

# CHP REACTIVATED

## Repowering Biomassehof Achenal

### SUSTAINABLE ENERGY PRODUCTION

2012 on the company grounds of the Biomassehof Achenal in Grassau (Bavaria) a wood gasifier and a CHP (constructed from another company) with a thermal output of 630 kW and an electrical output of 380 kW were commissioned for the first time. The plan was to use the regional available wood to produce economic energy CO<sub>2</sub>-neutral. The heat had to be feed into the existing district heating system of Grassau, whose heat plant is located in the neighborhood of the Biomassehof. After a few hundred of operating hours the whole plant had to be put out of operation and is unused since them.

### DECISION TO CONVERT

Because of the high demand for connections at the district heating system and the network expansion capacity limits were reached. The issue with the wood gasifier has been raised with the Burkhardt Company. In the middle of 2015 the decision

was taken to dispose of the old wood gasifier, convert the boiler house and build two new Burkhardt-Wood Gasifier V3.90. This double unit should run with the existing CHP. The biggest challenge was to adapt the foreign CHP-System to the Burkhardt Gasifier. Thus, in the spring of 2016 the whole unit was disassembled, set up at the facilities in Mühlhausen and modified extensively. With a new control technology and the dismantling of a few attachments the CHP was adapted to the Wood Gasifier. After the successful commissioning in the middle of July 2016, the wood gasifiers and the CHP produce 550 kWth and 330 kWel. This roughly corresponds to the energy consumption of 600 households and the heat consumption of 200 households. For this purpose, about 2,000 tons of wood pellets were used annually. With a plant-availability of 93% after an operating time of 680 hours, it can be said that the project was implemented successfully.



Top view Burkhardt wood gasifier.

### FACTS AND FIGURES

**Location:** Biomassehof Achenal, Grassau (Bavaria)

**Information plants:**  
2x Burkhardt Wood Gasifier V 3.90  
1x CHP by 2G (on site, modified by Burkhardt 2016)  
total Power:  
330 kWel and 550 kWth

### Comissioning

June 2016



After modification: now two Burkhardt Gasifiers supply one CHP



Power station with the two new gasifiers.