

Efficiency boost and emission reduction

Owner's Engineer CHP Plant Modernisation



Location

Netherlands



Client

Essent
(RWE Generation SE)



Expertise

Owner's Engineer, CCGT Plant, CHP Plant, Cogeneration, Contract Management, Flexibility Improvement, Plant Modernisation

Our Services



- Project management and monitoring progress
- Day to day administration of the project
- Contracting and contract management of EPC contracts & LTSA (O&M)
- Quality assessment, QA/QC
- Assistance with principal contractor's contractual compliance
- Supervision of construction, commissioning and start-up
- Advice on H&S matters and obligations
- Support of mobilisation activities for O&H

Project description

The Moerdijk 1 power plant dates back to 1997, initially designed as a CHP plant. In order to increase operational flexibility, we were assigned to act as owner's engineer and technical advisor to build an additional combined cycle gas turbine power plant (CCGT) on behalf of Essent (now RWE Generation SE). Moerdijk 2 has a capacity of 430 MW and was built in the direct vicinity of the 330 MW cogeneration power plant Moerdijk 1. The new CCGT power station has an efficiency rate of more than 58 per cent. Its special design enables highly flexible operations. There were many technical challenges to master in building the plant. For example, the ground at the site was so soft that ~1,200 piles had to be driven 40 meters into the earth to provide a secure foundation for the power station.

Our owner's engineer services included: project development, project management, tendering, contract award and management (EPC/multi-lot, LTSA), engineering review and site supervision. We also ensured compliance with health and safety policies and advised mobilization activities for later operation of the plant.

Power Plant Modernisation



Over the last two decades, we supported various power plant modernisation projects within the RWE Group. Aiming to keep the RWE generation fleet profitable and competitive, we assessed the techno-economic potential of upgrading plants by improving existing gas-fired plants (especially in UK/NL) or repowering and modernising the coal-fired fleet in Germany. We applied modern technologies on gas turbines or water steam cycles, upgrading generators to enable those extra MW's being safely and efficiently generated and supplied to the grid. We also supported the role-out of O&M solutions that brought major cost savings to the total fleet.

Acting as owner's engineer and technical advisor on behalf of the RWE Group we were responsible for engineering, procurement, construction supervision, project management and contract administration duties. RWE's key projects we supported in the last 10 years include:

- **Lignite-fired/high-efficient power plant ("BoA") 2&3 in Neurath (GY)**
- **Hard coal-fired/high-efficient plant "Westfalen" (Units D/E) in Hamm (GY)**
- **Hard coal-fired/biomass cofiring plant in Eemshafen (NL)**
- **CCGT plant in Lingen (GY)**
- **CCGT plant in Staythorpe (UK)**
- **CCGT plant "Pembroke" in south-Wales (UK)**
- **CCGT plant "Claus C" in Maasbracht (NL)**
- **CCGT plant in Moerdijk 2 (NL)**
- **CCGT plant in Denizli (TY)**

Europe & Central Asia

