

Electricity and heat generated from straw – bio-energy power plant Emlichheim, Germany

Turnkey electrical engineering, I&C, and control engineering for the first heating plant in Germany fueled with straw with a rated thermal output of 49.8 MW

Scope of supply and services:

- + Delivery of the entire electrical engineering from the transformer to and from the energy supply company via MV, LV main distribution, LV distribution, UPS devices to appliances, incl. illumination
- + Delivery of I&C technology for the boiler, the straw conveying, and water/steam process systems
- + Delivery of the distributed control system ABB 800xA and the HIMA failsafe control for a total of approx. 4,000 process and bus signals
- + Entire detail engineering, programming, control cabinet assembly, wiring, and installation as well as commissioning for the electrical engineering, the I&C, and process control engineering

Features:

- + Distributed control system ABB 800xA with redundant AC 800M controllers and S800 remote I/O
- + Virtualization of the servers and the operator station computers
- + Failsafe control HIMA H51q-HS with Profibus communication to the distributed control system
- + Integration of package unit controls S7-300/400 for turbine, flue gas treatment, among other things
- + Load management of the power station for a coordinated supply of process steam for a potato starch production plant and of energy for the local heat supply and for the feeding of electricity into the grid
- + DCS engineering and control engineering documentation in compliance with VGB guideline R170-B06