

POWER PROFILE

Customer: Zakrzewscy Meat Processing Plant

Location:

Kosów Lacki, Poland

Customer Business Issue:

Energy savings

Solution:

CG170-12 gas generator set

Cat® Dealer:

Eneria Poland



Design adaptations were necessary to ensure the system operates safely and efficiently with prevailing conditions at the plant.



Zakrzewscy Meat Processing Plant is one of Poland's leading meat producers.

THE CUSTOMER

The family-run, Zakrzewscy Meat Processing Plant was established in 1994. Based in Kosów Lacki in Mazovian Voivodeship province, 120 kilometers northeast of Warsaw, the company runs a modern plant where quality meat production practices are combined with advanced technologies to make it one of Poland's leading meat producers.

The family business competes on an international stage, having established a large and growing customer base across four continents; Europe, Africa, Asia and South America. Among their customers are meat producers, processing plants, exporters, wholesale traders and trade networks.

The main activities at the plant include processing of animal meat to produce quality meat sides, quarters and meat portions as well as skins for resale.

POWER NEED

At the end of 2018 and early 2019, many factors signalled significant increases in electricity prices on the Polish energy market. Despite reports of possible remedial action intervention by the government to help businesses offset higher electricity costs, this was a clear signal to industry that it was time to diversify their sources of energy.

The need to maintain lower operating costs and continue to offer competitive prices to their customers prompted the Zakrzewscy management team to explore new sources of electric power, which would serve to insulate the plant from fluctuations in its utility bill, according to plant director Mrs. Wladyslawa Grabska.

SOLUTION

Cat® dealer Eneria came to Zakrzewscy's assistance, offering the highly efficient Cat CG170-12 generator set and a combined heat and power (CHP) system fuelled with liquified natural gas (LNG).

The 1 MW system required expert planning and installation. "Design adaptations were necessary to ensure that the system would work safely and efficiently in conjunction with prevailing conditions at the plant, while simultaneously meeting the criteria for low noise levels so as not to create a nuisance to plant employees." Grabska said. "All those goals were achieved thanks to the applied expertise from the power systems professionals at Eneria."

Whilst the power provided by the installation is applied to the many mechanical processes around the plant, the heat recovered from the engine and the exhaust are used to produce hot water for both sterilizing and production purposes. Any residual heat is also sent to a thermal storage tank, enabling the Cat generator set to continue to operate at full load even during a low demand period.

Eneria not only guaranteed maximum use of the system's potential, but also adapted it to the individual needs of the plant. Technicians developed a number of unique structural features to adapt the CHP system to the buildings and existing installations. These adaptations eliminated any potential problems with access, which could have easily hindered operation of the system and in turn, the entire plant.

In addition, the installation not only enables the Zakrzewscy's to maintain consistent production costs, but also sees their plant capable of operating in island mode in the event of a grid power outage.

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RESULTS

Thanks to the installation and final commissioning of the cogeneration system in October 2018, the Zakrzewscy Meat Processing Plant enjoys notoriety not only from its high-quality produce, but also from its innovative, new energy solution. The distributed energy system installed by Eneria was one of the first gas-fuelled combined heat and power unit in Poland to reach more than 17,000 hours on LNG.

“We are closely monitoring the situation on the Polish energy market,” said Eneria CEO Leszek Nicgorski. “We are aware of the great significance that our customers attach to it. After all, the price of electric power has a significant impact on their operating costs. The range of solutions offered by Eneria includes those that may greatly reduce the uncertainty of electrical bill amounts, which is so burdensome for business.

“Entrepreneurs may choose from amongst many combined heat and power systems, which can be easily adapted to their needs and requirements,” Nicgorski said. “This will let them focus again on their own business.”

Thanks to its skilled technicians, Eneria can quickly and efficiently adapt its products to the individual needs of its customers. As was the case with the Zakrzewscy Meat Processing Plant, Eneria’s specialists provide expert assistance during the entire investing and installation process, which enables them to make the best-informed decisions and choices, resulting in greater profits the achievement of even greater operating efficiency.

In the final analysis, Grabska says the inherent advantages of CHP—cost savings and energy efficiency—along with the support of its local Cat dealer helps keep the Zakrzewscy Meat Processing Plant competitive with other international players in the meat processing industry.

For more information, please visit cat.com/chp



The plant combines quality meat production practices with advanced technologies.