



Pressemitteilung

Press release · Communiqué de presse

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Making meaningful use of waste materials to generate energy

WELTEC BIOPOWER builds biomethane plant in England

The German manufacturer WELTEC BIOPOWER has been commissioned by the English recycling company Eco Sustainable Solutions Ltd. to build a biomethane plant. The plant is located near Bournemouth Airport in the south of England. Eco Sustainable will operate the plant itself and fill the stainless steel tanks with household waste and agricultural residues from nearby businesses and its own farms. A de-packaging plant for food is already in place at another nearby location. From the end of 2025, the plant will produce processed biogas, which will be fed into the national gas grid as a natural gas equivalent.

Uniform mix, high system availability

WELTEC's modular plant design enables the project to be completed within 18 months. Proven pump and agitator technologies are used for sustainable digestion of the previously homogenized organic materials – such as submersible motor and long-axis agitators with high performance, which prevent substrates from settling at the bottom of the tanks and ensure optimal mixing of the input materials. No interruption to biomethane production is necessary during system maintenance, which contributes to high plant availability. WELTEC BIOPOWER also supplies pump containers, dosing units, desulphurization, heating and three downstream hygienization systems. The biogas produced is processed into biomethane using an upgrading system with membrane technology.

WELTEC CONTROL ensures simple operation of the plant

The components can be monitored and regulated by Eco Sustainable Solutions at any time via the web-based control system. "The innovative tool guarantees complete and rapid access to all plant parameters," explains Stephan Stärk, responsible for automation technology at WELTEC BIOPOWER. WELTEC uses high-quality stainless steel for the construction of the two 5579 cubic meter digesters, the storage tank and the 2 pre-storage tanks.

2013 'Organics Recycling Award' for WELTEC plant

WELTEC BIOPOWER has already implemented biogas projects for Eco Sustainable Solutions in the past: In Piddlehinton, west of Dorset, there is already a 1.6 megawatt biogas plant made by WELTEC. It was commissioned in 2009 and expanded two years later. A hygienization stage for the fermentation of food and agricultural waste has also been implemented there. "The current order is therefore based not least on very good experience with the existing WELTEC plant: "The 1.6 MW biogas plant received the renowned British 'Organics Recycling Award' in 2013 for its efficient use of energy," reports the responsible Sales Manager Carsten Hesselfeld.

According to Hesselfeld, an important criterion for the award was not only the modern technology but also the sustainable overall concept. This includes, for example, the high-quality fertilizer output in accordance with the strict British PAS110 standards and the decoupled system waste heat for a neighbouring feed mill.

Contributing to the decarbonization of the heating sector

The study, published under the title "The Bioenergy Review" (2023), comes to the conclusion that up to 183 terawatt hours of biomethane could be produced annually in the UK using biogas and biomethane from waste materials such as those supplied by Eco Sustainable. This amount could meet the annual gas demand of households across South East England, London and East Anglia.



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Organic energy worldwide

The review also concludes that bioenergy and renewable gas in particular can have an important impact on achieving the 2050 climate targets, especially if they contribute to the decarbonization of the heating sector. With an expertise of 20 biogas and biomethane plants realized so far in Great Britain and Northern Ireland, WELTEC BIOPOWER can therefore play its part in reaching this goal in the future.



A WELTEC system belonging to the British customer Eco Sustainable is already in operation in Dorset, southern England.



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Company Portrait

Since its foundation in 2001, the **WELTEC** Group from Vechta in Lower Saxony, Germany, has been contributing to the success of the energy transition. The specialist has developed into one of the world's leading providers for the construction and operation of biogas and biomethane plants. The group covers the entire biogas value chain, including the design, planning and setup of energy plants, 24/7 service, sustainable utilization concepts for the output flows and ongoing or temporary plant operation – an area in which it has more than 15 years of experience.

The establishment of individual, technically mature solutions with custom-tailored processes is one of the strengths of **WELTEC BIOPOWER**. Moreover, the use of stainless-steel technologies ensures flexible substrate input, quick and inexpensive assembly and a consistently high quality standard, regardless of the location. Following the go-live, **WELTEC** can take care of the mechanical and biological service in order to ensure efficiency of the plants.

The company also boasts a wealth of experience in the field of biogas generation and utilization. In Germany, the annual output of the 11 group-owned plants amounts to about 280 million standard m³ of raw biogas a year. Part of the renewable raw material is processed into biomethane and distributed to energy suppliers and petrol stations. Additionally, the biogas is used to supply heat to municipalities and businesses – e.g. in the field of horticulture, housing construction and healthcare – at a total of 16 locations within the scope of **WELTEC** energy contracting.

Apart from the entire biogas value chain, the portfolio also covers agricultural trade including transport, farm services and manure utilization. For **WELTEC**, proximity to customers and investors is very important. These include businesses from industries such as agriculture, food, waste and wastewater. With its global sales and service network and a team of 170 employees, the company has already installed more than 400 energy plants in 26 countries on five continents.

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