



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.

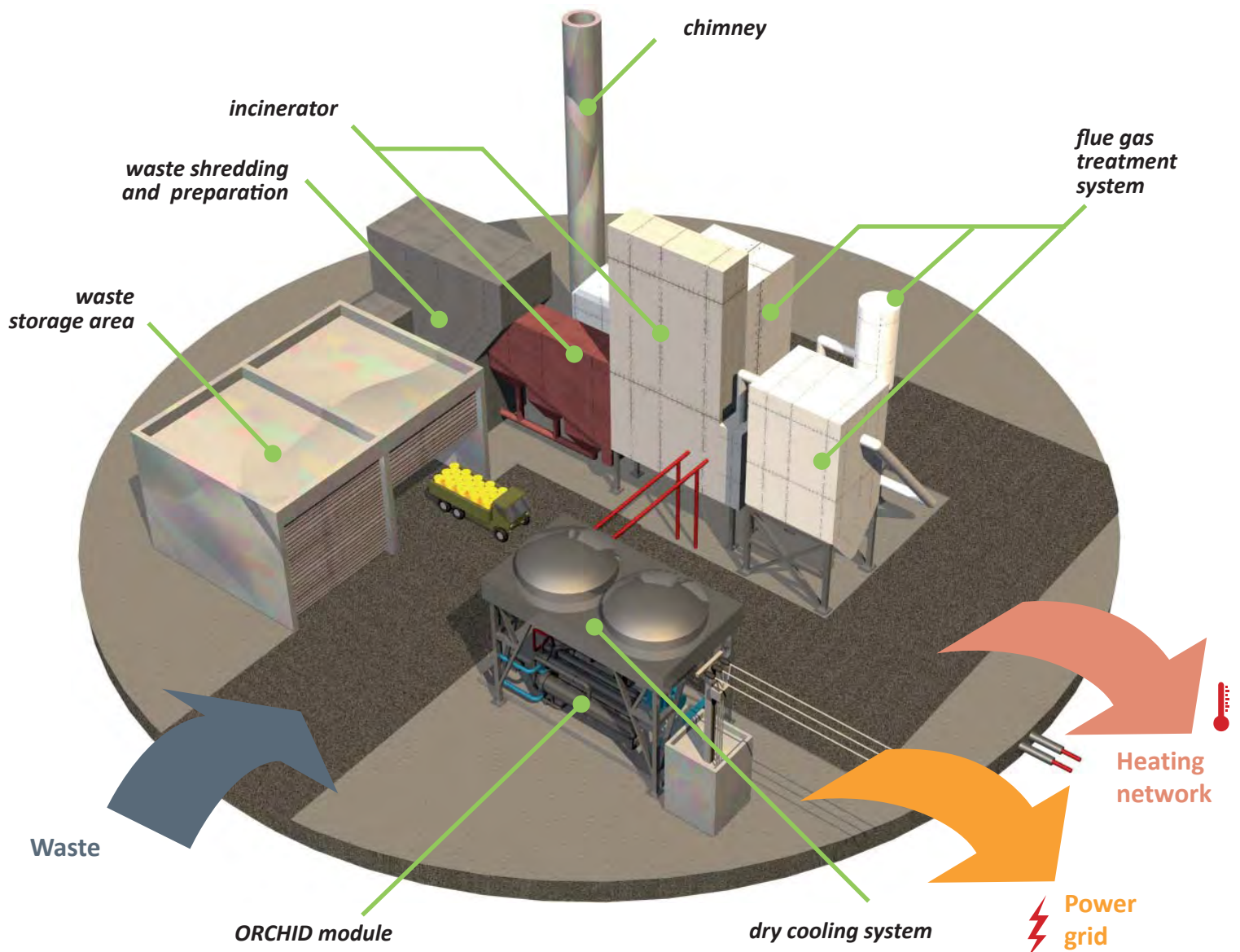
Using the electricity produced or exporting it to the grid, the waste treatment unit thus becomes more energy efficient and saves money.

