Vechta, June 2021

Northern Irish WELTEC Customer uses Biomethane as a Truck Fuel

Supermarket Chain Lidl enables Low-Emission Transport with Food Waste

The biogas plant of the Northern Irish food logistics company McCulla Transport will go live producing biomethane in July 2021 following a plant expansion by WELTEC BIOPOWER and partner companies. At the site in Lisburn, 10 kilometres south of Belfast, 450 standard m^3 of biogas will be processed into biomethane/ RNG every hour. With this amount, the logistics company can operate ten new CNG trucks, which are refueled directly at the company's new biomethane filling point. The substrates for the production of the green fuel come from the 41 Lidl supermarkets in Northern Ireland.

Ashley McCulla, chairman of the transport company of the same name, was able to commission the first stage of his biogas plant from WELTEC BIOPOWER back in January 2017. The intention at the time was to utilise the residual materials from his own agricultural business and to create synergies through the use of renewable electricity and heat in the refrigerated warehouse at their main logistics depot. „By digesting slurry, agricultural residues and grass silage from our farm, we were able to produce green energy ourselves with a 500kW CHP plant and use it on our company premises. Ultimately, this has significantly improved our carbon footprint," McCulla sums up. The expansion to biogas upgrading, HGV fuel and becoming Ireland's greenest fleet was the logical next step of this good experience with the AD plant and their network in the food industry.

As one of Northern Ireland's largest food transport companies with 235 employees and a cold storage facility of almost 8,500 square metres, McCulla has been supplying Lidl Northern Ireland's supermarkets for years. With the conversion of the biogas plant, 17,500 tons per year of food leftovers from Lidl stores will substitute the agricultural residues as substrate for the HGV fuel production.

Under the motto "Goodbye Diesel - Hello Biofuel", the ten new bio-CNG trucks will transport Lidl food deliveries with renewable gas. „Every lorry that runs on the green fuel emits 93 percent less carbon emissions than a diesel truck," explains chairman Ashley McCulla. Due to the excellent eco-balance, the reduced emissions and the lower dependency on fossil fuels, the deal between Lidl and McCulla is creating a positive response from all parties involved.

To ensure successful performance long-term, WELTEC BIOPOWER relied on its established components and technologies. Four pits are available for the pre-storage of the substrates. The subsequent anaerobic digestion takes place in two digesters made of stainless steel with a diameter of 23.03m, a height of 6.30m and a capacity of 2,625m^3 each. The digestate is stored in a 3,432m^3 stainless steel gas-tight storage tank. In order to fully exploit the energy potential of the food waste, WELTEC has equipped the 80m^3 dosing feeder in combination with the **MULTI**Mix pre-feed system. In it, food leftovers are shredded and homogenised. In addition, the Lidl waste is automatically unpacked and pasteurised at the biomethane plant.

Next Page: Pictures/Captions

WELTEC BIOPOWER GmbH · Zum Langenberg 2 · 49377 Vechta · Germany
Phone: +49 4441 99978-0 · Fax: +49 4441 99978-8 · E-mail: info@weltec-biopower.de · Internet: www.weltec-biopower.de

In the course of the extension, WELTEC BIOPOWER upgraded the in-house developed LoMOS PLC-based control system. „We also retro-fitted the extra gas lines, installed a second emergency flare and ensured that all components were connected smoothly with no downstream consequences on the original plant, which since commissioning has shown some of the top performance figures in the industry", WELTEC Sales Manager Dr. Kevin Monson explains. „Last but not least, our Biology Department guaranteed a trouble-free substrate changeover, more than doubling output from the original 500kWe plant without further investment in digestion space, by switching from grass silage and slurry to food wastes," adds Dr. Monson.

The biogas upgrading system comes from Pentair Haffmans. The tried and tested module separates carbon dioxide and other components of the biogas from methane using membrane technology.

This creates biomethane that is similar in its properties to natural gas, but is significantly more climate-friendly. Despite processing 450 standard m^3 of biogas per hour, the 500-kilowatt CHP continues to run, because McCulla can use the electricity and heat for his headquarters and the cold store.

With the tried and tested technology package and its extensive biomethane expertise, the German biogas specialist WELTEC and their partner Pentair Haffmans is making a significant contribution to McCulla being able to lay claim to being one of the greenest transport companies in Ireland. Chairman Ashley McCulla has already announced that the sustainable transport model will be applied to his entire truck fleet over the next five years.

Pictures/Captions

The biogas plant of the Northern Irish food logistics company McCulla Transport will go live producing biomethane in July 2021 following a plant expansion by WELTEC BIOPOWER and partner companies.

Copyright: McCulla Transport

At the site in Lisburn, 10 kilometres south of Belfast, 450 standard m^3 of biogas will be processed into biomethane/ RNG every hour. With this amount, the logistics company can operate ten new CNG trucks, which are refueled directly at the company's new biomethane filling point.

Next Page: Company Portrait

WELTEC BIOPOWER GmbH · Zum Langenberg 2 · 49377 Vechta · Germany
Phone: +49 4441 99978-0 · Fax: +49 4441 99978-8 · E-mail: info@weltec-biopower.de · Internet: www.weltec-biopower.de

Pressemitteilung

Press release · Communiqué de presse

Organic energy worldwide

Company Portrait

The **WELTEC** Group from Vechta, Germany, has developed into a globally leading specialist for the construction and operation of biogas and biomethane plants since it was founded back in 2001. The Group designs, plans and sets up energy plants, operates them on a permanent or temporary basis, provides 24/7 service and delivers sustainable usage concepts for output flows, thereby covering the entire biogas value chain.

The establishment of individual, technically mature solutions up to a plant size of 10 MW is one of the strengths of **WELTEC BIOPOWER**. The high proportion of custom-developed components is a key success factor. 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 commissioning, **WELTEC's** mechanical and biological service plays a significant role in ensuring the plant efficiency.

The company also boasts a wealth of experience in the field of biogas generation and utilisation. The company's nine decentralised plants generate 96 million standard m^3 of biogas a year. Most of it is processed to biomethane and made available to energy suppliers and petrol station operators via the public gas network. Additionally, at 16 locations in Germany– e.g. in the field of horticulture, housing construction and healthcare as well as communities – the biomethane is used for generating heat within the framework of **WELTEC** energy contracting.

The biogas specialist is well aware of the importance of customer and investor proximity. Accordingly, the Group's sales and service network spans the entire globe. The range of customers includes businesses from industries such as agriculture, food, waste and wastewater. So far, the 120 employees of the **WELTEC** Group have implemented more than 350 energy plants in 25 countries on five continents. These plants save about 485.000 tons of CO_{2eq} a year.

If you publish the press release please forward a copy to us:

Ann Börries
Marketing
WELTEC BIOPOWER GmbH
Phone: +49 4441/99978-220
Email: presse@weltec-biopower.de

Social Media:

You can also find us on the following social media platforms:

www.twitter.com/WELTECGermany

www.linkedin.com/company/weltec-biopower-gmbh/

www.youtube.com/user/WELTECBIOPOWER