



Study to characterize and valorize waste heat sources

What is waste heat ?

This is residual heat generated by industrial processes, which is often lost or barely valorized.

According to ADEME, in France, **52,9 TWh** of fuel are lost each year over 100°C.

Examples of possible valorization : Electricity production with cogeneration (electricity and heating/cooling) for internal needs (drying of incoming materials, injection in the process, buildings heating, ...) or external (heating or cooling networks).

Our proposal :

Study of your heat sources and heat wells in 5 steps

Phase 1 : Characterization of heat sources and heat wells

Task 1

Visit, recovery and analysis of existing client data

Task 2

Determination of measurement points & installation of the acquisition system over the duration of a representative cycle

Task 3

Quantification of available and usable waste heat

Deliverable

Detailed report on data and opportunities for valorization

Phase 2 : Evaluation, optimization, and valorization

Task 4

Analysis of recovery solutions
Architecture optimization
& sizing of the selected solution

Task 5

Cost evaluation (CAPEX/OPEX)
& associated benefits
Calculation of ROI and eligible subsidies

Deliverable

Detailed report of the recommended solution, including costing and action plan

Reduce your electricity and gas bills, and your carbon footprint

Our methodology & tools



Non-intrusive measurement tools for collecting reliable data



Wireless connectivity and remote analysis to monitor measurement quality throughout the campaign



Powerful sizing tools to choose recovery solutions with the best value creation



Reliable financial tools for producing preliminary cost estimates for selected solutions and calculating the associated ROI



Industrial furnaces



Waste incineration & VOCs



Combustion engines

Targeted applications

Business Case :

Conversion of waste heat into electricity and winter heating for buildings

Waste heat source of 1,6 MWth at 360 °C

Net electrical power production : 80 kWe

Cogeneration thermal production : 1,07 MWth (hot water at 90°C)

Electrical annual production	Valorisation thermique annuelle	Yearly CO2 avoided
 +700 MWh +70 000 € / year	 +4 GWh +160 000 € / year	 +1300 T +75 000 € / year

+300 000 €
of annual savings generated

- Annual energy recovery from the heat source : +35%
- Covering the heating needs of industrial buildings : +85%

Anticipate future environmental standards



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