

## Tomato grower slices energy costs with Perkins powered CHP unit

Located at Stekene, between Ghent and Antwerp, tomato grower Persoon has 10,500 square metres of greenhouses where the popular vine tomato variety Flandria Princess is cultivated. Selling to Belgium's largest vegetable auction BelOrta, the company is keen to maximise its production while keeping costs in check.

However, like many other growers in the region Persoon has had to combat rising energy costs as the price of fuel oil to heat the greenhouses has gone up. Determined to cut operating expenses the business engaged Perkins Gas Partner and cogeneration specialist, E Van Wingen (EVW) to examine the options. Calculations showed that CHP could lower its heating and lighting costs by as much as 30 percent using current gas and electricity prices.

The decision taken, EVW installed and commissioned a new CHP unit using a Perkins 4008-30TRS2 gas engine that produces 509 kWe and thermal output of 767 kWth.

The resulting installation has not only improved economy and efficiency but has the added bonus of being able to use the carbon dioxide (CO<sub>2</sub>) from the exhaust gases to be injected into the greenhouses to feed the plants.

There have been additional environmental and financial benefits; a saving of 237 tons of CO<sub>2</sub> has been achieved and the business now benefits from CHP certificates as well as the revenue from exporting electricity it doesn't need back to the public grid.

The heat requirement for Persoon's greenhouses varies with the seasons. In summer the cogeneration is designed to operate only during peak hours to achieve maximum revenue from selling electricity with the heat being stored to be used during the night. In contrast, in winter cogeneration operates around the clock. Overall the system runs for 6,000 hours a year.

Jean-Pierre Van Wingen, EVW general manager, stated: "Our CHP customers turn to us because they are interested in the performance of both the Perkins engine and the service team who will take care of long term maintenance. We are surprised at how many of our new customers seem to have been

struggling with maintenance contracts in their earlier cogeneration contracts from other brands and suppliers.

“They almost cannot believe EVW is still servicing EVW/Perkins cogen units installed 20 years ago and with a satisfactory track record. Long term commitment to end users is indeed key to success in the cogeneration business.”



Photos: Tomato grower Persoon engaged E Van Wingen to install and commission a new CHP unit using a Perkins 4008-30TRS2 gas engine.