Flémalle, Belgium

783 MW

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John Cockerill

Flémalle, Belgium | 783 MW

John Cockerill designs the world's largest HRSG to equip ENGIE's plant in Flémalle (BE)

Context of the Project

The new gas-steam combined cycle power plant in Flémalle (Belgium) will be commissioned in mid-2025.

The site, which from the 1970s hosted the largest thermal power plant in Wallonia, will be upgraded to build a brand-new power plant.

With a capacity of 783 MW, it will be able to supply electricity to nearly 700,000 households. It will achieve an efficiency of over 63%, one of the highest in the world for a gas/steam combined cycle power plant, thanks to the John Cockerill boiler, which will produce a third of the power plant energy.

ENGIE chose this type of equipment to produce responsibly and significantly reduce nitrogen oxide emissions.

The Contract

In July 2022, ENGIE entrusted John Cockerill Energy with an order for the design and supply of one heat recovery steam generator, triple pressure with reheat to be installed downstream of a SGT5-9000HL gas turbine.

In addition to the design and supply, John Cockerill will be in charge of the transportation to the site, the assembly and supply of the feed water pumps, piping with pipe rack, NH3 tanks, as well as dosing and sampling.

This new equipment and the complete SCR system offered by John Cockerill will bring a significant plus to the Flemalle power plant since they will allow to significantly reduce nitrogen oxide emissions and thus produce more sustainably.

Plant Operation

The combined cycle power plant is designed to facilitate frequent start-ups and changes of regime.

Gas Turbine

- SGT5-9000HL
- Fuel: natural gas

Heat Recovery Steam Generator

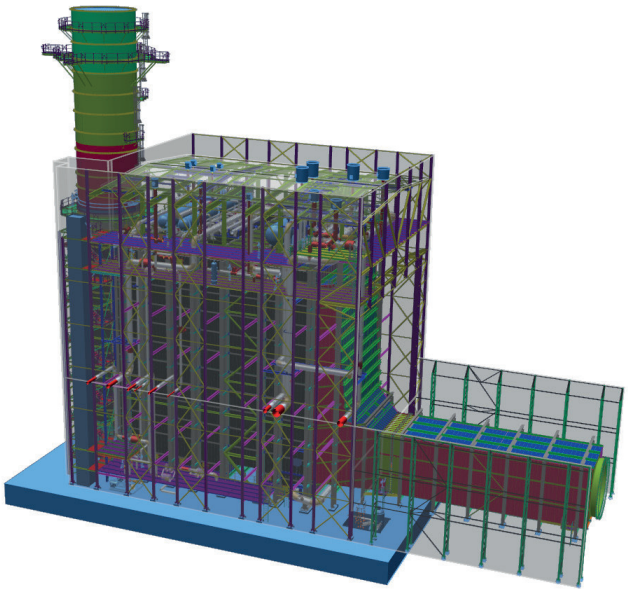
- 1 horizontal John Cockerill HRSG
- Triple pressure level + reheat
- ASME design and PED marking
- SCR
- Natural circulation

Performances

Gas	°C		kg/s
Inlet	679,5		1037,8
Outlet	64,5		1037,8
Steam	**°C**	**barA**	**t/h**
HP	603	163	576
IP	355	42	36
LP	302	6	56
Reheat	610	40	594

Schedule

Contract Award	July 2022
Start (first) Boiler Erection	November 2023
First Firing	January 2025
Industrial Start-Up	August 2025
Provisionnal Acceptance Certificate	September 2025



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