

Master Plan Energy



Energy Efficiency Solutions

A guiding tool and strategic solution for consistent energy investment decision-making

Faced with the challenges of the Energy Transition, Tractebel supports its clients by providing strategic advisory services.

The Master Plan Energy provides a strategy for implementing best energy practices to achieve your energy objectives and is an effective solution for deciding future investments in the energy infrastructures of industrial or tertiary sites.

Our approach

- Pre-feasibility study of “smart energy” solutions (e.g. integration of storage, renewable energy, etc.)
- Solutions attuned to each client’s specificities & objectives as the result of a co-creation process
- Cost-benefit analysis of different energy scenarios
- Action plan on the main energy principles to be implemented according to the client’s objectives (from optimal energy cost to zero CO₂ emissions ...) in terms of:
 - Type of equipment (boilers, cogeneration, wind ...)
 - Source of energy (biomass, gas, hydrogen, etc.)
- Possibility of multi-site energy study to identify the most promising sites in terms of energy optimisation

Our added value

The use of an in-house developed, advanced simulation tool for energy scenarios integrating:

- The cost and operating of the systems (CAPEX / OPEX)
- The emissions of the systems (CO₂, NO_x, SO_x, including CO₂ emission quotas emitted)
- The analysis of the reliability of the studied systems
- Flexibility constraints (site, energy systems)
- The relevance and optimisation of energy storage systems (electricity, heat, cooling ...)
- Cost-benefit analysis of each study solution
- Sensitivity studies (primary energy prices ...)

Client benefits

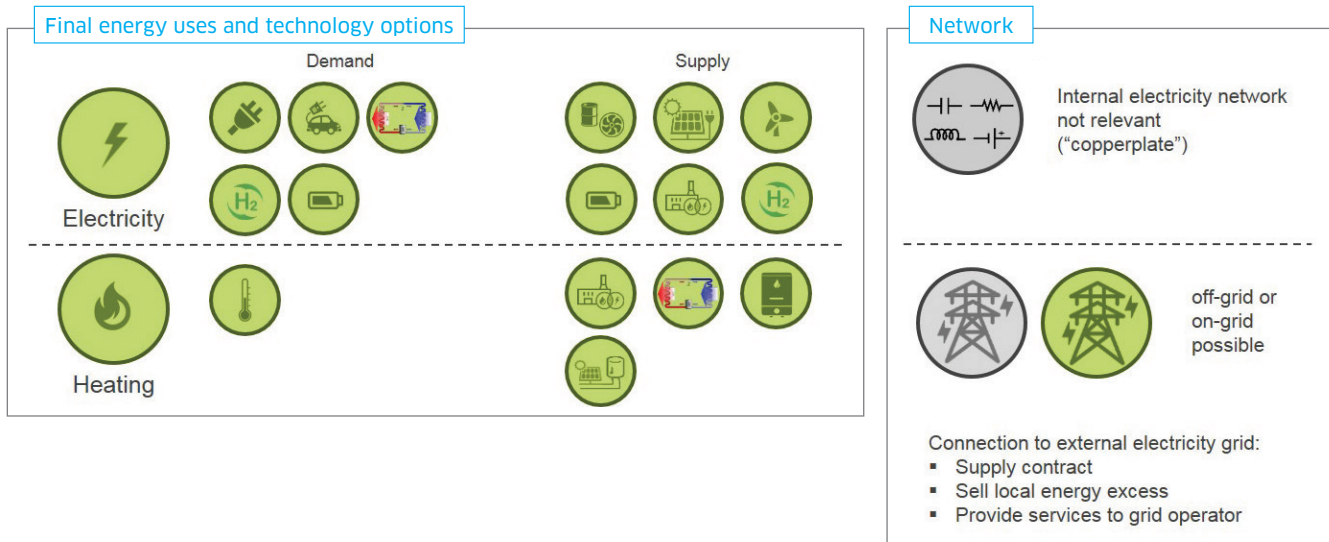
- The issue is addressed on a strategic level
- Multidisciplinary energy approach
- Safety, reliability, flexibility, regulations and all constraints considered
- Quantitative simulation and optimisation model for complex and multi-utility systems
- Systemic vision
- Detailed simulation at the scale of one or several industrial and tertiary sites (possibility of multi-site study)
- Informed decision-making on energy investments



Energy Master Planning: the basis of your energy efficiency strategy:

The Master Plan provides an energy roadmap in a deep-dive energy approach, tuned to specific client needs and using quantitative simulation and optimisation model for complex and multi-utility systems, to respond to the actual and future client's energy needs.

Expert studies based on in-house state-of-the-art simulation tools including all technical and financial aspects (systemic vision)



Some references

Energy Efficiency Solutions

Automotive factory: Belgium Industrial Master Plan Energy

Objective:

Minimising CO₂ footprint while optimising energy cost of a large automotive factory.

Methodology:

- Assessment of sustainable energy investments
 - For electricity and heat demand
 - CHP, heat pump, boilers...
 - Feasibility for thermal/electric storage
- Renewable energy potential assessment
 - On-site wind energy
 - On-site PV expansion
- Short and long-term scenario
 - Identifying short and long-term energy strategy

Result:

- The study provides the basis for important future energy infrastructure investments

Hospital: USA Tertiary site Master Plan Energy

Objective:

Development of an Energy Master Plan for the creation of a new hospital.

Methodology:

- Assessment of sustainable energy investments for the energy supply of a new-build USA hospital
 - Electricity, heat and cooling demands
 - PV, CHP, heat pump, solar thermal, thermal/electric storage feasibility
- Definition of the most relevant energy mixes
 - 9 configurations studied
- Sensitivity analysis
 - Evaluation of future situation according to various scenarios of energy price evolution
 - Robustness of optimal scenario > Tipping points between solutions (electricity / gas price)

Result:

- The study provides the basis for important future energy infrastructure investments