

# THE LARGEST COGENERATION UNIT OPERATING ON LNG IN SOUTHERN POLAND.



case study of Schumacher Packaging



We conducted a mandatory energy audit at the Schumacher Packaging plant in Myszków, and then identified and implemented a number of investments with a total cost of over EUR 14,8 million. However, let's focus only on a fragment of this modernization - we are talking about a 4.4 MW cogeneration unit, which has been operating at the plant for several months. As of September 2024, it is the largest operating cogeneration unit in southern Poland.

Schumacher Packaging is a global manufacturer of various types of paper packaging. With 29 branches, the company is one of the largest manufacturers of solid and corrugated board products in Europe.



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Our work with Schumacher Packaging began with...

## EED Audit



The client performed a mandatory energy audit of the company. We indicated to him actions that could contribute to achieving high energy savings in the plant and he decided to implement the investment with DB Energy.

### First steps - modernization of the CHP plant

At the beginning, DB Energy engineers noticed a very low initial efficiency of the boilers, which was only 65%. They also noticed numerous operational problems with their infrastructure and the lack of automatic regulation of operating parameters.

Thanks to the implementation of a comprehensive modernization, we managed to increase the efficiency of the boilers by 31%. We reduced the plant's demand for energy in fuel by 72 GWh - that's about 300 wagons of coal! By applying for White Certificates before the start of work, the Client also gained the opportunity to obtain energy efficiency certificates worth about EUR 2,65 million.

We talk on this part of the project here:



#### Schumacher Packaging

How to save 20 million?



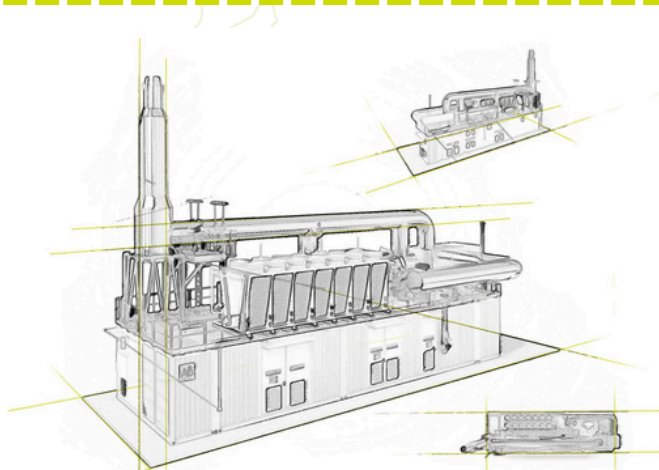
### Next steps

In parallel with the modernization of boilers in the CHP plant, we also implemented dust removal, denitrification and desulphurization installations, construction of a gas boiler room, expansion of the water treatment plant, a new coal conveyor system, modernization of the steam turbine in the CHP plant and a cogeneration installation.

Thanks to such comprehensive implementation of projects in the field of energy and thermal energy, the plant in Myszków **independently generates almost 9 MW of electricity**. Designing the entire investment and obtaining permits took over a year, but thanks to flexibility we were able to meet all of the Client's assumptions in such a way as to achieve maximum energy efficiency.

### Cogeneration installation

Initially, the plan was for a 1 MW cogeneration unit. Over time, however, this plan changed and the installed **cogeneration unit ultimately produces 4.4 MW of energy - including 3 MW of heat and over 1.7 tons of steam** needed in the production process.



The plant had an existing gas station for its own needs. It turned out that to power a larger cogeneration unit, twice as much gas was needed than the station could provide. **We expanded the gas station and added another boiler.** We also built our own **transformer station**, which outputs energy from the cogeneration to the production process and powers a new gas (steam) boiler house.

# 3 years

Payback period

### Modernization effects

Currently, production is not only dependent on two boilers in the CHP plant, but can also produce heat and steam in a gas boiler room and cogeneration. Thanks to the diversification of energy sources, these installations can be used interchangeably and energy can be saved. The cogeneration unit currently provides about 40% of the plant's energy demand.

# EUR 5 mln

Total investment cost

# 1445

industrial projects

We help medium and large industrial companies become part of a zero-emission future. We want to co-create factories that we could have right outside our doors. We advise, design, implement and finance energy efficiency activities. This is decarbonization that pays off.

## EUR 1.3 bn

value of completed projects

## 9.8 TWh

total reduction in energy consumption

## EUR 512 mln

annual savings of our customers

# Decarbonization, that pays off