TRACTEBEL
ENGIE

Industrial Energy Audit

Energy Efficiency Solutions

Realising the strategic optimisation of the energy performance of industrial utilities and processes

Improving performance in Energy Efficiency is a strategic issue for industries. Faced with the challenges of the Energy Transition, Tractebel supports industrial players by providing solutions to improve the efficiency of the industrial utilities (steam, hot/cold water, cooling, compressed air) and processes (furnace, dryer and more…) that comprise the main part of the energy consumption of an industrial site.
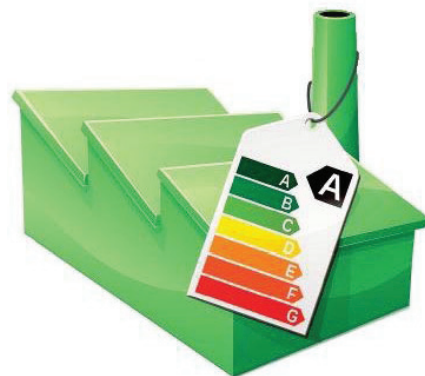
Our approach

- We focus our audits on identifying commercially-viable energy, CO_2 and cost-saving projects
- A holistic approach:
  - Auditing processes as well as services
  - Addressing energy supply as well as demand
  - Tracking energy wastage and questioning processes from an energy efficient point of view to find new cost-saving opportunities
- Solutions attuned to each client's specificities & objectives as the result of a co-creation process

Our added value

- Holistic approach in close collaboration with the client
- The use of powerful software tools for theoretical calculations providing more accurate energy saving potentials
- The use of several measurement and instrumentation tools for accurate data analysis
- Full report with matrix choice of appropriate improvement interventions based on benchmarking analysis, with cost-benefit analysis
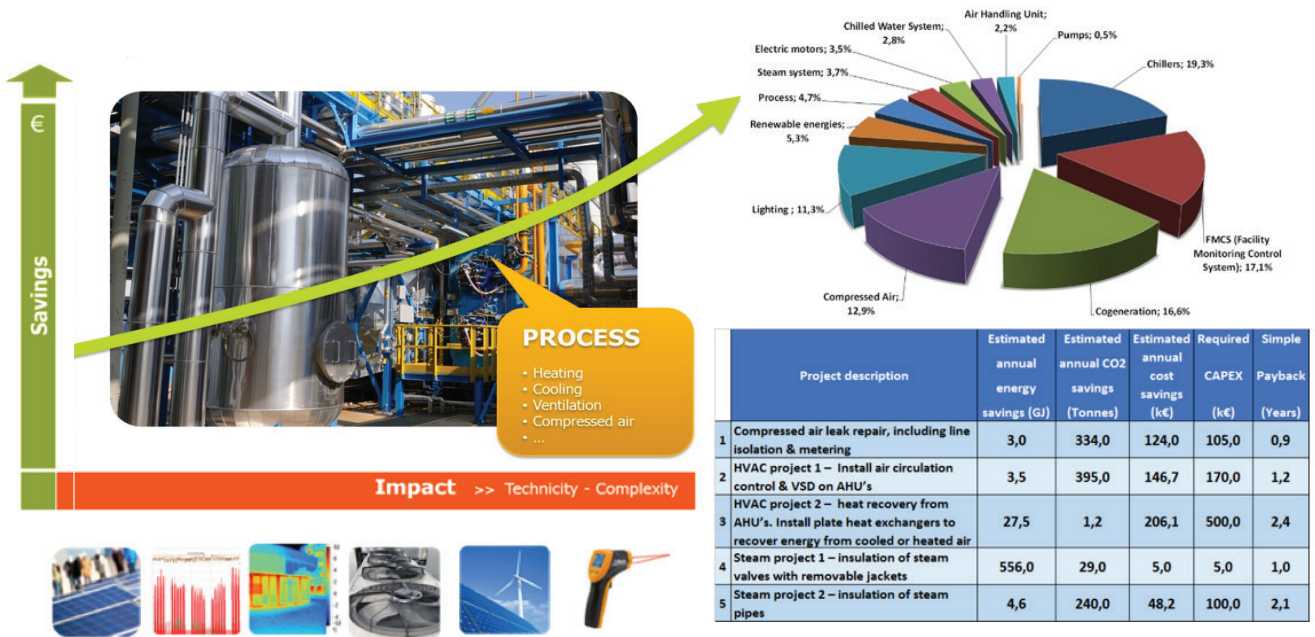
Client benefits

- Fast, accurate identification of the best cost saving solutions to implement with lower payback in all aspects of process energy generation and usage
- Action plans to invest in high-performance technologies available on the market:
  - To gain competitiveness
  - To reduce the energy bill
- Co-created approach: customer involvement in thinking and identifying improvements

Industrial Energy Audit:

Our approach allows us to perform a detailed study of your current operations, to evaluate future needs according to your objectives and to define the optimisation possibilities, with or without investment, to improve your profitability.

Identify the levers for the energy performance of your facilities

	Project description	Estimated annual energy savings (GJ)	Estimated annual CO2 savings (Tonnes)	Estimated annual cost savings (k€)	Required CAPEX (k€)	Simple Payback (Years)
1	Compressed air leak repair, including line isolation & metering	3,0	334,0	124,0	105,0	0,9
2	HVAC project 1 – Install air circulation control & VSD on AHU's	3,5	395,0	146,7	170,0	1,2
3	HVAC project 2 – heat recovery from AHU's. Install plate heat exchangers to recover energy from cooled or heated air	27,5	1,2	206,1	500,0	2,4
4	Steam project 1 – insulation of steam valves with removable jackets	556,0	29,0	5,0	5,0	1,0
5	Steam project 2 – insulation of steam pipes	4,6	240,0	48,2	100,0	2,1

Some references

Energy Efficiency Solutions

Soap Manufacturing: Spain
Energy and Water Audit

Objective:
Identify Energy Efficiency solutions on production energy systems and the industrial process.

Solutions:
• Proposed sweeping changes to the steam distribution and condensate return systems, including a CHP feasibility report, together with modifications to the process heating, compressed air and ventilation systems

Results:
• 16,4 GWh estimated annual savings
• 682 000 € of operating cost savings
• Reductions in CO_2 emissions of 3 100 tons per year
• Global simple payback of < 5 years

Global High-Tech Company: Italy
Multi-site Energy Audit

Objective:
Perform Energy Audits in 16 factories in various sectors covering rail, transit vehicles (manufacturing/refurbishment), and integrated mobility solutions and aircrafts production.

Methodology:
• Site visit, data collection, analysis of the energy use in the plants, evaluation of the most energy consuming areas and equipment, suggestion of several Energy Efficiency measures.

Results:
• 44 energy savings measures identified
• 10 M€ of total energy savings potential
• Global simple payback of total solutions < 2 years

Food Manufacturing: UK
Energy and Water Audit

Objective:
Identify Energy Efficiency solutions within a margarine and mayonnaise production facility.

Solutions:
• Identification of several energy efficiency measures in the steam, condensate, refrigeration, river water cooling, compressed air and electrical distribution systems

Results:
• 26,6 GWh estimated annual savings
• More than 1 600 000 € of operating cost savings
• Reductions in CO_2 emissions of 9 500 tons per year
• Global simple payback of < 4 years

See also Energy Masterplanning solution for industrials

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