



Pressemitteilung

Press release · Communiqué de presse

Vechta, November 2015

Down Under Discovers Advantages of Waste-to-Energy

WELTEC BIOPOWER Represented with Biogas Plants on Five Continents

On October 19th, 2015, the ground was broken for one of Australia's most innovative biogas projects. In the next 14 months, German biogas plant manufacturer WELTEC BIOPOWER and its project partner Aquatec Maxcon will establish a biogas plant in a Melbourne suburb. The 1 MW plant for the anaerobic digestion of organic waste will be one of the first of its kind Down Under.

The customer Yarra Valley Water is one of Australia's largest enterprises providing water supply and sewerage services. Through the biogas production, Yarra Valley Water will become energy self-sufficient at the plant location in Aurora: "The purpose built Waste to Energy facility will provide an environmentally sustainable solution for commercial organic wastes, generating enough renewable energy to run the existing sewage and recycled water treatment plants, as well as other Yarra Valley Water facilities", says Pat McCafferty, Managing Director of Yarra Valley Water. The two 530 kilowatt MAN engines are even producing as much electricity that an unused surplus can be fed into the public grid.

In view of the positive effects of this anaerobic digestion project, other investors Down Under are likely to follow suit. Currently, the population and politicians are debating what the correct energy mix of tomorrow should look like. The debate also includes the subject of nature conservation. The population is sensitive to this subject due to Australia's environmental impact as the world's third-largest uranium exporter and one of the world's highest per-capita carbon emissions resulting from the primarily coal-based power production.

In fact, the transition towards renewable energies has already started: By 2020, the production from renewable energies is to reach 33 TWh. The few biogas plants that are currently online in Australia still mainly utilise sewage sludge and wastewater from various industries. The growth of the biogas segment could be boosted especially by making more consistent use of biowaste, such as will be used at the WELTEC plant in Aurora. Meanwhile, organic leftovers are regarded as raw materials and valuable energy sources.

The two stainless-steel digesters in Aurora, each of which has a capacity of 3,573m³, will be fed with 100 tons of organic waste a day. More than half of this amount will come from cafeterias and restaurants. The rest will comprise fats and oils, brewery and dairy leftovers, fruit and vegetable waste and sludge that will be pumped from the adjacent wastewater treatment plant. After the digestion process, the substrate will first be sanitised and then buffered in a stainless-steel tank of 4,531m³.

A custom-tailored input process will be set up to ensure uninterrupted supply of the biogas plant. At the delivery area, the feed stocks will first be loaded into two 35m³ solids hopper feeder. Part of the substrates, such as melon peels, will first be shredded and then further chopped up with other raw materials and mixed with recirculation fluid in the **MULTIMix** system. After this preliminary treatment, the mixture will be pumped into the largest of the five stainless-steel pre-storage tanks with a total volume of almost 700m³.



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Organic energy worldwide

Except for the loading of the input systems, the process is fully automated. The size of the pre-storage tanks was designed in such a way that no loading and thus no manpower will be required at the weekend and at night. WELTEC's custom-developed LoMOS PLC will make sure that the substrate is automatically pumped from the pre-storage tanks to the digesters, thereby ensuring continuous digestion at the weekend.

"Our knowledge and experience in rolling out the technology of such a project was a key factor in our selection as the first German biogas plant manufacturer to build a plant in Australia. We are proud of being represented on five continents with about 300 biogas plants", summarises Jens Albartus, Director of WELTEC BIOPOWER, the company's achievements. The thorough planning that preceded the project is reflected in the two-year preparation phase prior to the commencement of the construction activities. Jens Albartus is sure that it was worth the effort: "The efficient operation will help to establish a good reputation of AD waste plants on the fifth continent."

Pictures/Captions



German biogas plant manufacturer WELTEC BIOPOWER and its project partner Aquatec Maxcon will establish a biogas plant in a Melbourne suburb.



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Company Portrait

WELTEC BIOPOWER GmbH is one of the world's leading enterprises in the field of stainless-steel biogas plant construction. The company has planned, developed and built anaerobic digestion plants since 2001. Today, the medium-sized company has about 80 employees at the headquarters in Vechta, Germany, and has established more than 300 energy plants in 25 countries worldwide. The global distribution and service network spans six continents. The range of customers includes businesses from the agriculture, food, waste and wastewater industries.

The strength of WELTEC BIOPOWER lies in custom-tailored design and technically mature solutions for projects up to 10 megawatt capacity. In this context, the high proportion of internally developed components is a key success factor. The company also owes its leading edge to the use of stainless steel. This enables the input of a diverse range of feedstocks, a fast and economic assembly and a consistently high quality standard – regardless of the location.

After a biogas plant goes live, WELTEC BIOPOWER offers additional support through its experienced mechanical and biological service team. 24/7 availability and an in-house lab contribute significantly to the efficiency of the plant. In addition, since 2008 the company has ensured certified internal quality and environmental management in accordance with the ISO 9001 and 14001 standards.

Nordmethan, a subsidiary company of WELTEC BIOPOWER, addresses another business area: The operation of biomethane plants and the provision of heat through energy contracting. In this way, the WELTEC Group covers the entire value chain of energy generation with biogas and biomethane – from the plant construction to the plant operation.

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