Continuing a successful partnership: A new combined cycle power plant gives Evonik a future-viable power supply

- Siemens Energy delivers another highly efficient combined cycle power plant to Marl
- Evonik replaces old backup gas power plant
- Siemens Financial Services arranges customized financing

Siemens Energy is building another highly efficient combined cycle power plant for the specialty chemical company Evonik at its largest industrial location in Marl, North Rhine-Westphalia, Germany. Consisting of one SGT-800 gas turbine, one SST-400 steam turbine, and two generators, the plant will produce power and heat with 90 megawatts of electrical capacity and 220 megawatts of thermal capacity. It will go into operation in 2022 replacing a backup gas power plant. Along with the power plant components, Siemens Energy is also supplying the SPPA-T3000 control system for controlling the cutting-edge plant. A long-term service agreement between Siemens Energy and Evonik will ensure the availability of the power plant and its components.

“Evonik produces sustainable and efficiency-increasing products. That is how we make a significant contribution to reducing CO2 emissions. Overhauling and retrofitting our energy infrastructure represents another way in which we are helping lower the amount of CO2 emissions,” says Rainer Fretzen, chair of the management board of Evonik Technology & Infrastructure.

“We are pleased to have won this contract. Marl VII is another milestone on the road to energy transition supported by our state-of-the-art power plant technologies, generating electricity with an overall efficiency of more than 93 percent. Siemens
Energy supports the emission goals of our long-term partner Evonik, and this project will build upon our trusted collaboration," explained Dr. Jochen Eichkolt, Member of the Executive Board of Siemens Energy.

Siemens Energy will develop and build the highly efficient power plant turnkey project as the general contractor. Siemens Financial Services and the KfW IPEX-Bank will fully finance the new plant during the construction phase and after commissioning with a project volume in the lower triple-digit million Euro range.

“Our many years of financial and industrial expertise in the energy sector played a decisive role in developing a customized financing solution together with Siemens Energy and KfW IPEX-Bank for the second power plant project in a row," says Veronika Bienert, CFO of Siemens Financial Services. “By successfully continuing this close and innovative collaboration, we were able to optimally support our customer Evonik in implementing another future-oriented energy transition project.”

The construction of the new combined cycle power plant is the second combined heat and power (CHP) project implemented this year at the Marl Chemical Park, which is Evonik’s largest site worldwide. The cornerstone for building the turnkey combined cycle power plant, known as Marl VI, was laid March 2020. With Marl VII, Siemens Energy and Evonik are now continuing their successful partnership. Once completed, Marl VI and Marl VII will be able to generate electricity with an overall efficiency of more than 93 percent and a capacity up to 270 megawatts. This is equal to the demand of approximately 750,000 households. Combined with the steam generators from the Duisburg-based Standardkessel Baumgarte GmbH, the plant will be able to generate up to 660 metric tons of process-steam per hour for the chemical park starting in 2022. Furthermore, it will continue to supply around 2,000 homes in Marl with district heat.

The power plant’s highly flexible load control system will make it possible to balance out fluctuations in the grid and even operate autonomously as an island solution in the event of a blackout on the site. This is an important and indispensable building block for the success of the energy transition.

Close to 400 gas turbines in the SGT-800 series have been sold worldwide. The entire fleet has now accumulated more than eight million operating hours. The SGT-
800 is especially suitable for CHP and combined cycle applications. The gas turbine features a high degree of reliability and efficiency, achieves low lifecycle costs, and minimizes pollutant emissions. In the future, Siemens Energy plans to operate the burner of the SGT-800 gas turbine with no fossil fuels, replacing them, for example, with hydrogen.

Model showing the new, highly efficient combined cycle power plant that Siemens Energy is going to build in a resembling form at the Marl Chemical Park.

This press release and press picture are available at
https://sie.ag/2MZT7xC
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