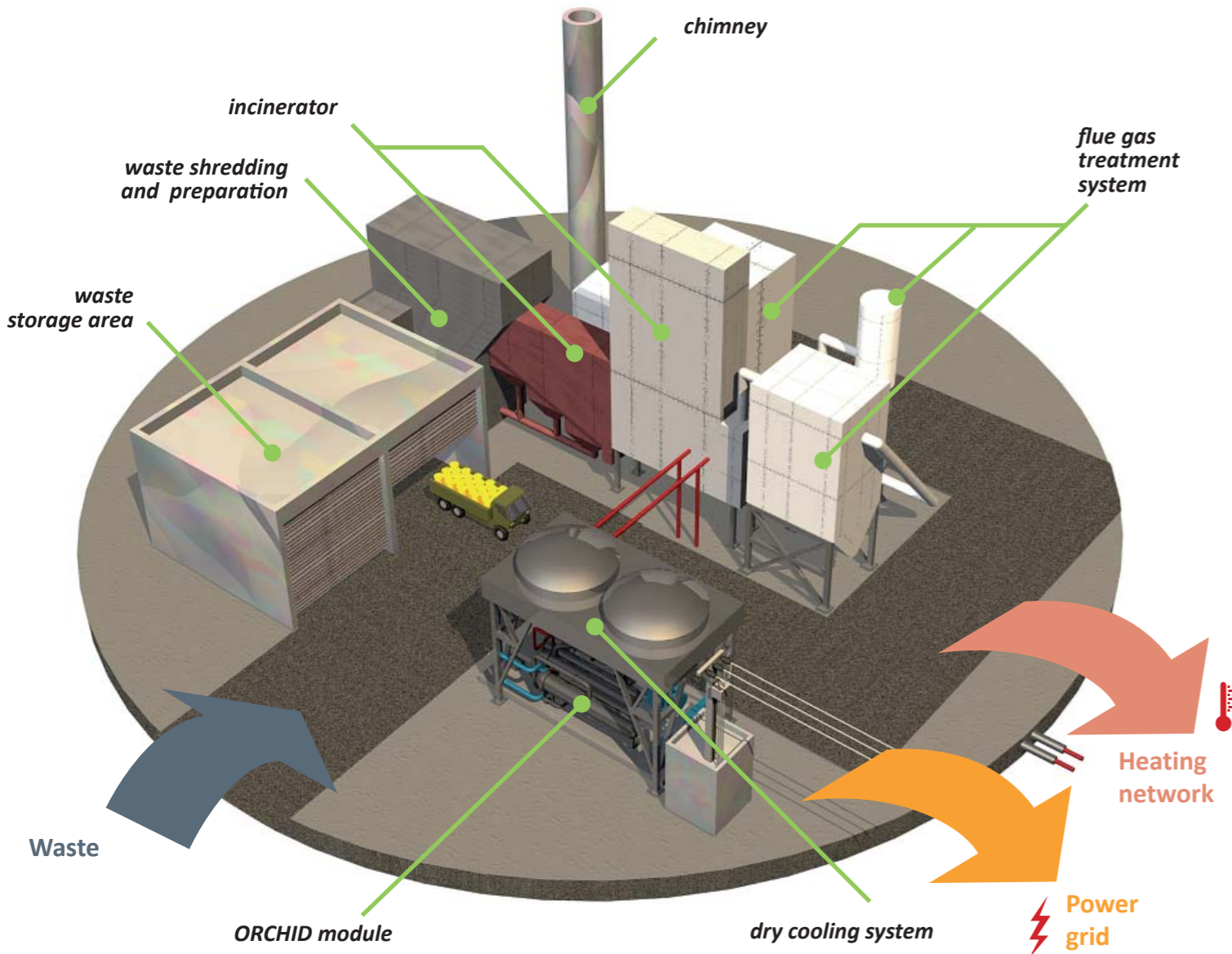
These customized solutions can adapt to clients' specific needs, thanks to:

- a modular solution offer, adjusted to use the available thermal power on the site in order to maximize performance and minimize investment costs
- an adaptation to the available space
- the possibility to install the system outdoor, even without structure or shelter
- easy integration into the industrial environment because of their flexibility in matters of coolant, recovered effluent temperature and mode of operation, which prevent any impact on BPI classification of sites and ensure a high level of security.

# SIMPLIFIED OPERATION AND MAINTENANCE

Thanks to a simple and robust technology, the solution does not require someone dedicated to the maintenance of the machine on site nor any specific expertise. Besides, Enertime offers a complete set of customized operation and maintenance tailor-made services.

Efficiency at partial load of the ORCHID line of product is significantly improved compared to steam cycles of the same size because of the multi-stage subsonic turbine technology.



# MAIN TECHNICAL SPECIFICATIONS

## RANGE

Electric power  
ORC inlet temperature  
Turbine

## ORCHID©

5 MWe to 500 kWe  
90°C to 200°C  
subsonic multistage  
2 bearings

## RAINBOW©

300 to 100 kWe  
200°C  
supersonic single stage  
with over hang

Please consult us for tailor-made systems.

## ABOUT ENERTIME

Enertime is a young French company that innovates in energy efficiency technologies as well as in renewable energy production through the application of thermodynamics.

Enertime designs and manufactures its ORC machines in France for the world market. Their solutions apply to improvement of energy efficiency in waste recovery units, but also:

- to improvement of energy efficiency in raw material processing industries
- to recovery of low underground temperature (as in geothermal energy) and its transformation into electricity
- to energy production from biomass or solar energy in decentralized units

Enertime offers ORC modules or turnkey systems, on their own or in consortium with manufacturers of industrial heat exchangers, biomass boilers or solar thermal collectors.

Enertime has ORC references in various fields: Industrial heat recovery, biomass, geothermal and solar thermal.



ORC turbine



## CONTACT

**ENERTIME**  
1, Rue du Moulin des Bruyères  
92400 Courbevoie - FRANCE  
Tel: +33 1 75 43 15 40  
Email: [contact@enertime.com](mailto:contact@enertime.com)

Cover pictures:  
ORCHID module by Enertime