Nicholas Meat becomes the latest to install GWE's waste-to-energy tech

By Inside Waste, Thursday 10 May 2018

US-based Nicholas Meat has become one of the latest adopters of Global Water Engineering's (GWE) award-winning anaerobic waste-to-energy technology, which is widely applicable to meat works of any size and has the ability to turn production residuals into an energy-generating resource.

The waste-to-energy technology can be readily applied to local applications dealing with paunch, manure and other meat processing waste.

GWE's North American affiliate Global Water & Energy (GW&E) will provide Nicholas Meat with both an industrial wastewater treatment facility - utilising its cutting-edge MEMBROX aerobic membrane bioreactor technology, as well as a complete organic waste-to-energy

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facility to manage solid and concentrated wastes generated at the factory and wastewater treatment plant.

The organic waste-to-energy will be implementing the award-winning RAPTOR (RAPod Transformation of Organic Residues) system, which is a pre-treatment enhanced form of anaerobic digestion designed to turn nearly any organic substance into valuable green energy in the form of biogas that is being used to replace fossil fuels at scores of food and beverage plants globally.

Nicholas Meat's new facilities will be designed to recover both energy and water from waste products generated on site and significantly reduce the impact of the beef and veal processing plant on the local community.

"You don't need to be a big company to benefit from this technology," said Michael Bambridge, managing director at CST Wastewater Solutions, the company that represents GWE in the Australasian region.

"Paunch and manure are rich in biogas and are often just left for composting or land disposal in Australia and New Zealand, when that biogas could be a source of ongoing profits instead."

Scheduled to be completed later this year, the new facilities are engineered to properly manage the factory wastewater onsite for water reuse and recover energy from by-products generated within both the production process and within the wastewater treatment operations themselves.

They are aiming to significantly reduce the impact of the processing plant on the local community, including a major reduction of odours and truck traffic currently present and at the same time making the company more energy self-sufficient.

"These sorts of environmental benefits could also be genuinely beneficial to forward-thinking Australian meat companies looking to reduce their environmental impact, and generate energy from their waste and by-products - both liquid and solid," Bambridge said.

"The system also has the ability to accept organic wastes from other nearby facilities, thus augmenting the production of green energy and reducing the local community's disposal issues."

The RAPTOR portion of the plant involves an innovative twist on traditional anaerobic digestion, designed to maximise the energy generation from specific wastes.

"This world-class technology, which can be applied globally by all community-minded companies with organic waste and wastewater streams, produces both green energy to supplant fossil fuel needs, as

well as delivering high-quality treated wastewater to safeguard community water standards," said Ian Page, GW&E vice president.

"These standards of environmental protection, and reduction of environmental footprint specified by Nicholas Meat, are a credit to the company as an efficient, sustainable and overall good corporate citizen."

RAPTOR technology has won a global green energy award from the Institute of Chemical Engineers (IChemE), which represents more than 40,000 chemical, biochemical and process engineers from around 100 countries.

The IChemE Global Awards are known for their celebration of the excellence, innovation and achievement in the chemical, process and biochemical industries, making this recognition so significant and gratifying for GWE, the developer of the RAPTOR technology and parent company of GW&E.

"Utilising the residuals from production as a resource, rather than treating them as wastes, will generate significant value for the Nicholas Meat plant, as well as the surrounding community, and will help to transform Nicholas Meat into a truly green company and reduce their dependence on fossil fuels," Bambridge concludes.

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