Power Generation
Thermal plants

Fossil plants

Open cycle power plant

Waste to energy

Combined cycle power plant
Thermal power plants

References
Customer need

- Replacement of the old plant (built in the seventies located in Berlin city)
- Maintaining the district heating of Berlin South
- High efficient combined heat and power supply for Berlin
- Integration of electrical and control systems

**ABB’s scope of supply and services**

- ABB’s electrical system (transformers, IPB, GCB, MV, LV, UPS etc.)
- ABB Symphony Plus state-of-the art power plant automation system, instrumentation
- Mechanical systems (gas compressor, gas reducing station, air compressor, fire fighting)
- Project management, engineering, erection and commissioning

**Customer benefits**

- Reduce CO2 emission
- Competent partner for complex electrical and automation package to be integrated in local municipality

**Combined heat and power plant Lichterfelde Berlin, Germany**

Output: 300 Mwel & 230 MWth

Enduser: Vattenfall Europe Wärme AG, Germany

Customer: Iberdrola E&C, Spain

Year of commissioning: 2016
Maasvlakte, Netherlands

Customer need
- The new unit will be 20 percent more fuel-efficient and emit 1.2 million metric tons less carbon dioxide annually than a typical coal-fired unit. It will also cofire up to 30 percent biomass and cogenerate heat for nearby industrial enterprises, further enhancing its climate performance.

ABB’s response
- System 800xA control installation with boiler protection and all instrumentation: electrical actuators etc.
- Complete engineering, installation and commissioning

Customer benefits
- Thermal Efficiency more than 46 percent
- One of the world’s most energy efficient coal-fired plant
- CO₂ emission is approx. 20% lower than the average coal fired plant currently operational in the Netherlands
Wilhelmshafen, 800 MW, Germany

Customer need
- 800 MW clean coal power plant with high efficiency and low emissions
- Fuel and load flexibility for shifting and peaking operation

ABB’s response
- Complete electrical system (eBoP)
- Complete HV/MV/LV equipment incl. peripherials

Customer benefits
- Single source for eBoP with short delivery time and optimized interfaces
- Complete engineering and project management

Enduser: GDF Suez Kraftwerk Wilhelmshaven GmbH & Co.KG
Customer: GDF Suez Energy Germany (formerly Electrabel Deutschland)
Year of commissioning: 2014
Walsum Unit 10, 750 MW, Germany

Customer need
- 750 MW clean coal power plant with high efficiency and low emissions
- Frequency control and UCTE compliance
- Fuel and load flexibility for shifting and peaking operation

ABB’s response
- Complete electrical system (eBoP)
- Process control system including boiler and turbine control
- OPTIMAX® APC and BoilerMax process optimization

Customer benefits
- Single source for DCS and eBoP with short delivery time and optimized interfaces
- Leading automation and optimization technology for
  - Load flexibility
  - Frequency control and grid stability
  - Emission control
Customer need

- Refurbishment of the 280 MW boiler at lock 6 of the GKM power plant
- Retrofitting 2 of 3 boiler feedwater pumps with ACS 1000 VSDs, by replacing the old hydraulic couplings (with poor efficiency)

ABB’s response

- 2 x water cooled ACS 1000 VSD incl. dry type transformers, 4000 kW
- General overhaul and star-delta reconnection of the 6 kV motors

Customer benefits

- 20 – 25 percent energy savings: around 12’000 MWh / year
- Reduction of CO\textsuperscript{2} emissions: 10’000 t / year