

„ECOENERGIE BEETEBUERG“

ANOTHER BURKHARDT PLANT IN LUXEMBOURG

ON THE SEARCH FOR A NEW ENERGY SUPPLY

Since 1996, the district heating network in Bettembourg, Luxembourg, has been supplying a number of public buildings, such as the community centre, the primary school, the sports hall and the swimming pool, as well as various homes (e.g. care homes, day-care centres), with heat. This had previously been produced in the energy centre using natural gas fired CHPs. After the contract for the natural gas fired CHP centre had expired in 2016, an alternative means of energy production needed to be found. The decision was taken to use an environmentally-friendly means of heat production from biomass and, for this reason, to build a new energy centre.

BURKHARDT GASIFIERS IN USE

At the very heart of the new construction there are two Burkhardt wood gasifiers with two CHPs and two pellet boilers.

The special feature of the Burkhardt system is that it uses homogeneous fuel, that is to say, wood pellets.

These are standardised according to EN Plus A1 and therefore guarantee a consistent and stable gasification process. This in turn provides greater efficiency and longer operating times.

The certified wood pellets for the new systems are manufactured in Luxembourg.

The new wood gas systems with a total output of 520 kW of thermal energy serve to cover the heat base load. A positive additional effect: an electrical output of 330 kW is produced by means of cogeneration. The electricity produced in the centre is fed into the public network. The wood pellet boilers supply the base and medium load with a total thermal output of approx. 1,400 kW. Two natural gas boilers are to cover the peak load. A total of around 2,800 t of wood pellets will be used for the biomass-driven systems. The architect-designed energy centre offers space for the entire heat production and periphery, as well as for the fuel storage with a capacity of 220 m³. Following a construction period of around one year, the new biomass energy centre was opened in October 2018.

RENEWABLE FUEL

With the new heat supply, around 85% of the annual thermal energy in Bettembourg can be covered through the use of wood pellets as a fuel. Savings of approx. 1,600 tons of CO₂ can be made in comparison to the previous natural gas plant.

FACTS AND FIGURES

Location: Bettembourg (Luxembourg)

Information: Base load with wood gasifiers, Base and medium load with wood boilers

Burkhardt plant information:

2x Burkhardt wood gasifiers V 3.90

2x Burkhardt CHPs ECO 165HG

with a total output of:

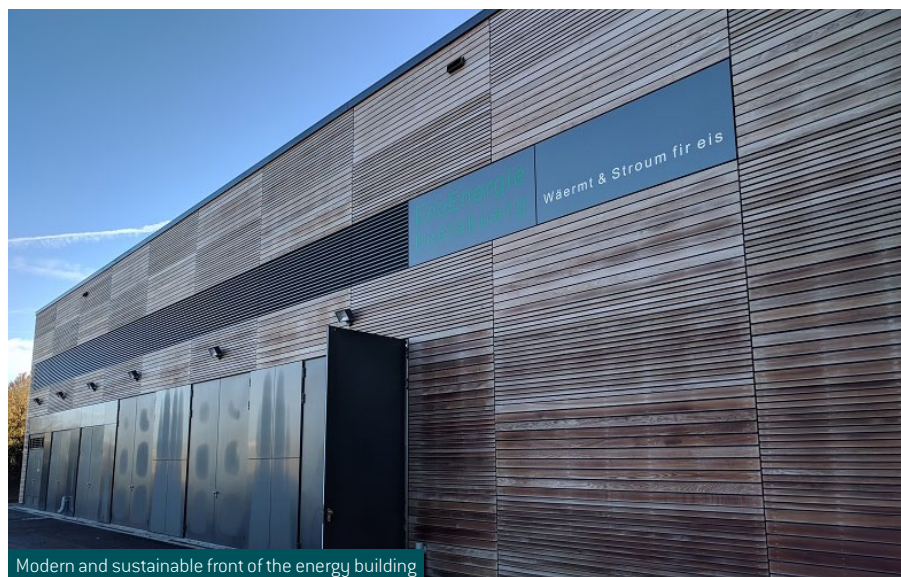
330 kWel and 520 kWth

Commissioned:

2018



One of two CHP ECO 165 HG



Modern and sustainable front of the energy building



Wood gasifier with gas reactor