

Herne's energy future takes shape

STEAG applies for final decommissioning of Herne 4 hard coal fired power plant

Herne/Essen. At STEAG's long-established power plant site in Herne, construction is currently in progress on a state-of-the-art combined cycle gas turbine (CCGT) power plant, which is to replace the hard coal fired unit previously operated there in the course of the coming year. The new Herne CCGT plant, which STEAG is to operate together with its partner Siemens, ranks among the most flexible, efficient and consequently resource-conserving power plants of its kind worldwide. STEAG has registered the coal fired unit, which went on line in 1989, for final decommissioning. The aim is to convert the unit to one with a boiler fired by natural gas. It is to be used in future to back up the district heating supply at the heart of the Ruhr area.

When the new Herne CCGT plant goes into continuous commercial operation in 2022, the old coal-fired combined heat and power unit at the same site will be history. "With the CCGT plant, which also generates electricity and heat at the same time in accordance with the principle of cogeneration, we are ensuring a secure supply and supporting the energy system in a much more environmentally friendly way," says Dr. Ralf Schiele, who, as a member of the management board of STEAG GmbH, is responsible for Markets and Technology. And furthermore, "STEAG is building the energy future in Herne and in doing so making an important contribution to decarbonization and the success of the energy transition in the region, because the switch to natural gas will roughly halve CO₂ emissions."

Hard coal unit to be converted for district heating backup

STEAG is also concurrently planning the second step in sustainable CO₂ savings at the Herne site. "We will also convert the plants that are to be used to back up the heat supply in the future to lower-emission fuel," says Ralf Schiele. To this end, STEAG is planning to convert the existing Herne 4 coal-fired unit to a natural gas-fired boiler.

Performance of the necessary work within the current schedule for the construction and commissioning of the Herne CCGT plant is dependent on a permit from the transmission system operator Amprion for the final decommissioning of the former hard coal unit. "Since such a decision is preceded by extensive reviews of, among other things, the system relevance of the plant to be

Page 1 of 3

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decommissioned, STEAG has today submitted a corresponding application to Amprion in order to be prospectively ready to take action next spring," Ralf Schiele explains.

STEAG takes a major step towards decarbonization in Herne

As soon as the transmission system operator has given its approval for final decommissioning, STEAG will be able to start implementing the plans after the 2021 heating period, i.e. in spring 2022. "With the Herne CCGT plant and the conversion of Herne 4 to natural gas, the heating supply to around 275,000 households in the heart of the Ruhr region, which is already climate-friendly today, will once again be noticeably lower in emissions," says Michael Straus, managing director of STEAG Fernwärme GmbH.

In terms of resource efficiency and climate protection, it will also be possible to reduce CO₂ emissions at the Herne site even further in the future by switching partially to green hydrogen firing.

Project secures employment prospects

STEAG's plans to convert the old coal fired unit in Herne are also good news for the Ruhr region as a business location. This is because the number of jobs that will be retained at the site in the long term even after the switch from hard coal to natural gas will be even greater. "Herne is and will remain a highly skilled energy hub where the energy transition for Germany is shaped. This is good news in terms of environmental protection in our city and in the region as a whole," says Herne's Mayor Dr. Frank Dudda.

Herne as a symbol of STEAG's successful transformation

At the same time, the projects in Herne are an expression and symbol of the consistently pursued process of transformation at STEAG as a whole: "For several years now, we have been successfully and with increasing speed aligning the company to the growth markets of the energy future," says Joachim Rumstadt, Chairman of STEAG's Board of Management, placing the environmentally friendly conversion works at the Herne site in a broader context.

"No matter whether in the field of the hydrogen economy, power generation and supply from renewables, storage technology, heat supply, the planning and implementation of customized decarbonization and efficiency solutions for industrial customers, or in the construction and operation of distributed generation plants or large-scale power plants as in Herne, STEAG always brings to the table expertise in energy that has grown over more than eight decades," says Joachim Rumstadt. This makes STEAG an active and successful contributor to the energy transition, especially in Germany.

"Because," as Joachim Rumstadt sums up, "the projects in Herne in particular fulfill the requirements for a forward-looking energy supply almost ideally: they guarantee security of supply, are cost-effective, resource-efficient and therefore environmentally compatible."

About STEAG

For over 80 years, STEAG has stood for efficient and reliable power generation, both in Germany and abroad. As an experienced partner, we support our customers comprehensively in all phases of power supply. We design, develop, implement, operate and market highly efficient energy solutions – from distributed generation facilities based on renewable energy sources to large central power plants and recycling of their by-products. Together with customized solutions in the field of electricity and heat supply, we also provide a wide range of energy services – increasingly on the basis of renewables. Successfully so: Since 1990, STEAG has permanently reduced its own CO₂ emissions by approximately 85 percent.

About STEAG Fernwärme

For over 60 years now, STEAG as a regional energy provider has been supplying private households, large customers and property companies in the Ruhr region with environmentally friendly district heating, the majority of which is generated in highly efficient combined heat and power plants. Each year, STEAG makes around 1.6 billion kilowatt hours of thermal energy available to its customers – equivalent to the needs of over 275,000 households. This makes STEAG the largest district heating company in North Rhine-Westphalia.