



WE

INDUSTRIAL SECTOR

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Globally the industrial sector is responsible for around one-quarter of total energy consumption. The industrial sector spans a wide variety of activities. While the energy saving potential in industrial application regularly exceeds 30% (except for very modern production plants), finding the most efficient solutions for reducing energy consumption is often a complex task.

OVERVIEW OF EXAMPLES FOR ENERGY SAVING AND RENEWABLE ENERGY INVESTMENTS IN THE INDUSTRIAL SECTOR

MAIN ENERGY CONSUMERS ACROSS ALL INDUSTRIES

Electrical energy:

- Compressors
- Pumps
- Motors
- Fans
- Lighting, cooling & refrigeration

Gas and fuel oils:

- HVAC
- Furnaces & kilns
- Steam & Heat

MAIN ENERGY EFFICIENCY MEASURES

- Efficient Manufacturing / process equipment
- Efficient models and variable speed drives for motors, fans and pumps
- Compressor replacement
- Efficient boilers
- Combined Heat & Power (CHP) or Tri-generation
- Heat recovery systems
- Energy efficient lighting
- Energy management systems
- Solar PV (factory roofs are large!!)
- Solar hot water

MAIN ENERGY EFFICIENCY MEASURES IN FACTORY AND ADMINISTRATIVE BUILDINGS

- Building insulation
- Energy efficient windows
- LED lighting inside administrative buildings and in parking lots
- HVAC
- Office equipment

CASE EXAMPLES:

FURNITURE

A manufacturer of high quality chairs and tables invested in an air compressor, efficient power staple guns, finishing spray guns and a programmable thermostat and benefited from a 58.8% reduction in the consumption of natural gas, electricity.

PHARMACEUTICALS



A pharmaceutical production company aimed to reduce the energy consumption in the warehouse and production buildings without compromising on product quality. The focus of the initial assessment was on the energy performance of the pharmaceutical HVAC systems. The agreed projects were implemented in order to reduce energy consumption, whilst maintaining quality, safety and regulatory requirements. The projects consisted of replacement and optimization of fans and fan controls in AHUs of the warehouses and installation of temperature demand controlled ventilation for the production area, producing energy savings of 2.5 MWh/a and 1,950 MWh/a respectively.

PRINTING

A printing company with the capacity to produce 8,000 square meters of printed materials undertook a simple energy assessment to improve its energy consumption. Resulting from the consultants' recommendations, the company made the following improvements:

- Compressed Air – installed a properly sized air compressor, delivering the required 6 bar instead of 10, saving approximately 23 % of energy
- Installed LED lighting throughout and saved more than 60% on lighting energy
- Replacement of HVAC system reduced system related energy consumption by 30%



METAL PROCESSING



A large metal processing company with the production capacity of three thousand reinforced concrete units per month invested in optimizing the energy efficiency of its plant. The project consisted of installation of new press scissors to reduce operational costs and energy consumption in the melting furnaces, decentralization of compressed air system, heat recovery and automatic control systems. The investment resulted in annual energy savings of 30,000 MWh per year and also reduced production wastes and operation time.

