Vechta, February 2025

WELTEC BIOPOWER hands over dairy RNG plant in Wisconsin, USA

In February 2025, the German biogas specialist WELTEC BIOPOWER has successfully completed the commissioning and handover of a dairy RNG (Renewable Natural Gas / biomethane) plant in Barron County, Wisconsin. After just four months of construction, the dairy farm produces 2.36 million standard cubic meters of RNG/biomethane annually (86,600 MMBTU per year). This RNG, above gas grid specifications, is processed using advanced membrane-based gas upgrading technology to deliver 272 standard cubic meters per hour (159 SCFM), which is compressed, bottled and transported to a gas grid injection point. This strongly carbon-negative RNG is drawn off the gas grid elsewhere, significantly enhancing the sustainability of the transportation fleets of the buyers.

Sustainable agricultural practices

The farm currently has a herd of 3,400 cattle, primarily Holsteins along with a select number of Swiss cows. The owners previously operated an AD plant producing electricity for on-site use, so the concept was not new for them. "For years, we have been utilizing cattle manure to generate biogas, meeting our farm's electricity and heating needs while also fertilizing our fields with digestate," said the owner. "With the new RNG facility, we have expanded our digestate utilization on a larger scale and now store it in our dedicated lagoon for optimal land application."

Four months construction time thanks to modular design

WELTEC BIOPOWER constructed three 6850 cubic meter (1.8m USG) duplex stainless steel digesters for the new biomethane plant near Rice Lake: "We constructed the tanks using a ring-by-ring assembly approach, with the final step involving the installation of a gas-tight membrane storage roof," explains responsible WELTEC BIOPOWER North America COO Carsten Hesselfeld. With a diameter of 31.48 meters, the 8.8 meter high, insulated stainless steel tanks each have a gas storage volume of 3320 cubic meters. "Our modular construction method, tried and tested worldwide over the past 20+ years, contributed significantly to the short construction time of the plant," emphasizes Hesselfeld. The plant is designed to process 207,000 metric tonnes of cattle manure annually (150,000 USG per day), with some flexibility to incorporate future increases in herd size.

Efficient Biomass Processing and Energy Output

The facility employs a streamlined process flow, with manure fed from the barns into a 1,543 cubic meter (408,000 USG) stainless steel pre-storage tank before being pumped into the digesters. The digestion system has a retention time of 34 days, before the biogas is upgraded in a membrane-based system (specified, purchased and integrated into the central SCADA system under WELTEC BIOPOWER contract) into high-quality RNG at gas grid specifications. Digestate is pumped from the RNG plant to the existing lagoons. WELTEC BIOPOWER designed and supplied key components for the project, including digesters, a prefabricated containerised pump-block system, heating and boiler containers and a prefabricated factory-tested control container to simplify works on site, enhance the fast construction time and ensure optimal operational efficiency.

Savings through CO_2 equivalents and tax benefits

By utilizing biomethane as a fuel source, the dairy achieves substantial environmental benefits, reducing carbon emissions by approximately 11,200 tonnes of CO_2 equivalents annually. Additionally, the plant owners capitalize on financial incentives such as RNG tax credits and fuel tax allowances. This project (particularly the strongly negative RNG, the fast construction time and the relatively low CAPEX for such a project) is a great example of the huge potential that still exists for biogas/RNG development at some of the smaller dairy farms in the USA. Projects like this have a key part to play in de-carbonising North American agriculture, and de-carbonising US truck fleets. With the successful implementation of this dairy RNG project, WELTEC BIOPOWER continues to drive innovation, quality and cost-effective solutions for dairy RNG developers, as well as continuously developing market-leading expertise in the co-digestion market.

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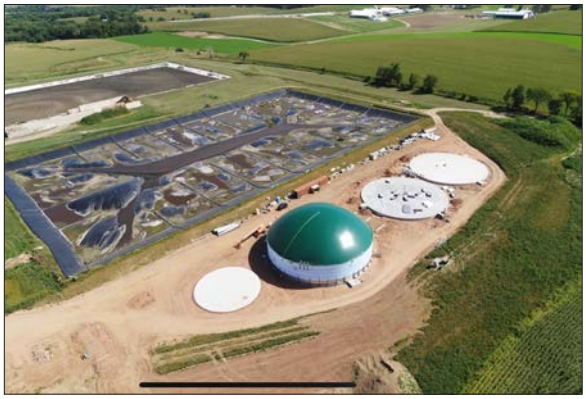
You can also see this video about the biomethane plant in Barron County, Wisconsin:
https://www.youtube.com/watch?v=NquqS1CxceU

Forward-looking statements

Although the forward-looking statements contained in this presentation are based on what the Company's management believes to be reasonable assumptions, there can be no assurance that the forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. The Company undertakes no obligation to update forward-looking statements should circumstances or management's estimates or opinions change, except as required by applicable law. Readers are cautioned not to place undue reliance on forward-looking statements.



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Pressemitteilung

Press release · Communiqué de presse

Organic energy worldwide

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, services, 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.

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, the company has already installed more than 400 energy plants in 26 countries on five continents.

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