



## **MAN Diesel & Turbo commissions Biogas Power Plant**

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**A gas engine of the type MAN 20V35/44G is generating electricity from biomass in Rushden, England.**

MAN Diesel & Turbo has delivered, installed and handed over a genset of the type MAN 20V35/44G to Wykes Engineering in Rushden, England. The engine generates up to 10.4 MW of electrical power from biogas at the power plant in central England. The contract was completed in just eight months. The new genset supplements an existing 7L51/60DF engine that has been running on biogas at the power plant since 2014. The plant is used to back up the base load supply in the local electricity grid and now has a capacity of around 17 MW.

Wykes Engineering is a British engineering company specializing in machine and plant construction and in the construction and operation of power plants as an independent power provider (IPP), especially with renewable energies. In Rushden, Wykes uses food waste such as meat waste, fruit juice and dairy products which have been deemed not fit for human consumption from a wide range of pre and post-consumer sources across the food industry. As these waste products decompose in the fermenter, biogas is produced. This biogas is then utilized to fuel both the existing and the new engine to generate renewable power.

"The energy market in the UK is particularly interesting for us as power supplies and demand are subject to great volatility as a result of the decision to phase out coal, and this is having a direct effect on energy prices," explains Hajo Hoops, Senior Sales Manager Gas Power Plants at MAN Diesel & Turbo: "Furthermore, Brexit will also mean largely autonomous power supplies. That will make it extremely exciting for MAN Diesel & Turbo in the years ahead."

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In contrast to Germany, the energy system in the UK includes a so-called capacity market. Generators are given additional remuneration for reserved capacities that should guarantee reliable supplies even at load peaks. This creates incentives for new investment, in particular for supporting renewables.

The biogas plants typically encountered in Europe often use maize and other agricultural products as a substrate and are usually operated with smaller, less efficient engines with output up to 1000 KW. By contrast, Wykes achieves larger dimensions by industrially using food waste for the power plant in Rushden. By generating electrical power with a large engine and a downstream steam turbine process, the company now achieves close to 50 percent efficiency. "The installation of the first engine with output around seven MW was already a success. By expanding the power plant with the 20V35/44G, Wykes and MAN Diesel & Turbo are now demonstrating that the efficient use of biogas is also possible in the order of ten megawatts and more," explains Hajo Hoops.



Picture: Inside the Power House

**About MAN Diesel & Turbo**

MAN Diesel & Turbo SE, based in Augsburg, Germany, is the world's leading provider of large-bore diesel and gas engines and turbomachinery. The company employs around 14,500 staff at more than 100 international sites, primarily in Germany, Denmark, France, Switzerland, the Czech Republic, India and China. The company's product portfolio includes two-stroke and four-stroke engines for marine and stationary applications, turbochargers and propellers as well as gas and steam turbines, compressors and chemical reactors. The range of services and supplies is rounded off by complete solutions like ship propulsion systems, engine-based power plants and turbomachinery trains for the oil & gas as well as the process industries. Customers receive worldwide after-sales services marketed under the MAN PrimeServ brand.