

Waste Heat Recovery



Energy Efficiency Solutions

Exploiting waste heat as part of a coherent energy efficiency approach

The recovery and valorisation of waste heat from industry is a major energy saving potential waiting to be exploited.

Faced with the challenges of the Energy Transition, Tractebel supports industrial players by providing solutions meeting their economic and ecological stakes with a dedicated and customised approach based on a strong know-how in energy systems and processes.

Our approach

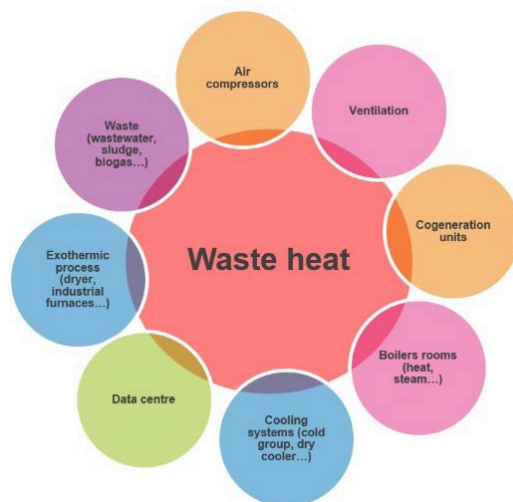
- Diagnostic of industrial energy installations
- First scan of possible energy optimisations (adjustments, reduction of losses) before looking for the possible valorisation
- Solutions for storage and internal valorisation (re-use for same or other processes, heating needs...)
- Solutions for external valorisation (injection into a district heating network, use (sale) by a neighbour company, conversion into electricity)
- Calculation of profitability including CAPEX/OPEX and grants

Our added value

- Dedicated approach taking into account:
 - Specific process needs and site constraints
 - Site environment (external valorisation)
 - Possible subsidies
- Strong knowledge in energy systems and processes
- Comprehensive technical and economic (CAPEX/OPEX) study using advanced software tools and considering the best available technologies in a regulatory context
- Full report with best solutions and key indicators

Client benefits

- Improved Energy Efficiency of the facility
- Financial and competitive gain thanks to substantial energy savings
- Reduction of greenhouse gas emissions
- Improved industry and responsible citizen image
- Answering the Energy Transition context

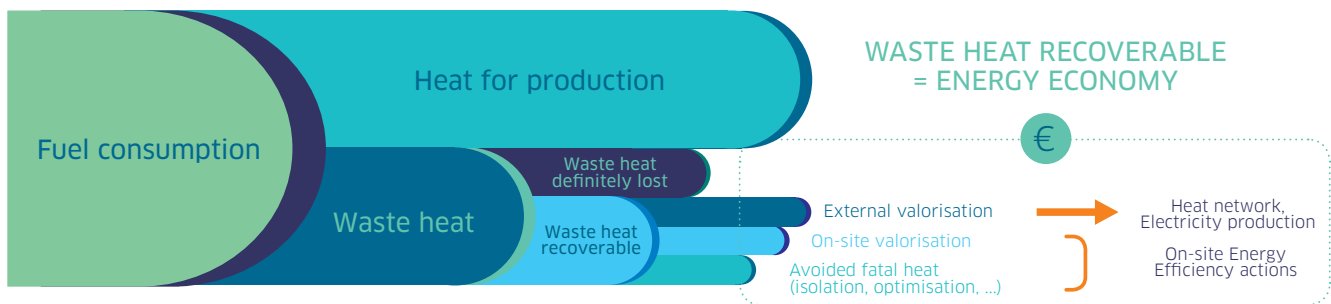


Waste heat recovery:

The valorisation of waste heat, an available and already paid-for energy, constitutes a strategic stake for the industry. It increases the energy performance of processes and sites, and reduces the environmental impacts associated with them.

Expert guidance on the opportunities of exploiting a valuable energy deposit

To use it	To sell it
on your own industrial installation (for processes, heating buildings...) to reduce energy invoices	to other industrials or to the Public Authority (district heating networks, electricity production)



Some references

Energy Efficiency Solutions

Food company: Mozzo, Italy

Residual heat recovery in an industrial washing process

Objective:

Performing an Energy Efficiency Assessment with the primary objective being to analyse the energy management framework of the industrial activity and to identify possible opportunities to reduce the energy consumption taking into consideration:

- Multi-department process requiring washing of the devices used in the preparation of the aromas.
- Washing operations require the use of drinking water at a temperature of about 70 °C.
- The water is then discharged at about 40 °C

Solution:

Recommended installation of an additional heat exchanger for each washing device to allow heat recovery from the waste water to preheat the drinking water to be sent to the washing

Results:

- More than 9 000 € of economic saving/washing system
- Reductions in CO2 emissions of 50 tons per year
- Global simple payback < 1 year

PocoLoco: Roeselare, Belgium

Heat recovery on a deep fryer and on air compressors

Objective:

Improve energy efficiency of the factory identifying the sources of waste heat recovery and valorise it in the industrial process.

Solution:

- Heat recovery via a condenser on the heat exchangers of a deep fryer.
- Heat recuperation on the compressed air compressors with the recuperated heat covering two heat demands:
 - The heat needed to condition the manufacturing hall (preheating of the water before it enters the natural gas boiler).
 - The heat needed to warm the weekly cleaning water (a 30m³ water barrel) of the process.

Results:

- Heat recovery on the deep fryer
 - 475 MWh energy savings/year
 - 11 000 € of economic saving/year
 - Global simple payback < 5 years
- Heat recovery on air compressors
 - 350 MWh energy savings/year
 - More than 8 000 € of economic saving/year
 - Global simple payback < 5 years

TRACTEBEL

tractebel-engie.com
info@tractebel-engie.com