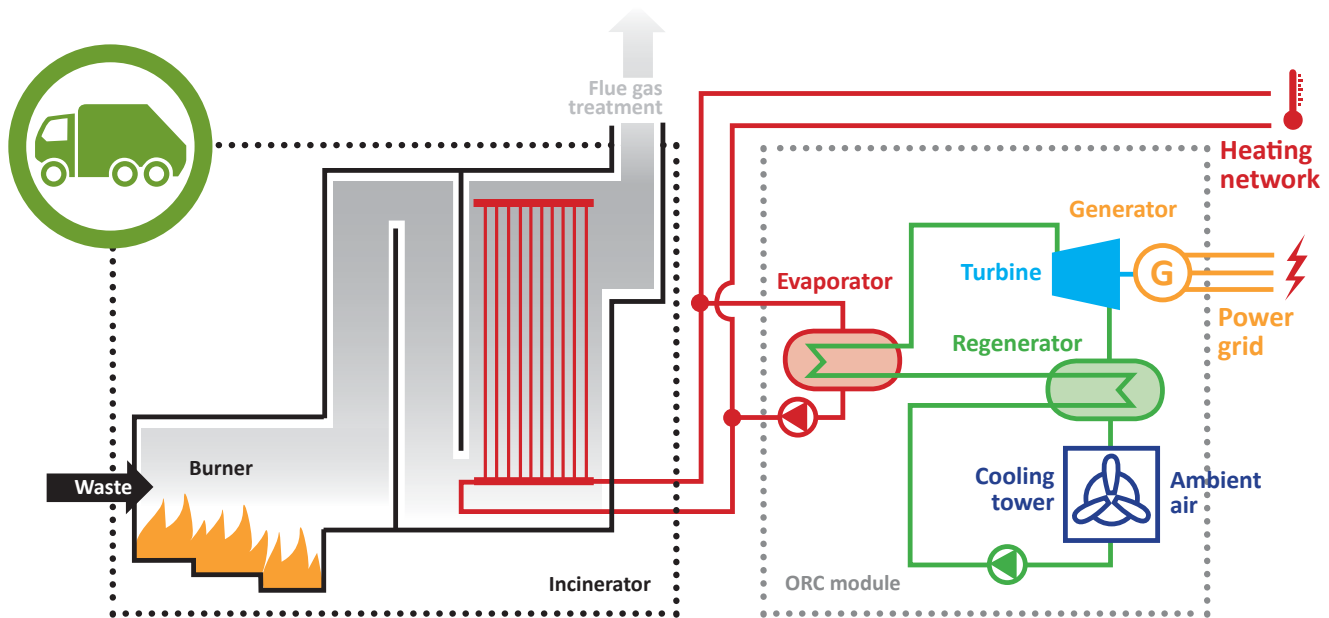
Enertime offers industrial solutions to existing plants which are not yet producing electricity and which possess unused thermal sources at temperatures above 130°C (hot gas, fatal steam, heat over dissipated oil loop...) or new plants with a small or medium size, that is too small for benefitting from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

The use of high-density organic fluids enables the systems of Enertime to operate on a partial load (reduced load of up to 20% of the nominal value without any problem) with much more efficiency than in an ordinary steam cycle.

ORCHID© range

	ORCHID© 1000	ORCHID© v160°C	ORCHID© cogen
Inlet Temperature	200°C	160°C	220°C
Thermal Power Input	5600 kWth	5400 kWth	5500 kWth
Version	Electrogeneration	Electrogeneration	Cogeneration
Cold Source	Ambient temp. 20°C	Ambient temp. 10°C	District heating
Gross Electrical Power	960 kWe	776 kWe	550 kWe
Auxiliaries	90 kWe	76 kWe	65 kWe
Net Electrical Power	870 kWe	700 kWe	485 kWe
Thermal Power (in cogeneration)	N/A	N/A	4950 kWth
Temperature (in cogeneration)	N/A	N/A	90°C / 60°C

60 m2 is the necessary surface for an ORCHID© unit.

Enertime also designs customized units.

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.

With its module ORCHID© 1 MW installed in a foundry in the Loire Valley, Enertime won the sixth AMI ADEME Total award on energy efficiency in the industry.



ORCHID
module turbine

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Cover pictures:
ORCHID module by Enertime