



# Green Energy for Erkner



A significant milestone for the heating transition in Brandenburg: with the installation of two large heat pumps and a biomethane CHP plant, the heating plant in Erkner Mitte is now fully equipped and generates over 50 percent renewable heat.

## The system at a glance:

- Combination of a biomethane CHP plant and two heat pumps
- Over 50% renewable energy in the district heating network of the city of Erkner
- Natural refrigerants ammonia and propane and heat storage for maximum efficiency
- Intelligent sector coupling that protects the power grid

Green district heating now flows here – generated by an innovative combination of biomethane CHP and highly efficient heat pump technology from 2G. The project has been made possible by the close and trusting cooperation between EWE subsidiary TEWE and 2G, as well as targeted funding as part of the federal subsidy program for efficient heating networks.

The new generation system consists of a biomethane-powered CHP plant for base load supply and a two-part heat pump system. The installed CHP plant, agentor 408, produces electricity and heat simultaneously with an electrical output of 360 kW and a thermal output of 400 kW. The green electricity generated in this process in turn drives the 530 kW heat pump system.

Thanks to intelligent sector coupling, there is no additional load on the power grid.

### **Intelligent technology for maximum efficiency**

The heat pump system is a series connection of an afilea air AEK-R290 series air-to-water heat pump and an afilea water R717 series water-to-water heat pump. This system enables the sustainable and efficient heating of water to 80°C using environmental heat and supported by a heat storage tank. When selecting the refrigerant, the focus was on efficiency and sustainability, so that only natural substances such as propane and ammonia are used.

With the commissioning of the system, the share of renewable energies in the Erkner district heating network increases from zero to over 50 percent. The largest customers include the city of Erkner, the education center, and the Erkner housing association. The green district heating also supplies climate-friendly apartments, public facilities, and educational buildings.



### **Heating Plant Erkner Mitte**

agenitor 408 | afilea air AEK-R290 |  
afilia water R717

