Westhof Bio – CHP as part of the recycling economy

FIVE NEW CHP PLANTS FOR TWO OF THE LARGEST ORGANIC GREENHOUSES

Westhof Bio operates two of the largest organic greenhouses in Germany at its sites in Wöhrden and Hennstedt in Schleswig-Holstein. Maintaining an intact environment is just as important here as the production of healthy, high-quality food. Westhof Bio places great importance on ensuring that production takes place cleanly according to organic farming regulations and that all areas of the company are managed with a focus on saving resources and an environmentally-friendly approach. At the site in Hennstedt, a total of 105,000 tomato plants are planted from 2021 (panicle, mini panicle and roma tomatoes), while, at the site in Wöhrden, 70,000 pepper plants are also planted in addition to 45,000 tomato plants (panicle, mini panicle and roma tomatoes).

Due to the high energy requirements and the generally extremely advantageous conditions in greenhouses, Westhof has been operating CHPs at both sites for a number of years. The existing modules are currently being supplemented with a total of five 2G systems (three in Hennstedt, two in Wöhrden) as part of a flexibilization measure.

The three avus 2000a modules in Hennstedt are supplied completely with biomethane and therefore cover a large portion of the occurring electricity and heat requirements with gas from renewable production from the grid. At the site in Wöhrden, Westhof Bio also operates its own biogas plant that supplies gas for operating the avus 2000a. The site in Wöhrden is also supplemented with another avus 3000a CHP run with biomethane.

CO_2 fertilization as a central component

The already high efficiency or sustainability in energy generation with CHP systems is increased even further during use in greenhouses, as the CO_2 produced during the combustion process can be collected, filtered and used to fertilize the plants. In addition to efficiency, this was one of the main reasons for the investment in CHP systems and for the expansion at Westhof, explains Project Manager Nils Wieczorek: “The focus of our actions is on ecological farming, hand in hand with nature and natural cycles. So it’s obviously really great that we can even support the plant growth with the by-product from energy generation.”

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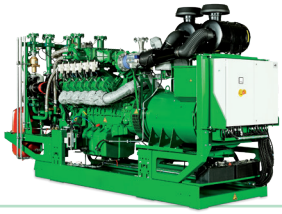
>
> Nils Wieczorek | Westhof Bio

Everything from a single source: planning, installation, financing

The smooth implementation of the project with a total of 11 MW required careful planning and, above all, the experience from many other plant construction projects over the past few years, explains 2G Project Manager Christoph Rotthaus: “In addition to the construction of a new machine house, some of the modules were also integrated in existing infrastructures. A separate area with masonry and additional concrete ceiling was created in an existing hall, for example, to fulfill the noise protection requirements.” He particularly emphasizes the extremely pleasant cooperation with Westhof here. “The important thing in this dimension of project is that all parties work hand in hand – this was definitely the case with Westhof.”
In addition to the technical integration, Rotthaus also points out the financing of the project: “The project is a great indication of the complete range of services that we can offer our customers. With our company subsidiary, 2G Rental GmbH, we were also able to help with the financing of this mammoth project.” Nils Wieczorek really values this combination: “We really appreciate the fact that we can combine our commitment to sustainability with good economic efficiency. The support from 2G, from the financing to the implementation, made the entire project much easier.”



WESTHOF BIO®

Westhof Bio-Gemüse GmbH & Co. KG
westhof-bio.de

4 x avus 2000a, 1 x avus 3000a
Biomethane, biogas
4 x 2.004 kW, 1 x 3.360 kW electrical
4 x 2.330 kW, 1 x 3.801 kW thermal
Machine house installation