

# AB InBev

## Brewery



**Optimising the brewery's effluent treatment plant through operational excellence and a proactive partnership. SUEZ has added value by finding improvement opportunities across the entire effluent management system that provides a £2m saving on future capital expenditure while maintaining environmental compliance.**



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## About the customer

AB InBev, the world's biggest brewer, owns global brands such as Budweiser, Stella Artois and Becks. In South Wales, its Magor Brewery has an off-site effluent treatment plant (ETP) handling 200 m<sup>3</sup>/hr which is now operated and maintained (O&M) by SUEZ Water UK.

The ETP features a large anaerobic digester (AD) which, as part of the natural process, produces methane. This is collected, cleaned and burned in a gas engine to generate green electricity that is used to power the ETP. As well as the environmental benefits, this is important financially, as it lowers the plant's energy costs and attracts government incentives such as ROCS. The treated effluent from the AD is subsequently treated aerobically, before being discharged into the local water course, the Severn Estuary. Any failure of the ETP risks the final effluent breaching its compliance regulations, halting the brewery and impacting the environment.

As with any ETP, overtime they depreciate and lose efficiency if not operated and maintained effectively. In AB InBev's case, the plant was not achieving optimum efficiency, including not reaching its potential biogas yield.

## Our Solution

SUEZ is a leading provider of outsourced O&M contracts with a proven track record and can draw on its vast expertise and

experience to ensure that best practices are applied. SUEZ is responsible for managing the ETP at Magor and provides O&M on a 24/7 basis which is essential to support the brewery operations. Through daily process and chemistry checks, routine sampling and laboratory analysis, planned preventative maintenance, optimising the generation of biomass within the AD plant, and providing a reactive breakdown service to unforeseen incidents, SUEZ ensures the plant is operating efficiently overall and the final effluent remains compliant.

Having worked on some of the highest-risk plants in the UK, health and safety is a fundamental element of every operations and maintenance contract. Due to the risks associated with operating a large gas engine and the explosive nature of methane gas, having an operator with a strong, inherent health and safety culture and technical understanding of such equipment is particularly important to AB InBev. Subsequently, SUEZ has optimised the biomass from the AD plant which consequentially has maximised the biogas yield to ultimately generate more green electricity.

During the initial contract start up, SUEZ developed a process improvement plan which identified areas to improve efficiency and operating cost.

For example, for many years, aerobic treatment on site had been carried out in stages, though not as efficiently as possible. By looking at removing one stage, re-routing effluent and improving processes across the site, its operations can be improved while lowering costs as pumping requirements are reduced and less sludge is generated. A reduction in future capital expenditure by approximately £2m will also be achieved from this reconfiguration. In addition, sludge dewatering has been installed to minimise the volume of material being removed off site via tankers.

## Benefits

- Support from the leading expert in the operations and maintenance of brewery ETP's for effective effluent management and minimised operating costs
- Process improvements in anaerobic treatment to optimise biogas yield
- Reconfiguration of aerobic digestion system for greater efficiency and reduced future capex by £2m
- Sludge conditioning to reduce operating cost and the quantity of material transported off site for disposal

### contact

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