

# Using waste heat and improving the carbon footprint

STEAG and KRAFTBLOCK aiming in joint projects for market leadership in industrial waste heat utilization

**Sulzbach/Saarbrücken/Essen. The Saarland-based startup KRAFTBLOCK and STEAG New Energies GmbH, a subsidiary of the energy company STEAG with headquarters in Essen, are planning to embark upon joint waste heat and energy storage projects. The two companies have agreed on this venture in a Letter of Intent.**

STEAG is a major supplier of precisely tailored, distributed energy solutions for industrial customers and local authorities, and has decades of experience in the fields of energy generation from renewables, geothermal energy, waste heat recovery and district heating supply. The start-up KRAFTBLOCK, a spin-off from Saarland University in Saarbrücken, has developed a heat storage system for stationary and mobile deployment that has the potential to make an important contribution a successful energy transition – especially the heating transition – in Germany and Europe.

## **Innovative, mobile storage technology made in Saarland**

KRAFTBLOCK is a modular, scalable storage system that can store thermal energy – i.e. heat – at up to 1,300 degrees Celsius. The nanotechnology-based granulate is much more efficient than conventional storage media such as salt and concrete, which usually only reach a maximum of 600 degrees Celsius. It also consists of 85 percent recycled material and has a service life of over 30 years, which makes KRAFTBLOCK a very sustainable heat accumulator.

“Our storage system makes it possible to decouple renewables-based energy production and the consumption of climate-friendly energy. It is thereby made available when it is needed – even when there is no wind, or during the night. In addition, our modular system can be used very efficiently in

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industry for the utilization of waste heat, which will help many companies with decarbonization,” says Dr. Martin Schichtel, a chemist by training and founder and managing director of KRAFTBLOCK.

### **Frank Thelen is backing KRAFTBLOCK**

Investor Frank Thelen is also convinced of the system’s ecological and economic potential and its technological innovativeness. The CEO of Freigeist Capital holds a stake in KRAFTBLOCK as part of a strategic investment. “Freigeist focuses on start-ups with visionary ideas that have the potential to trigger disruptive developmental leaps in their industries,” says Frank Thelen, whose investment company is appropriately located in Bonn’s Joseph-Schumpeter-Allee; named after the Austrian national economist who, as early as in the 1940s, described the impact of groundbreaking technological innovations as the “creative destruction” of traditional ways of doing business.

### **Combining strengths**

The new partners see exactly that kind of potential being created in their future collaboration. By combining their specific strengths, STEAG and KRAFTBLOCK intend to develop innovative concepts in the field of storage technology on a project-by-project basis. “The possibilities here are very diverse thanks to the high mobility of the storage facility. In this way, waste heat potential in industry and commerce for which there have been no economically feasible solutions to date can be developed in the future,” says Dino Mechenbier, who is in charge of the cooperation on the part of STEAG New Energies.

However, not only the mobility of the KRAFTBLOCK storage unit represents a real quantum leap, as Dino Mechenbier explains: “Thanks to the significantly higher overall efficiency compared to other thermal storage units, it will be possible in future, for example, to exploit previously unused potential in waste heat utilization, the tapping of which was previously too expensive, because the heat to be extracted is not permanent but only temporary.” In such cases, a permanently installed system for waste heat utilization would not be profitable due to the low number of operating hours; with a mobile solution from KRAFTBLOCK, this would now be different.

### **Development of joint project ideas**

Thanks to STEAG’s many years of relevant industry experience and KRAFTBLOCK’s technical innovation, the partners are confident in developing joint project ideas. “Here, the scalability of the new storage technology and STEAG’s mentality of planning and implementing energy solutions tailored to the needs of the respective customer complement each other in an ideal way,” as Martin Schichtel and Dino Mechenbier explain why they are looking forward to the future joint project development.

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### **About STEAG**

For over 80 years, STEAG has stood for efficient and reliable power generation, both in Germany and abroad. The Group is a partner to local authorities and industry, particularly through its subsidiary

STEAG New Energies GmbH. The Saarbrücken-based energy experts specialize in developing customized, decentralized energy solutions that are both efficient and sustainable. In addition to energy generated from conventional sources, the portfolio extends from wind and bioenergy to mine gas, geothermal energy and district heating.

#### About KRAFTBLOCK

KRAFTBLOCK GmbH (formerly Nebuma GmbH) is a company which manufactures high temperature storage systems, founded in Saarbrücken, Germany, in 2014. The patented, nanotechnology-based storage granulate can effectively store thermal energy at temperatures of up to 1,300 degrees, which leads to a significantly higher efficiency than conventional thermal storage systems. Supplying the storage facility in modular containers allows for mobile, portable and stationary applications. The company was founded by Dr. Martin Schichtel and Dr. Susanne König.

#### About Freigeist

Freigeist Capital is a private investment fund that works with visionary start-up entrepreneurs to finance and build up disruptive technology companies. The company is known for its seed investments in Liliium Aviation, Kraftblock, Neufund and Smartlane. Some of its most prominent exits include Wunderlist (acquired by Microsoft), MyTaxi (acquired by Daimler) and kaufDA (acquired by Springer). The team of experienced business founders consists of Frank Thelen, Marc Sieberger, Marcel Vogler, Alex Koch, Niklas Hebborn and Lena Hessbrügge. Freigeist specializes in identifying and supporting outstanding new entrepreneurs at an early stage, often even before the company foundation.